The Harley, Le, only a thin super-
24 hours. I once
lar glass vessels, one

LY RESEARCHES LEAL ame time, but whereas ANTISEPTIC SYSTEM OF

The diluted blood and
to be an unusually

ered at the Opening of the Winter S two thirds of the
Cross Hospital Medical School on Oct , and the micro had lost their

BY LORD LISTER, F.R.C.S. ENG., well known, tion But it

PROFESSOR OF CLINICAL SURGERY, KING'S CO. make our

TLEMEN,—When the Council of Charing Cro in living
did me the great honour of asking me to deli ation for
of the lectures instituted by them in memor of the
illustrious former pupil of their school, vessels of an
eying their desire that the subject of blood outside the
work, I at first reluctantly declined, on the no such con-
I had done had been for the most part nd a frog's
shed. But when the dean, who assured me th vessels of
sed the unanimous wish of his colleagues, urged nch of
consider my decision, I felt unable to refuse compliance oved
a request so very kindly made. It also occurred to me ut
as my papers are scattered through a variety of media
lication extending over a pretty long period, the
ones especially being probably little known to the
st generation, it might perhaps be not without interest
to refer on this occasion to some of the more salient
observations as bear more or less directly upon the
ptic system of surgery, while I should at the same time
mplying with a wish that has been expressed that I
d give some indication of the circumstances that led me
at subject.

a student at University College I was greatly attracted
Sharpey's lectures, which inspired me with a love of
ology that has never left me My father, whose labours[1]
raised the compound microscope from little better than
tific toy to the powerful engine for investigation
h it then already was, had equipped me with a first-rate
rument of that kind and I employed it with keen interest
rifying the details of histology brought before us by our
t master. When I afterwards became house surgeon
r Mr, Erichsen I applied the same means of observation
thological objects. One of the earliest records that I
of such work is in the form of sketches of the corpuscles
e pus of a case of pyæmia which occurred after excision
e elbow in a little boy. The cancellated tissue of the
erus at the seat of operation and the adjacent part of the
ullary cavity were seen on post mortem examination to
occupied by thick yellow pus and similar fluid distended
brachial and axillary veins and their branches, including
only those leading from the bone towards the venous
k, but also those proceeding from other parts of the
, while the upper part of the axillary was plugged
a firm adhering clot There was also suppural
in one knee-joint and there were multiple abscesses
the lungs I was struck with the fact that the
was to be found not only in the course of the
els leading from the original seat of mischief to
main trunk, but also in branches along which it
have advanced in the reverse direction in spite of
lves of the veins The plugging of the axillary seemed
a very noteworthy circumstance. Sédillot had shown
multiple abscesses in the lungs were caused by
ucing pus into the veins of an animal, and it
d probable that the collections of pus in those
is in the present case had been of similar meta-
t origin. Yet the plugging of the axillary, shutting
he pus in the veins from the general circulation,
ed inconsistent with such a view I took careful
ra lucida sketches of the constituents of the pus
the various situations in which it occurred, and I also
a record of the magnifying power employed by sketch
with the camera the scale of a micrometer placed upon
stage of the microscope. And I would venture to
mmend this practice strongly to pathologists The
h which I then made is as valuable to me to day as
had been made yesterday. I see from my drawings

not possibly leave behind them among the tissue
substance The tissues, as
were therefore the parts
by the action of the irrit
their relation to the blood c
or less closely, according
the behaviour of ordinary
tinguished from the living s
was that they had lost more or less, natural inference
certain special properties which they for the time being
active health as constituent structures possessed when in
In other words, certain of their vital functions of the living body.
porarily in abeyance I say temporarily were tem-
extreme degree of inflammatory congestion, because the
capillaries appear as homogeneous scarlet threads in which the
packed red discs, is susceptible of complete recovery by densely
resolution if the action of the irritant has not been pushed
too far

The same conclusion followed naturally from a considera-
tion of the properties of irritants Greatly as they differ
in their nature, whether physical, as mechanical violence,
heat, and the electric shock, or chemical of the most
varied characters, one feature they have all in common if
pushed far enough they destroy the tissues on which they
act Extreme inflammatory congestion is the state which
they produce when their action is just short of the lethal
chloce, and it seemed to follow absolutely that the state of
allowemes just short of death must be one of impairment of
quarter or
possible alivas beautifully confirmed by a series of observa-
wise infect It was led by a most unlooked for experience
object I washed the method which I have described of
soap and water, anew tranquil state of the frog's foot I
decided to perform the effect of an irritant by placing on
removed next day, the small piece of moistened mustard,
as in the other cases, local position like a drop of liquid
was greatly struck with the On removing the mustard
cases seemed to afford that its effects I was astonished
a purely local poison In web on which it had lain not
I examined microscopicalmmatory congestion but totally
and I made a sketch of the rest of the web in con-
which I imagined might of arrangement of its pigmentary
some form of fungus the mustard had rested the pig-
disease the idea that a delicate black network among
at that early perioding an extremely dark appearance,

On visiting Edint of the web it was gathered into small
see something of I interfered little with the pallor of the
the prominence till at once saw that I had before me direct
surgery as well as an effect of the irritant upon the tissues
surpassing powers hat I had applied the mustard to one spot
unexpected great I revealed what had escaped the notice of
which extended observers who had studied the circulation
Royal Infirmary I afterwards learned that changes of colour
behaviour of wennorfiation had been observed in Germany
was charmed with the by von Wittich, who had attributed
wounds which I witn, and relaxations of chromatophorous
which was used at logous to what is seen on a large scale,
of Liston, who in the skin of cephalopods Very
"filthy ungnents" pigmentary functions in the frog
applied, was invariably pich was in the form of granules of
changed daily Mr Syme ptained in cells with offsets that
bodies of the flaps, leaving tucations of exquisite delicacy,
escape of blood and serum, covered and with those of other
of dry lint and a retaining bandages only visible when
the cut surfaces together This dressing en they appeared
for four days, during which union by at my disposal
proceeded undisturbed except in the tr as fine homo-
tores upon the blood vessels, while the packed granules
on changing the dressing was scanty and these circum-
offensive. But highly successful as this p effects were
it could not be continued in the further prog so that it
case. The ligatures were separated by a process
ration which, even when the tissues had been the
at the time of operation, became fully established into a
days at the latest The ligatures, on the other hand, of
not fully detached till a later and variable period, and
long as they remained they perpetuated the formation of pus
in the depths of the wound, the retention of which by a dry
dressing long continued would have involved disastrous con-
sequences Thus, under the best possible management which
the knowledge of those days permitted, suppuration was an
inevitable attendant on nearly every wound; and so long as
it continued there was no security against the advent of one
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[1] The Philosophical Transactions 1830.

hysiologists. In muscular con- the cell shrinks, and in ciliary action the only other visible form of motion then known to occur in animal tissue, the part concerned moves as a whole, so far as we are able to observe it: in the pigmentary changes the form of the cell one of its constituent materials from place to place among the rest. But drawings made with the camera of a cell in successive stages of concentration of the pigment admitted of only one just interpretation.[5]

These changes in the disposition of the pigment accommodate the tint of the animal to that of surrounding objects. A dark frog placed in a white earthen basin in sunlight soon assumes a dull yellow colour and a pale one is not long in becoming black in a covered earthen jar.

It was very interesting to find that light produces these effects not by direct action upon the skin, but indirectly through the retina and optic nerve. A hood of black cloth, carefully arranged so as to exclude light from the eyes without obstructing respiration, entirely prevented a dark frog from becoming pale in bright sunlight. I was naturally desirous of ascertaining through what efferent channels the nervous impulse that caused concentration of the pigment on exposure to light was conveyed from the brain to the foot. Division of the sciatic nerve had no effect whatever upon the colour of the limb. I then tried cutting through all the structures in the thigh except the bone, the femoral artery and vein, and the sciatic nerve. This also had no influence. But when I added to the latter procedure the section of the sciatic, the animal being then pale, it gradually grew dark below the seat of operation till in no long time it presented from the toes to the wound as great a contrast with the rest of the body as if that part had been covered with a miniature black stocking. Thus the regulation of this function, which is probably closely allied to the action of the cells in nutrition, was not carried on exclusively through special nervous channels, as is the case with the contractions of the voluntary muscles, but one nerve could take the place of others in the duty.[6]

Light was not the only agency that induced pigmentary concentration. It might take place rapidly during struggling of the animal, and I once saw a frog grow pale in its efforts to avoid capture. Here mental emotion perhaps came into play, if we may use such an expression regarding the frog. It seems quite astonishing that nervous action should make the pigment molecules rush thus rapidly to the centre of the cell from its remotest and finest ramifications. Yet a sudden gush of tears or outburst of perspiration, although familiar, is perhaps not less wonderful. Concentration of the pigment took place, as we have seen, under nervous influence and diffusion on its withdrawal. But diffusion was no mere passive phenomenon, such as might follow according to any ordinary arrangement of matter when the agency that caused the grouping of the molecules ceased to operate. The transference of the granules from the body of each cell to its remotest ramifications, and their close packing there, were acts such as a living organism alone could have effected. Pigmentary concentration and diffusion were vital functions of a profound character concerned with the relative distribution of different constituents of the cells. Yet from the very happy circumstance of the conspicuousness of the pigment the results of their activity could be observed with the utmost facility and their behaviour in relation to inflammatory congestion easily studied even under a low magnifying power.

The pigment cells pervade the skin and subcutaneous tissue of which the frog's web consists and are especially numerous about the blood-vessels round which their branches twine abundantly. They must, therefore, be acted on along with the vascular parietes by anything applied to the surface of the membrane. And to state shortly the result of many experiments I found that any agency, physical
which caused the blood-corpuscle to lag
sanguinis in the part on which it operated
pigment cells in that particular area incapable of
their functions. Whatever might be their st
of the experiment, whether in full diffusion, co
centration, or any intermediate condition, so t
in the irritated spot while in surrounding parts
as in the body generally, they changed as usual
to differences of illumination or other circums
the same time they were not killed, for if the
not been too severe they recovered their full
resolution occurred.[7]

Thus the pigment cells afforded ocular d
the truth, to which I was otherwise led by inf
an irritant when producing inflammatory c
strates for the time being the vital energies of
on which it acts. It is to be observed that mere
the nervous apparatus of the irritated area woul
followed by diffusion of the pigment, as
section of the nerves in the thigh, so that the
diffusion as well as concentration shows that
pigmentary functions had been arrested. It wa
a familiar fact that nerves may be temporarily
the direct action of pressure, cold, and other
them. But, so far as I am aware, it had not been
the tissues generally are liable to be thrown in
suspended vital energy by injurious influences.

An experiment upon another form of tissue
trative of this subject that I am induced to
detail. It was an attempt to study the effect
upon the ciliated epithelium of the frog's tong
easy to obtain the material for observation by
ing the surface of the organ and diffusing the
drop of water. Individual cells were then to
their cilia in motion, which might continue for a
period. But special arrangements were
avoid killing them with the warmth, to which
seen, the tissues of the frog are peculiarly
succeeded by arranging them in a film of water
extremely thin cover-glasses, the whole mass
that it could be very quickly heated and as r
The object being placed under the microscope, I
small cautery at a low black heat between the
the stage and watched the result. The
which had been somewhat languid, became at
in rapidity, but resumed its former rate if the ca
once withdrawn. If, however, the application
longer continued, the active motion soon ga
state of complete rest, in which the cilia stood
the hairs of a brush. The hot iron being
instant that this effect was observed slight ind
ment soon began to show itself in indiv
before long all were again in action as
heat was applied. If the cautery was
what hotter the motionless condition
almost immediately, preceded by a mom
of excessively active motion; but if the
cati n was immediately suspended recovery
the former case. And the same experimen
repeated again and again on the same cells wi
results. But if the warmth was allowed to act
longer time, or the cautery was made still h
never took place, and the bodies of the cell
through endosmotic imbibition of water, having
and obeying the ordinary laws of chemistry.

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[5] Max Schulze had not yet described the movements of animal protoplasm; and if he had done so this could have gone but a little way in explaining the phenomena described in the text. The gushing out of homogeneous pseudopodia from the granular body of an amœba may, however, be of an allied nature. I made attempts to see the movement of the pigment granules in cells in which concentration was going on; but their extreme minuteness, together with the excessive rapidity of their apparent motion under the high magnifying power requisite, made them generally elude observation. I fancied I saw an infinite rush of something through the clear space around the already accumulated mass but I could not be sure. On one occasion, however, I saw some individual granules leave the mass and make excursions into the colourless fluid, as I could not doubt it to be.

[6] Vide Philosophical Transactions, ibid.

[7] I have in rare instances seen an irritant cause d
state of concentration as a preliminary effect. This was
the case on one occasion when mustard was employed.
was in an intermediate (stellate) state when the applic
In a narrow ring round the mustard, where the volatil
act extremely mildly on the web, the stellate condition
complete diffusion, whereas under the mass, where it
acted at once with full energy, the stellate appearance
changed. Inflammatory congestion, however, had bee
the ring of full diffusion as well as in the more c
area It happened that complete concentration afterw
in the rest of the web, while the irritated area
appearances above described. It seems probable that
under slight irritation may have been the result of t
irritated part being paralysed before the pigment ce
monly the case with more specialised structures, the p
a delicate form of tissue, and are more readily killed
stituents of the web Hence, if care is not taken to
the action of the irritant too far, it will be found,
has taken place, that the pigment cells never recover;
of pigment gradually lose their sharpness of outline
mately absorbed, leaving a permanently white spot in the

was in various ways instructive. It indicated
epithelium cells, like the pigment cells, when
a destructive agency to a degree just short of
is lethal, are thrown into a state in which their
ns are suspended but not irretrievably lost. It
that the cells which compose the animal
te
overing from this
pe
any aid from the
sle
It further illus-
mportant fact that a most injurious agent when
ry mildly may stimulate function without impair-

ngestion, or arterial dilatation with consequent
blood through the capillaries, is an early and
symptom of inflammation of a vascular part in
ke the morbid condition which is produced by
ion of irritants to the frog's web, it is brought
ectly through the nervous system. A striking
of this was presented in a case which occurred
d to which I have been referring. A scirrhous
been removed by transverse incisions, together
siderable amount of integument, and the cuta-
ins had been brought together, in spite of a good
ion, by means of a few stitches. Two days later
e lips of the wound gaping slightly, but the
l to much traction, were still
presented an inflammatory blush
d downward from the wound, so
about four inches in breadth. I
sutures, and I particularly noticed that no blood
ut any stitch-track. The procedure occupied
inutes and (to quote from a note taken at the
ooner had I done this than I observed that the
most parts that
oeing now pale."
a minute portion
ctive congestion
uch results could
e agency of the

re had occasion to remark, active congestion
throughout the frog's web when an irritant is
any part of it. It was, therefore, possible to
phenomenon upon that animal. It was not at
arly known by what mechanism the constriction
oles was effected, or by what part of the nervous
as regulated. Kölliker had recently made his
ery of the fibre-cells of involuntary muscle and
ed them as existing along with elastic tissue in
coat of the larger arteries; but the trustworthi-
observations had not yet been by any means
recognised, and the structure of the ultimate
s compared with the capillaries, had not been

n dissecting out the vessels from between the
e frog's web and examining them with a high
power, that whereas the capillaries showed only
ccasional
of which
wrapped
membrane. A more efficient
ion could hardly be conceived [9]
of the arterial contractions,
nt of inducing turgescence of
tion of the sympathetic in the
e observation that galvanic
the distal end of the divided nerve made
d vessels shrink and the ear assume unwonted
demonstrated the great fact of nervous control
l circulation, but it was not known what part of
centres exercised the function.

g on the inquiry I first divided the sciatic
ceeding which had been stated on high authority
xation of the arteries of the web. The imme-
f its division was, indeed, some enlargement of
ls, but this very soon passed off. I then resorted
s on the roots of the spinal nerves and on the
nd, not to weary you too much with details, I may say that removal of all the posterior half of the spinal cord, that portion which alone gives off branches for the hind legs, caused the arteries of the web to relax completely and to remain permanently of about the same calibre as the veins. But if any portion that furnished nerves to the posterior extremities, whether a little caudal segment or a small anterior part, was allowed to remain, the arteries, after temporary dilatation, resumed their ordinary and varying dimensions.[10]

It was thus shown that the cerebro-spinal axis is the centre that presides over the contractions of the arteries of the foot, and that the function is exercised by the entire posterior half of the cord; and the temporary effect of section of the sciatic proved that, as is the case with the pigmentary functions, one nerve can take the place of others in the duty. We can thus understand how a flap of skin
ject may have
branches in a

An experiment that greatly pleased Dr. Sharpey would seem to indicate that the vaso-mot
leg is also discharged by the most
A frog having been arranged as b
of a fine needle, curved at the end,
wound behind the occiput, so as to
divided medulla. The
microscope while this
seen to contract to con
first experiment with warm water. The contraction of the vessels caused on that occasion by the application of gentle heat to the web was now explained as a "reflex action" through the spinal cord. Their dilatation under irritation remained to be accounted for. In describing that first experiment I stated that the extreme constriction of the arterioles was followed by relaxation to a larger calibre than they had before the water was applied, suggesting the idea of fatigue after exertion. I have now to add that if the warmth was longer continued the subsequent relaxation was more marked and of longer duration, and if the water was made somewhat hotter the contraction that preceded the dilatation was so transient as to be barely discernible.[11]

We seem to have here an exact parallel to what occurred as the result of the action of heat upon the ciliated epithelium. And the natural view seemed to me to be that the ganglion cells of the cord concerned in the arterial contractions were affected by the nervous impulse conveyed to them by the efferent fibres according to the same law that governed the direct action of heat upon the epithelium cells, increased activity or suspension of function being induced according to the degree of energy of its operation. I incline still to believe that this was a correct interpretation of the phenomena of active congestion.

Inflammatory congestion also may be brought about by nervous agency. This fact being of fundamental importance, and not perhaps universally recognised by pathologists, I may describe briefly two unpublished experiments with regard to it which I did shortly after the time of which I have been speaking. Inflammatory phenomena being of a very languid character in the frog I had resort to a higher animal. One of the experiments was simply passing a silk thread through a fold of skin in a rabbit's back and knotting the ends together. When 48 hours had elapsed, the animal having been killed, I removed the portion of skin concerned and examined its under surface. The thread was covered with a yellow line of lymph, around which there was intense scarlet redness for about a quarter of an inch in every direction, contrasting strongly with the paleness of the healthy structures around. And on microscopical examination I found that this depended (to quote from my notes of the time) "partly upon ecchymoses, but chiefly upon well-marked inflammatory congestion of the minutest vessels of the subcutaneous tissue and the deeper parts of the skin."

The other experiment was performed 20 minutes before the first, upon a part of the same animal which, being more sensitive, was more likely to show the effects of nervous disturbance. By means of a fine sewing needle I passed a delicate thread of silk through the superficial layers of the left cornea and cut the ends off close with scissors. Next day the eye was much inflamed and its condition was aggravated on the day following, while the other eye remained

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ppear that all agents that act with destructive effect
s produce suspension of vital energy without loss of life
g in a minor degree. Whether all such agents are also
function when in a still milder form is quite another

tions of the Royal Society of Edinburgh for 1856, vol. xxi.

[10] Vide Philosophical Transactions, ibid.

[11] Brief contraction of the vessels, followed by dilatation, had been previously observed by others as the result of the application of irritants to the frog's web.

healthy. As I have already said, the rabbit was killed on the expiry of 48 hours. This having been done by pithing, I at once divided the blood-vessels in the neck while the heart was still beating so as to allow all blood that was free to flow to escape from the head. I then removed the two eyes and cut them both across transversely midway between the cornea and the optic nerve and compared the inflamed eye with the healthy. I will not detain you with a description of the anterior halves of the globes, though they were very interesting, but will at once speak of their posterior portions, more remote from the part where the exciting cause had been in operation on the left side. In that eye the retina was much more readily detached than in the right and showed small spots of ecchymosis. The two choroids presented a striking contrast, "the vessels in the right eye," to quote my notes again, "being not at all conspicuous, while in the left eye the membrane was scarlet, and this depended not merely upon fulness of the vessels but upon darker tint of their contents in consequence of excess of red corpuscles."

It is matter for discussion how inflammatory congestion is brought about by nervous action. It may be doubted whether active congestion could alone give rise to it, though it is by no means inconceivable that the excessive supply of the nutrient fluid might in time exhaust the tissues by over-stimulation and so bring about more or less of that impairment of vital energy which we have seen reason to regard as the essential cause of the blood-corpuscles lagging behind the liquor sanguinis. Or it may be that the nerves produce this weakening effect upon the tissues by immediate action upon them. From that point of view the proof afforded by the pigment cells of the influence of the nerves over processes going on within cells seemed to me peculiarly interesting. And we can conceive of nervous impulse impairing their energies either by over-stimulation followed by exhaustion or by immediate prostration of their powers as by an electric shock.

That the latter idea is not altogether out of the question seems to follow from a kind of experience familiar to surgeons. I will mention one instance of this which produced a great impression upon me. A healthy man, in the middle period of life, had been operated on by lateral lithotomy. All went perfectly well till about 10 days had elapsed, when the renal secretion, which had passed through the wound since the operation, flowed for the first time through the natural channel. In those days, when lateral lithotomy was the routine treatment of calculus, it was well understood that the mucous membrane becomes in a few days unaccustomed to the urine, which then acts upon it with irritating effect, and the result may be a violent general nervous commotion in the shape of a rigor. This may be immediately followed by complete suppression of secretion by the kidneys, and if this does not pretty soon pass off it is fatal. Such was the case with the patient to whom I am referring. In spite of hot applications to the skin—which sometimes work like a charm in such circumstances, operating, as it would appear, by distracting, so to speak, the attention of the nervous system from the affected organs—that man died within a few hours of the rigor. On post-mortem examination the kidneys presented on section an appearance that I have never forgotten—scarlet redness throughout what in other respects appeared to be perfectly sound structure.

The previous healthiness of the patient seems to preclude the idea that this grave disorder of the kidneys could have existed before the rigor. We are therefore led to believe that the prostration of vital energy which inflammatory congestion implies was caused by the irritation in the urethra. If such was the case the remoteness of the kidneys from the source of disturbance makes it certain that the disorder was brought about through the nervous system. This effect could not possibly be produced, like arterial relaxation, by failure of the nerves to act. For we know that the tissues retain their vital energies for a considerable period after entire severance from the body, as is illustrated by the success of Thiersch's method of skin-grafting. We are therefore driven to the other alternative and conclude that the inflammatory congestion of those kidneys was caused by nervous action upon the renal tissues, and the suddenness with which the effect was produced strongly suggests the view that the prostration of their vital power was the primary effect of an unwonted nervous impulse.

Abnormal effusion of liquor sanguinis from the vessels, another marked feature of acute inflammatory disturbance in man, would seem to be a natural result of inflammatory congestion. I used to illustrate to a simple experiment the enormous increase which in the pressure of a liquid upon the walls of a which it is flowing when an obstacle is op passage. When, therefore, the corpuscles begin capillaries the plasma will naturally be for quantity through their porous walls. When assumes an intense degree the effused liquor the peculiarity of being coagulable, producing b fixation the characteristic "brawny" swelling among which it is poured out. In this respect it the normal plasma forced by pressure through t healthy capillaries as the result of venous obst the swelling has the "doughy" character of œ dition also caused by inflammation of a mild that point I shall have occasion to refer again.

I designated by the title "direct infla morbid state produced by the direct operation agents upon the tissues as distinguished from in brought about through the medium of the ne This distinction appears to me to be of great and it enables us to understand what would ot quite unintelligible. One beautiful instance of behaviour of a recent wound in tissues previou When our means of arresting bleeding were les than they are at present it was no uncommon t summoned a few hours after an operation on hæmorrhage. It was a sad thing to have to te the lips of a wound already well glued together in order to gain access to the bleeding point. was neither more nor less than liquor sanguinis been effused from the cut surfaces and had From the quality of the effusion we should supp had to deal with inflammation of a very intense yet the lips of the wound were perfectly pale a free from the active congestion which is the very e of inflammatory disturbance. How could this in reconciled? Very simply, as I believe, by the aid ciples which we have been discussnig. Mechanical a noxious agency producing effects proportio degree. A very blunt implement passing through kills the surface of the parts which it divides; and days we had to poultice a "contused wound" till t separated. A sharp knife does not destroy any tissues, but it throws them in a microscopically into a state of intense inflammatory congestion, with effusion of coagulable liquor sanguinis. noxious agency is only momentary in its operati no time to cause active congestion through t system, but at once leaves the injured tissues free by virtue of their own inherent powers. If the be very sharp the layer of lymph will be very t some other disturbing cause come into play. always sufficient in amount to serve the beautiful adhesion. It is comparatively rarely that direct tion is met with thus pure and simple in prac two forms, the direct and indirect, are co or less associated. Thus, putrid discharge in is an acrid irritant, as I once experienced in the keen smarting of an abrasion on the back of smeared accidentally with the pus of a stump dressing. Hence during the period that elapses divided tissues are clothed with that wonderful layer which we term granulations such disc direct inflammation in the structures on which it diately, while it also induces in neighbouring parts tion through the nervous system.

When Marion Sims had published his remarka with the silver suture in gynæcology I resolved trial in general surgery. At that time, as assist in the Royal Infirmary of Edinburgh, I had ch Lock Hospital, and one of the patients having matous tumour of the scalp I removed it and b edges of the skin together with a silver stitch. required ligature and the wound healed without As the suture created no disturbance I left it about ten days, when I took the patient over to and showed him the skin about the wire perfectl natural in appearance without a trace of discharg a silk stitch would within four days have infalli suppuration with surrounding redness. Mr. Sym recognised the importance of the facts and from forward the silver suture was used for all more convenient and no longer

g over this striking difference between the effects kinds of suture it seemed to me clear that it n the silk imbibing blood and serum, which, decomposition in its interstices, grew more he longer the process continued, whereas the no hold to the organic liquids, which were shed s fast as they were effused. From these and ns I taught my class at that the organic liquids was the of suppuration.

gulation of the blood, while it is a matter of l importance in physiology, has peculiar interest unt of the special feature of coagula- exudations and the part played by of wounds, and various other patho- h as the sealing of divided arteries by

Towards the close of the investigations which I lescribing there was published another successful per Prize essay, "Coagulation of the Blood," the subject selected by the judges for the com- The author of this dissertation, the late Dr. , propounded the new theory that the solidifica- ood shed from the vessels was due to the ammonia, which, as he believed, held the lution. I was at first much struck by the lth which he supported this view, and my first s on the subject were made with the object of ng that evidence where it seemed to me weakest. these, a sheep having been placed under chloro- ght by means of a common tourniquet to constrict so extremely as to prevent the ammonia from the vessels were divided and so keep the blood of amputation. Rigidity of the muscles pre- m carrying out my intention, but I tied a mly round the foot below the joint where the noves it, so as to retain the blood and, as far as the ammonia also. The foot being severed, I me, and, having raised a portion of the skin xpose a subcutaneous vein, I investigated the blood in it. I found it indeed fluid, with one full of significance, though I did not see its e time—viz., where the cord used by the butcher e feet together had pinched the veins against the , and there only, was the blood in them coagu- emember being a little disappointed, as well as that appearance. It was not in harmony with n which I was at the time disposed to believe w replete were the facts with possible instruc- pression of the veins had certainly given no for escape of ammonia It is equally certain rd did not make the blood coagulate by any n upon it; for the cord, so long as it remained in pt the parts of the veins which it compressed lood. It is clear that the effect was due to the e cord upon the walls of the vessels. Not that it d them, nor is there any reason to suppose that it hem. No doubt if the animal had been released slaughtered the veins would in due time have But the mechanical violence which the hard exerted, being pretty severe and long continued, ted for the time the vital energies of the tissues t had acted, and we had in coagulation of the etition of the class of phenomena which we had he blood-corpuscles.

was it that the blood remained fluid in other parts ls? To my surprise I found that the same con the case for days afterwards. And thus accident recognise what I afterwards found to be the e—viz., that the blood, though in mammalia it soon after death in the heart and main trunks, l for an indefinite period in minor branches. The the heart had been an object of familiar observa- -mortem examinations in the human subject and have been assumed that the same thing occurred the vascular system.

's foot with the blood retained in its veins by a plied before the animal was slaughtered afforded nity for very simple but instructive experiments lations between the living vessels and For that the veins retained their lapse of more than 24 hours after [illegible] by muscular contraction on exposure.[12] Thus I found that a piece of glass introduced into a vein occasioned coagulation in its vicinity The end of a sewing needle pushed through the wall of a vein otherwise uninjured became after a while encrusted with a layer of fibrin deposited upon the part within the vessel, while the rest of the blood in it retained its fluidity.[13] On the other hand, having injected air into the vessels on another occasion, I found seven hours later that their contents were a frothy mixture of blood and air, the walls of the bubbles of which were fluid but solidified when shed. Sir Astley Cooper had been of opinion that the living vessels kept the blood within them fluid by acting in some way upon it—in other words, his view implied that the blood had a spontaneous tendency to coagulate which was held in check by the active operation of the living tubes that contained it.[14] Facts such as I have just mentioned seemed to me to indicate that the ordinary solid was the active agent, determining the formation of fibrin as a thread does the deposition of sugar candy, while the healthy living tissue had the remarkable peculiarity of being destitute of this general aggregating property of solids, behaving rather like the self-repelling particles of gases.

It was not only in vessels of small size, like those of the sheep's foot, that the blood remained fluid in parts severed from the body. I found that the same was the case in veins of the dimensions of the jugular of the ox or the horse, and this in spite of their entire detachment from surrounding structures. The vessel being exposed after the animal had been felled at the abattoir two ligatures were applied in order to retain the blood in it, after which it was removed and taken home with as little disturbance as possible. The blood in it retained its fluidity for upwards of 24 hours, affording opportunity for most instructive experiments. Of these I must content myself with describing one. A portion of an ox's jugular with its contained blood being held vertically the upper part was removed along with its ligature and the lips of the now open venous compartment were held apart with forceps by aid of an assistant, while a thin glass tube, of rather smaller calibre than the vein and open at both ends, was passed down into the vessel with the utmost steadiness so as to disturb the blood as little as possible. The upper end of the tube had been drawn out with the blowpipe to much smaller size and a short piece of india-rubber tubing adapted, so as to admit of clamping with catch-forceps. When blood appeared at the end of the caoutchouc tube the clamp was applied. The whole apparatus was then rapidly inverted and the piece of vein removed, leaving the blood in a vessel of ordinary solid matter without any contact of living tissue. The glass tube was steadily clamped to a retort stand and its orifice covered with a loose cap of guttapercha tissue to exclude dust, after which all was left undisturbed for 24 hours. On then turning out the blood I found it all fluid except a layer of clot about one-eighth of an inch in thickness which encrusted the interior of the tube, and also a little clot at the surface which might be explained by some drying on account of the imperfect fitting of the cap. The fluid part of the blood soon coagulated. The result of this experiment seemed to me of itself sufficient evidence that the blood requires no action of the living vessels to maintain its fluidity and that the hypothesis of such action was superfluous. At the same time the extreme care required in order to ensure the success of such an experiment indicated the subtilty of the influence of an ordinary solid in bringing about coagulation. A very simple experiment performed in a butcher's establishment on the way from my father's house at Upton to deliver the Croonian Lecture before the Royal Society illustrates the same thing. I received blood from the throat of an ox into two similar open earthen jars (gallipots), and slowly moved a clean glass stirring rod through the blood of one of them for a second or two, and then left both vessels undisturbed. In the course of a few minutes the blood that had been thus gently and briefly stirred was a mass of coagulum, while the unstirred blood was still fluid, except a thin layer of clot encrusting the wall of the jar. In course of time it also coagulated completely. Now we know from the experiment with the ox's jugular that coagulation is propagated with extreme slowness, if at all, from a clot in blood perfectly undisturbed. The earlier coagulation of the main mass of the stirred blood was, therefore, not caused by propagation of the process from a layer upon the surface of the jar, but must have been the result of the brief agency of the glass rod.

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[13] As regards the ammonia theory, an experiment which proved universally convincing was this foot, I pressed the blood out of d. There it soon coagulated; the very substance, a mere trace of which should have kept it fluid according to the theory in question, having brought about its coagulation ary considerably foot was removed id impairment of and finally loses ter the veins have lost all life

[14] Brücke of Vienna, who had also competed for the Astley Cooper at a similar conclusion. He experimented largely in cold-blooded animals generally. from the body, the blood in its ts fluidity. I had not seen Brücke's ents referred to in the text were performed

A little before the delivery of the lecture referred to,[15] I became aware of the recent very important observations of Schmidt, who showed, as had been foreshadowed many years previously by Andrew Buchanan of Glasgow, that normal liquor sanguinis does not, as had been supposed, contain fibrin in solution, but only one constituent of that substance, the other, which Schwann termed "fibrinogen," being derived from the blood corpuscles. The ordinary solid, therefore, in determining coagulation does not cause the *deposition of fibrin* already formed, but so influences the corpuscles as to make them give up an ingredient necessary for the formation of that insoluble body.[16]

With this further light upon the subject the conclusions derived from the experiments to which I have referred seem to explain the special coagulability of the exudation in intense inflammation. Under intense *irritation the capillary* walls will naturally be affected by the noxious agency as the veins of the sheep's foot were by the constricting cord and, like them, act upon their contained blood as if they were ordinary solids. The plasma of that blood will therefore receive from the blood corpuscles the material requisite for forming fibrin and, passing through the pores of the capillaries with that addition, will constitute a coagulable exudation.[17]

On the other hand, if irritation is less severe, although the tissues are impaired in vital activity, the walls of the capillaries may not be reduced to the condition of acting like ordinary solids in their relation to coagulation, in which case the result will be the effusion of normal uncoagulable liquor sanguinis.

It does not, of course, follow that the absence of adhesiveness of the blood-corpuscles is due to the same cause as the fluidity of the blood. It might quite well be, for example, that the corpuscles are maintained in the healthy condition by nervous action, whereas the state of the healthy living vessel which ensures fluidity of the blood would seem to be a profound property of the constituent matter of the lining membrane which, when in active health, behaves, as we have seen, like a gas rather than an ordinary solid.[18]

In point of fact a very interesting observation which I made long ago, but to which I have not before directed attention in this point of view, proves that an extreme degree of adhesiveness of the red discs may exist within a *blood-vessel the walls* of which are in perfect health with reference to coagulation. If a horse's jugular vein, obtained in the manner which I have described, is suspended vertically, the blood in it remains fluid for an indefinite period, but the red corpuscles soon fall from the upper parts of the fluid, leaving a buffy layer of plasma, readily seen through the translucent wall of the vessel, just as occurs in blood outside the body. And this behaviour of horse's blood implies, as we have seen, a very high degree of adhesiveness of the red discs. If we compare this with the perfe absence of grouping of the red corpuscles which w observed within a vein of the bat's wing in spite of the extreme adhesiveness in the same animal in blood shed fro the body, we cannot but be greatly struck with the contras As regards the circumstances of the two vessels we see th in the bat's wing the vein was a small one in its natur relations to surrounding structures, whereas the horse jugular was of very large dimensions and isolated from t rest of the body.

It seems impossible that the adhesiveness of the corpuscl in the jugular vein was the result of isolation fro other structures; for adhesiveness of corpuscles is n occasioned in the vessels of the frog's web by amputati of the limb, nor does the state of the tissues that causes result from complete detachment from the body in t human subject, as we may safely infer from the persiste healthiness of a piece of skin entirely transplanted in ski grafting. We seem, therefore, forced to the conclusi that what keeps the blood-corpuscles *from adhesiveness* is local function of the tissues, quite distinct from th molecular constitution of their component material whic renders them neutral in relation to coagulation of the blood and it seems necessary to ascribe the adhesiveness of t red discs in the horse's jugular to the mass of the blood i it being too great for that function to control. This fun tion, unlike that property of the tissues which ensur fluidity of the blood, must therefore exert an active influenc upon the vital fluid. It would seem to be *much more* eas disturbed by noxious agencies, for adhesiveness of corpusc may exist in any conceivable degree according to the degr of irritation, whereas coagulation seems to imply severe di order.

The mobility of the black pigment granules of the fr has often struck me as extremely remarkable. Perfe absence of any tendency to aggregate on their part mu be fully as essential to the freedom with which they mov through the exquisitely delicate *ramifications* of their co taining cells when diffusion gives place to concentrati as want of adhesiveness of the blood corpuscles is to th free transit through the capillaries, and I cannot but thi that the two phenomena are analogous. It may be, for an we know to the contrary, that the pigment granules may themselves living entities. Their uniformity in size is favour of such an idea. *Our fathers* would have be greatly astonished to learn that the chlorophyll grains vegetables were, as has been shown in recent years, liv organisms multiplying by division like the nuclei of th containing cells; and though the pigment granules much smaller they are probably greatly surpassed minuteness by many microbes which, though hithe invisible to us, we believe from analogy to be the cau of some infective diseases. But, however this may the perfect mobility of the pigment cells seems me a special property which they possess as constitue of the living body, in other words, to use once mo the expression which in the present state of our knowled is indispensable, a vital property. If this be so, we und stand what would otherwise be very unintelligible—t that when the pigment cells have their functions tempora suspended by a noxious agent the granules do not bec diffused as they do when withdrawn from nervous influe but remain exactly as they were before the irritant applied, whether concentrated, diffused, or in any inte mediate state. If we suppose that the pigment cells, l the blood corpuscles, acquire under irritation a tendency mutual aggregation which they do not possess in health, follows as a matter of course that when vital energy suspended by the noxious agency they will adhere toget and retain for the time their relative positions.

After being appointed to the Chair of Surgery in University of Glasgow I became one of the surgeons the Royal Infirmary of that city. Here I had too am opportunity for studying hospital diseases, of which most fearful was pyæmia. About this time I saw opinion expressed by a high authority in pathology t the pus in a pyæmic vein was probably an accumulation leucocytes. Facts such as those which I mentioned having aroused my interest in my student days in a of pyæmia made such a view to me incredible, and determined to ascertain, if possible, the real state of thi by *experiment.* I introduced into a vein of a li horse a short glass tube open at both ends, cont ing a piece of silver wire in which was mounted of calico, which I thought likely to give y to putrefactive change, shutting off the vein concerned from the general circulation by igature. After the lapse of some days I removed compartment and found that the blood in it had very remarkable changes The limits of this ich have been already too widely extended) make le for me to enter into details, as I had hoped to regarding the researches of which this was the nent. I must content myself with stating the con- which I was led at the time I am speaking of, and confirmed by later investigations—viz., that the n of septic material into a vein may give rise to the opment of large nucleated cells which, growing at [illegible] ients of the coagulum, con- [illegible] liquid. The pus so formed [illegible] hose which I sketched in ase at University College, are not pus corpuscles dinary sense, or leucocytes, but the variously or less granular nuclei of the large cells the dies of which const [illegible] estion of the origi [illegible] t not enter. This [illegible] d clot removed all [illegible] ing the post-mortem appearances in pyæmia and ical features. Having become familiar with the s of these cells in suppurating coagula I was able e them in acute abscesses in the human subject onstrate them to others by mixing carmine with [illegible] render clearly defined the limits of the [illegible] the cells which otherwise would have been [illegible] *puris*.

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[15] Vide the Croonian Lecture on the Coagulation of the Blood, Proceedings of the Royal Society 1863

[16] Regarding the corpuscular elements of the blood which are concerned in supplying to the plasma the materials necessary for the formation of the fibrin and the chemical interactions of those substances various important researches have since been conducted in which I have had no share.

[17] I once ascertained the coagulability of a drop of clear fluid which had exuded from a recent contused wound by drawing the point of a needle through it, to which it yielded threads of fibrin.

[18] It has been shown of late by Professor Haycraft that an indifferent liquid, such as liquid paraffin, has a similar negative behaviour in relation to coagulation, so that by proper management blood may be kept fluid in a vessel of ordinary solid matter smeared with that substance.

course, aware of the great importance of the of leucocytes discovered by Cohnheim and mmeasurably more interesting by Metchnikoff's of their phagocytic powers, and I know that of pus have often such an origin. But I am fied that this is not the exclusive mode of pus and that it is often produced by the proliferation was first taught by my illustrious predecessor in of two years ago (Professor Virchow) in the Pathologie."

ese investigations into the nature of pyæmia eding I was doing my utmost against that deadly Professor Polli of Milan having recommended the ministration of sulphite of potash on account of trescent properties I gave that drug a very full prophylactic. I have notes of a case in 1864 ter amputating the thigh for disease of the knee- e ten grains of the sulphite every two hours from f the amputation; and when on the sixth day an gor occurred, I doubled the frequency of the admini- Death, however, took place nevertheless, and this means my only experience of such disappointment e time I did my best by local measures to diminish f communicating contagion from one wound to freely employed antiseptic washes, and I had on the y wards piles of clean towels to be used for drying nd those of my assistants after washing them, as should invariably be done in passing from one another. But all my efforts proved abortive; as ardly wonder when I believed, with chemists that putrefaction was caused by the oxygen of will thus be seen that I was prepared to welcome lemonstration that putrefaction, like other true ons, is caused by microbes growing in the substance Thus was presented a new problem: lude oxygen from wounds, which was impossible, ect them from the living causes of decomposition by h should act with as little disturbance of the tissues tent with the attainment of this essential object n since shown that putrefaction, though a most se of mischief in wounds, is not its only cause ords, it has been proved that there are microbes duce poisons that do not occasion unpleasant t the principle that first guided me still retains, I full value, and the endeavour to apply that o as to ensure the greatest safety with the least disadvantage has been my chief life-work.

HOMAS'S HOSPITAL MEDICAL SCHOOL.—nce Scholarship in Natural Science (£150) was Mr George Young Worrall; and the University p in Anatomy and Physiology (£50) was awarded lter L Harnett, B A.Cantab.

An Introductory Address
ON
SCIENCE AND PRACTICE.

Delivered at the Opening of the Winter Session at University College, London, on Oct. 1st, 1900,

BY GEORGE VIVIAN POORE, M.D.,
F.R.C.P. LOND.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE.

GENTLEMEN,—It is 19 years since I last had the honour of delivering the introductory address to the students of the Faculty of Medicine in this college. Since October, 1881, inevitable changes have taken place. Many of those who were then our chiefs are now no more; others have retired from the labours of professorial work; their places have been supplied, let us hope, by good men and true, all of them anxious to maintain the high traditions of this college. In 1881 some of my colleagues were beginning to talk of reconstituting the University of London. That reconstitution has now taken place. The headquarters of the university have been removed from the City of Westminster to the newly-incorporated town of Kensington, and all the medical schools in London have become constituent colleges thereof. Since 1881 the Universities of Oxford, Cambridge, and Durham, as well as the Victoria University at Manchester, have made, and are making, ever-increasing efforts to meet the needs of the medical student. In connexion with the new University of Wales a medical school has been founded in the flourishing town of Cardiff, and the present year has witnessed the foundation of the University of Birmingham, which, under the guidance of the Right Honourable Joseph Chamberlain and Professor Oliver Lodge, both of them former students of this college, may reasonably be expected to attain a large measure of success. I believe that competition is the very essence of progress and that the largely increased competition in the matter of medical education is full of good omen for the future of medicine in this country. So long as the competitions be really free there is nothing to fear. So long as men be really free to back their own judgment in the matter of gifts and endowments, and so long as the medical student be free to choose the schools and the teachers to which he will take his educational fees, there can be no doubt that the law of the survival of the fittest will continue to exert its beneficent influence and that progress will result.

I purpose to-day to address myself to those of you who are about to commence the study of medicine proper Your studies hitherto in chemistry, anatomy, and physiology, studies which are a necessary preliminary to the study of medicine, have been pursued by the aid of dead material and by methods which are largely artificial—methods many of which have no counterpart as far as we can tell in Nature. You have learnt to recognise and to name the various parts of the human body and to understand the relation which the various organs hold to each other. You have learnt how the chemist, by methods of his own, tears organic matter into fragments and designates the bits by dodekasyllables, and represents them by mystic formulæ which sometimes perhaps illustrate his own imaginings and show his descent from the astrologer and the alchymist. You have learnt by methods which are largely artificial to recognise many of the cellular elements which go to the building of our complex bodies and by means of anæsthetics and sundry artifices you have had an occasional glimpse of vital movements—a momentary and imperfect glance of the fringe of Nature's robe. Your time hitherto has been largely spent in a valley of dry bones and in the laboratory of a crematorium, and many of you who to-day begin the study of medicine are doubtless asking, "Shall these dry bones live?"

The passing from the study of the dead to the study of the living constitutes the greatest epoch in the life of a medical student, and you will readily believe me when I say that the study of the living demands infinite patience and great humbleness of mind. I have alluded to the fact that the methods of the laboratory are largely artificial. We are in necessary doubt as to the resemblance between Nature's methods and man's methods, and how far he who works in a laboratory merits the name of artificialist rather than that of naturalist. It is necessary to say this because we have to follow Nature. We must not mistake our methods for her methods. We physicians have to find out what is man's true relation to his surroundings in this world. We are powerless to alter the course of Nature, but we may, perhaps, persuade our fellow men to reform their conduct. Before, however, we begin to persuade, still more before we venture to compel, we must be sure of our ground. We must constantly check the advances of the laboratories by the observations of the broad facts of Nature. Science in its narrow sense must go hand in hand with practice, each must be respectful to the other, like symbiotic organisms living together for mutual benefit. A very dangerous person in this world is the quasi-monocular Polypheme who holds one eye over an immersion lens and keeps the other shut. He becomes doubly dangerous if he be the holder of a public position, which may give to his utterances a fictitious value sufficient, perhaps, to tempt the politician to earn a bubble reputation by hasty legislation, than which there is no more effectual bar to scientific progress.'

"Man, proud man,
Drest in a little brief authority,
Most ignorant of what he's most assured,
* * * * *
Plays such fantastic tricks before high Heaven
As make the angels weep."

Those of you who are passing from the laboratories to the hospital are equipped for your work in a manner which enables you to observe with completeness and to record with accuracy. You may be disappointed in finding that no inconsiderable part of the knowledge which you have hitherto acquired is of little practical use to you in the wards, or at least you may fail to see the bearing which it has upon the treatment of the sick. Be not dismayed; the correlation of knowledge is infinite. We cannot tell from hour to hour what may prove to be the practical bearings of the most recondite discoveries of the laboratory. The so-called practical man who is ever asking the question "*Cui bono?*" is certainly not the one by whom advances in knowledge are likely to be made. If you find that the recording of cases in the hospital has to be done by clerks and dressers instead of by clockwork and drums driven by an electric motor, do not for this or similar reasons rush to the conclusion that you have left really scientific work behind you. It is true that scientific work cannot be done as rapidly in a hospital as in a laboratory and that in a hospital you cannot control the circumstances and conditions of your work as you can in a laboratory. The collection of facts often extends over years and those who are in a hurry to make a so-called scientific reputation should remain in their laboratories. The power of independent observation is a gift which is given to few. The true naturalist—such as Harvey, "Parson" Hales, John Hunter, Gilbert White, Charles Darwin, and Pasteur—would seem, like the poet, to be born and not made, and generally educates himself by methods of his own. We may reasonably hope, however, that the extension of scientific teaching is calculated to bring the unconscious genius within sight of the mental pabulum for which he has, unknown to himself, an inborn appetite.

May I venture to allude to some of the work which has been accomplished by the patient observation of physicians? First amongst these is the solution by Harvey of the difficult problem of the circulation. This was the result of many years of incessant labour and the observation of every fact which by any possibility could assist him. He is credited with having begun to teach the doctrine at least 12 years before he published it in its final form. He was in no hurry, he had no petty ambitions with regard to priority, and finally he left the question completely settled, so that in the 272 years which have since elapsed physiologists have been able neither to add to nor detract from the doctrine that remains pretty much as Harvey left it.

Again, the discovery of the cause of the endemial colic of Devonshire by Sir George Baker deserves ungrudging recognition. Baker's essay was published in 1767 and it is very interesting to contrast his admirably arranged and thoroughly scientific discourse with the essays on the same subject which had preceded it. I need not follow Sir George Baker in his collection of facts and his close reasoning upon the facts collected. Having shown that in all human probability the cause of the colic was to be found in the lead fittings of the cider presses, he finally had recourse to Dr. Saunders, "an ingenious gentleman who practised chymistry" and who extracted a tangible quantity of lead from a dozen bottles of Devonshire cider. No better instance can be found of the happy association of the laboratory worker and the clinical physician. I may, perhaps, remind you that Baker's discovery, although limited to a disease which was peculiar to certain districts only of this country, was in reality very far-reaching, for there were endemial colics in many other parts of the world, such as the colic of Poitou and the "dry belly-ache" of the West Indies and Central America, all of which were ultimately traced to lead as a cause. Lead colic was, prior to Baker's discovery, a very widespread malady and is now happily very rare.

Scientific in its best sense was the discovery made by Ballard, then medical officer of health of Islington, that certain pestilences—enteric fever, scarlet fever, and diphtheria, which hitherto were supposed to "stalk in darkness"—walked occasionally with the milkman. This great discovery, following on that made by Snow and Budd that cholera and enteric fever could be conveyed by water, encouraged the pathologist to renewed efforts, and it was not long before the "ingenious gentlemen who practise bacteriology" were able to demonstrate to the clinicians that the true causes of some of these diseases were recognisable by the eye and that their habits were such as to fit them peculiarly for transit by water and by fluids mixed with water. The great increase of knowledge which has taken place with regard to infective disease in the last half of this expiring century has been due to the coöperation of the laboratory worker and the clinician. Let us give to Pasteur and Koch their due mead of praise, but do not let us forget the credit which is due to Ballard, Snow, and Lister.

The spread of infective disease is, in the opinion of some of our more enthusiastic and less experienced laboratory workers, to be accounted for solely by the existence of a microbe, and having discovered the microbe they are anxious to push the fact to what they are pleased to call its logical conclusion. In relation to the bacillus tuberculosis we hear propositions for killing 80 per cent. of our cows, for making expectoration a misdemeanour punishable by fine at so much per nummulus, for declaring it felony to drink raw milk, and for converting a dairyman into a sort of ticket-of-leave man. No room is to be left for the exercise of private judgment, albeit that clinicians are feeling that the cause of the spread of infective diseases is still enveloped in mystery and that notwithstanding the light which recent discoveries have given us the unknown is certainly greater than the known. The wise laboratory worker will always be chary of moving without the support of the clinician. One great mistake has already been made in Germany in relation to tuberculosis. This should serve as a warning. As a nation we have a reputation for level-headed common sense, and I feel sure that if in these matters we "legislate in haste" we shall "repent at leisure."

The labours of Edward Jenner in relation to the establishment of vaccination were scientific in the best sense. It is only recently that other facts which seem to bear some analogy to vaccination have received attention at the hands of Pasteur, Haffkine, Wright, Fraser, and others, and we have learnt much, but have much more to learn as to the causes of immunity Practice in this matter has been ahead of theory. The scientific use of theories and the discovery of far-reaching principles gives an impetus to practice and endows it with a degree of certainty and security which it could not possess without it.

Many an antiseptic process has been practised in our kitchens from time immemorial. The careful housewife who long since successfully preserved fruit by bottling was anticipating Pasteur Pasteur has shown us the principles which underlie the process, and has therefore given such an impetus to the art of food preservation that we seem almost to be in danger of famine in relation to food which is really fresh. This is a most important matter, for the practical man is beginning to feel that stale food is no true substitute for fresh food, all chemical analysis to the contrary notwithstanding.

The frequency with which practice has anticipated theory and a knowledge of principles is most interesting. The "unbusied shepherd stretched beneath the hawthorn" munching bread and cheese and a raw onion is doing that which his ancestors learnt centuries ago by the light of Nature and the craving of a natural appetite The physiological chemist arrives somewhat late upon the scene to tell him that he has selected for his meal a perfectly correct mixture of proteids, fats, carbohydrates, antiscorbutics, and antiseptics and Corin stares as M Jourdain stared on learning that his conversation consisted of prose If, however, the physiologist were to suggest a change of diet in favour of a more portable assortment of dried proteid, starch, oleomargarine, and allyl compounds, the best products of his laboratory, he would probably attribute the yokel's refusal to impenetrable stupidity. The physiologist unfortunately can tell the shepherd nothing concerning those natural appetites which are the mainsprings of every human action.

In Stanley's "Darkest Africa" I find a very interesting example of practice ahead of theory. In the second volume the author has some valuable observations on malaria, among which I find the following: "Emin Pasha informed me that he always took a mosquito curtain with him as he believed it was an excellent protection against miasmatic exhalations." Emin's practice was right (a practice, I am told, not unknown in India) albeit that he seemed to have no knowledge that the "miasmatic exhalation" against which he was protected was nothing more or less than a mosquito. It is needless to point out how recent discoveries have supported Emin's practice.[1] We must not lightly abandon established practices at the bidding of each unfledged theory. Theory and practice must go hand in hand, each working for the correction and support of the other if the art of medicine is really to progress and the profession to retain its legitimate hold upon the public.

THE NEW HOSPITAL.

The council of this college soon learnt that a medical school without a hospital was not complete, and that for the education of the medical practitioner science and practice must go hand in hand. The old hospital, so soon to disappear, was opened in 1833, and in it an illustrious line of physicians and surgeons have done work which has redounded to the credit of the institution and have sent out students whose subsequent careers have shown how well they were taught and how diligently they worked It is now 20 years since the old hospital was condemned as unfitted for its purposes[1] by Dr. de Chaumont, the worthy successor of Parkes in the Chair of Hygiene at Netley. Sir Francis Goldsmid came forward and made a noble offer to help us to rebuild it—an offer which the council, after due deliberation, refused, notwithstanding that the general committee and the then staff of the hospital were unanimous that rebuilding was necessary. Thus it has come about that we as a medical school have been handicapped in these days of keen competition by being obliged to carry on the most important part of our teaching in a hospital which, when compared with recent hospitals, was obsolete and squalid. Possibly our ill-fortune has been a blessing in disguise, because the construction of the much-needed new hospital has now been undertaken in a spirit of unbounded generosity and philanthropy by Sir Blundell Maple, whose name will deservedly be honoured as that of Thomas Guy is honoured, and whose noble hospital, the form of which is due to the genius of Alfred Waterhouse, bids fair to be one of the chief ornaments of the new borough of St Pancras. As we are about to take possession of the central (administrative) block and one of the wings of the new hospital it will not be out of place if I say a few words about it

The new hospital has about double the area of the old hospital and occupies the entire "island" bounded by University-street, Huntly-street, Grafton-street, and Gower-street Not only is it surrounded by streets but it faces the college green, and considering that it is necessarily placed near the centre of a densely crowded city it may be said to occupy a site which is exceptionally good in relation to light and air. Nearly the whole of the area will be covered by a noble basement 15 feet in height, rising six feet above the pavement and lighted by large windows and skylights. In this basement will be placed the out-patient departments, baths, offices, store-rooms, &c The ventilation of this basement has received special attention and it will be completely cut off from the central and subsidiary staircases and lift shafts which communicate with the superstructure. The wards have an amount of floor space per bed greater, I believe, than is to be found in any other hospital This is most important as conducing to purity of atmosphere and enabling the individual patient to be easily screened off when necessary—a necessity which for one reason or another is of frequent occurrence In a teaching hospital like ours large floor space is required for the accommodation of students. The wards are amply lighted by windows on both sides and it is one of the advantages of the cruciform ground plan which Mr. Waterhouse has adopted that the majority of the ward windows command a view which is singularly unobstructed because there are no buildings which are opposite and parallel to them. The new operating theatres are highly finished and are arranged and fitted after the best models to be found either in this country or the continent. In them, as in the rest of the hospital, light and cleanliness have ever been in the mind of the donor, the architect, and the medical staff, whose opinions at all times have received the most careful consideration at the hands of the hospital committee and the building committee

We have not been unmindful that science and practice must go hand in hand. If medicine is to advance morbid products must be minutely studied by all the methods which are available A novel feature of the new hospital is the range of rooms on the top floor devoted to the chemical, microscopical, and bacteriological study of morbid products and secretions These investigations often give a certainty to diagnosis which a few years ago was hardly dreamt of, and it must be remembered that upon accuracy of diagnosis depends to a large extent the efficacy of treatment. It may, I think, be confidently said that in no hospital will the latest advances of pure science be more promptly available for the relief of the suffering poor than in the palatial establishment which Sir Blundell Maple is building for us. We are entering at once into possession of three new wards containing 72 beds, new administrative offices, new baths, new operating theatres, and new scientific workrooms for the purposes of research and diagnosis The nurses' wing is rapidly approaching completion and when this is finished we confidently expect that the accommodation provided for our resident medical staff, for our matron, and for nurses and servants, will compare favourably with that of any other hospital It need hardly be said how essential it is that young men and women engaged in the arduous duties of attendance on the sick should be housed in the most wholesome manner possible. There can be no doubt that the present and future students of University College will enjoy facilities for the practical study of disease such as were undreamt-of a few generations back.

LECTURING.

The medical student differs from other students in this, that his course of study is largely controlled by the General Medical Council and the corporations. Seeing that mere examination is a very fallible test of knowledge, and seeing that the public naturally want some guarantee of adequate education from those to whom they entrust their lives, the medical student is compelled to produce proof that he has at least dwelt for a season beside those springs of knowledge from which he may have sipped occasionally when so inclined. He is *compelled*, for example, to produce evidence that he has attended certain lectures, and you will only think it natural for me to make some special allusion to the course of lectures on the *Principles and Practice of Medicine* which (*inter alia*) he is bound to attend. Formerly he was compelled to attend two courses of such lectures; now the examining boards are contented with one course.[1] The medical student is still a very much lectured individual. He has very little time to pick up crumbs of knowledge for himself, but his intellectual pabulum is administered at very frequent intervals, often without regard to his appetite or his powers of assimilation

There is an idea that mere lecturing is of little use, that practical work in the laboratory is the only true complement of practical work in the wards, and that the printing press has rendered lecturing unnecessary. There is a measure of truth in this, and therefore it is almost incumbent upon me to offer some apology for venturing to stand before you as a professor whose duty it is to give lectures on medicine not at the bedside only but in a class room. Perhaps I have been tempted to take upon me the duties of professor of medicine by the recollection of my student days and by the consciousness that in listening to the systematic lectures on medicine of my day I spent time more profitably than I have ever done before or since and obtained a knowledge of medicine which I found in no text-book. In listening to those lectures one's enthusiasm was roused, and one went from the lecture-room to the ward with intenser interest and with greater knowledge of how to observe and what to look for. Not many students even of this college had the good fortune to attend the systematic lectures on medicine by William Jenner, because his tenure of the chair extended only to four or five sessions. Sir William Jenner was the greatest lecturer I have ever heard. He appeared to me to have more insight at the bedside than any other physician I have ever met, and assuredly he was the strongest personality with whom I have ever had dealings in this world. As to Jenner's lectures I have never heard but one opinion. That is interesting, because a lecturer, even a good one, is not always in sympathy with all the members of his audience, and you will find that among students there are widely different opinions as to the merits of their teachers Jenner taught from the fulness of his personal knowledge and largely used the vivid impressions made upon him by cases which he had seen for illuminating and illustrating the principles of medicine. When he suddenly interrupted the thread of his discourse with the words, "I saw a case last week which illustrates this," there followed an interesting recital which was vivid beyond belief and left itself ineradicably fixed on the tablets of the memory. Jenner never talked about things which he did not understand; he was a physician in whom there was little of the metaphysician. He knew that intricate arguments on doubtful points, arguments often difficult to follow even by the best of his audience, were out of place in the lecture-room. There was no attempt at oratory, no wasting of the students' time with flowers of rhetoric, no pretentious display of learning, no pedantry, no "side." His style was that of an honest man, brimful of learning, spurred by enthusiasm for his subject, and genuinely anxious to impart knowledge His manner was his own, at once simple and emphatic. He was a man of transcendent gifts and willingly gave of his best even to the least intelligent. Sharpey, who lectured on physiology, was also an expounder of no common merit who devoted much of his time to lecturing and whose lectures, like those of Jenner, were a recurring pleasure The lectures of Ellis, the professor of anatomy, were highly esteemed by many. To me they proved too soothing even at 9 A.M. He fed us, as it were, on a flavourless gruel of uniform quality which, though theoretically nutritious, proved unappetising to some of us. Two, among the other courses of lectures which I attended, were thoroughly bad, mere incoherent and incomprehensible drivel. I have used the word "attended," but I will ask you to interpret this word in a "schedule" sense.

It is not always the man with the most knowledge and the greatest intellect who makes the best lecturer. Some of our greatest men have had very little power of exposition. A notable instance of this was Professor Thomas Graham of this college who became Master of the Mint. He was the greatest chemist of his age and the worst lecturer conceivable Such a man—and I take him as a type—is far better employed in research than in lecturing. The laboratory, not the theatre, is his proper sphere of action.

Lecturing is not reading. The man who keeps his nose on a manuscript while his audience take a nap might well be replaced by a phonograph with a text-book in its magazine. The functions of a lecturer are different from those of a text-book. The lecturer has power of selecting his material and he must be able to keep in touch with his audience. He knows at once when his audience are interested and when they are bored. A lecturer who fails to maintain order in his class has probably mistaken his vocation The student who pays no attention and who comes to lectures on compulsion is an unmitigated nuisance.

I should not have assumed the duties of the chair of medicine unless I were buoyed by the hope of being useful to those of you who are commencing the study of medicine proper and who, while attending my course, will be mainly occupied in filling the junior clinical appointments In a former address I took occasion to remark that man, who to our unaided vision appears to be at most some six feet by two, is, when viewed by the higher powers of the microscope, about as tall as Mont Blanc and two miles wide across the shoulders. Medical studies have necessarily enlarged with the virtual enlargement of the subject of them, and so it has come about that specialism in medicine is very highly developed—perhaps morbidly hypertrophied. This is inevitable; but a student must generalise before he specialises. As an examiner in medicine of some experience I have noted that students often have a most imperfect grasp of elementary principles

Just as it is the business of the professor of anatomy to deal with the entire framework of the body, so it is, I conceive, the duty of the professor of medicine to endeavour to give the student a comprehensive glance of the entire field. If the young student be too early given over to the teaching of specialists his knowledge is apt to be scrappy and he obtains an acquaintance with medicine which may be compared to that which we may suppose the aphis has of the rosebush on which it feeds. The young student needs instruction as to the proportionate importance of different subjects. He needs to know the common things, and his tendency to run after medical rarities to the neglect of more important matters must be checked rather than encouraged.

Some of the modern text-books written by specialists are often misleading to the student, because diseases which are so rare that an ordinary practitioner may never encounter a single case are treated at inordinate length. I was lately dipping into a work in which the diseases of the skin were dealt with by no fewer than 15 different authors. The knowledge, the half-knowledge, and the no-knowledge of these gentlemen had been elegantly rendered in the dermese language and set before the reader, but the word "itch" did not appear in the index. The child playing with a Noah's ark naively remarked that the beetle was as broad in the back as the elephant and the same criticism may be made on some of our modern treatises, which are apt to mislead a beginner as to the relative importance of different diseases.

I trust that it may be my privilege to be of some use to the beginners of medicine and with the aid of the vast amount of material which is ready to our hand in the museum and the hospital to give a solid foundation and scaffolding upon which you may securely build hereafter, as your knowledge and experience increase.

ENDOWED LECTURES.

One of the results of the reconstitution of the University of London may be a diminution in the number of lecturers and an increase in the size of the classes. Thus it will be possible for a man to give some of his best energies to teaching without suffering from comparative starvation. At present few lecturers earn a "living wage." It must be remembered, however, that lecturing is very hard work. Speaking with no little experience I should say that to really hold the attention of an audience for an hour makes very great demands upon one's store of energy. A man who teaches successfully and lectures day after day may well be excused if his output of what is called original work is not very great. Professor Sharpey was one of the most learned physiologists of his time and yet his fame in the field of discovery is small, and one reason for this is, I believe, due to the fact that his best energies were given to teaching. Not only did he lecture six days a week to large audiences in this college but his advice was sought far and wide, and when sought was freely given to all workers in the vast field of physiology.

We hear a great deal about the endowment of research, and if such endowments should relieve original workers from the drudgery of lecturing, for which possibly they have no great love or aptitude, there can be no doubt that such endowments would advance knowledge and prove a benefit to the student in many ways. The endowment of lectureships, especially of lectureships which students are compelled to attend, is of very doubtful advantage to the student. Dr. Johnson attributed the failure of Gresham College to the fact that the lectureships were endowed while the students paid no fees. Such an arrangement was not calculated to bring out the energies of the professor, and if by chance a professor without the necessary aptitude were appointed to a chair failure and boredom were the results. Every professor needs the stimulus of competition and his emoluments ought mainly to depend upon the fees which are freely paid by students who feel that he can be useful to them. In very few cases ought the endowments of a chair to exceed the amount of fees contributed by students. The best form of endowment would be a provision for old age, which should bear some relation not only to length of service but also to the average earnings in the five years preceding retirement. Thus an inducement would be given to professors whose powers are failing to make room for younger men. Doubtless many of you have heard the story of Gil Blas and the Archbishop of Grenada. It seems *apropos*. Gil Blas, who occupied the post of secretary to the archbishop, was one day thus addressed by the prelate: "My chief pleasure consists in preaching. ...... The honour of being reckoned a perf rator has charmed my imagination ...... but I would avoid he fault of good authors who write too long. ...... Wherefore, ny good Gil Blas, whenever thou shalt perceive my pen smack f old age and my genius flag don't fail to advertise me of t." A few months later the archbishop had an attack of poplexy, from which he recovered sufficiently to enable him o mount again his pulpit steps, but the fire of his genius was xtinct and his congregation said to one another, "This sermon smells strong of the apoplexy." Gil Blas, faithful to his duty, [illegible] his grace, but soon found tha[illegible] an incensed author who had [illegible] elf praised. "Go," [illegible] thrust Gil Blas from his closet; [illegible]; I wish you all manner of [illegible] taste." If lecturers and professors are mainly dependent on their earnings there will be *no need of any Gil Blas to run the risk* of tendering unpalatable advice. On the other hand, the man who has successfully given his best energies to teaching ought to be under no apprehension as to his sustenance in his declining years. Open competition with a fair field is the surest protection against discourses which smell of apoplexy, a protection to which students who are compelled to attend lectures have an undoubted right.

An Introductory Address

ON

THE FUTURE OF THE MEDICAL STUDENT.

Delivered at the Opening of the Winter Session at St. Mary's Hospital on Oct. 1st, 1900,

BY H. STANSFIELD COLLIER, F.R.C.S. ENG.,
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LADIES AND GENTLEMEN,—My colleagues have committed to my care the function of bidding welcome to old and new students at the beginning of this winter's work. We are glad to see you, we look forward to a closer acquaintance with you, since a good deal of the brightness of our lives is reflected from the cheerfulness and enthusiasm of your youth; and you are necessary to us, for without you the work of the great charity which we serve could not possibly be satisfactorily done A short time ago I was in conversation with a gentleman from another country who had been diligently reading a new and unpleasant romance of war from the pen of a great authority on the subject of horse breeding. Dealing with this romance the gentleman said so many things that seemed to be true, so many things more than seemed to be true, and so many things that were less than honest, that he made me visibly uncomfortable, and, being polite, he continued: "And yet your Government appears to manage the teaching hospitals of your metropolis tolerably well" I explained to him that the hospitals were maintained by the bounty of the charitable and were under no immediate supervision of the Government. "Is it possible!" he said. "But is there no State department to look after the maintenance of your medical schools?" "None," I said. "But pardon me," he asked, "permit me to inquire, your salaries, by whom are they paid?" "By the students," I said; "but we are not entirely dependent upon school fees, we practise our profession outside." "For you, yes; but does not the State pay your science teachers?" "No," I said; "the students pay" "Ah," he ejaculated, "how rich your students must be." To be quite frank with you, here is shown another reason that we welcome you.

The fact that medical education in this kingdom is independent of State aid is one of the bulwarks of the dignity of the profession of medicine. The primary purpose of our hospitals is the relief of the sufferings of the poor. The necessary conditions and facilities for medical education are a by-product in the process of transforming the bounty of the charitable into comfort, hope, and health for the unhappy, and this by-product uses up not one grain of the raw metal and adds greatly to the amount of the output [illegible] Samuel Lane and the other founders of this hospital, [illegible]ose who have since added to it and those who have for so long striven to build a new wing, have had compassion, not only upon the sick child and injured man of Paddington, but upon humanity everywhere, for the good which you by the knowledge acquired here will be able to do for men will be spread widely, even as far as the most distant battle-field and plague-stricken city.

An old custom has placed you at my mercy for the next 30 minutes or so in order that the cup of counsel may be offered to you and that a trial may be made of your patience—a quality necessary for your success. For your encouragement I may tell you that you are happier than your fathers were in that this is the only written discourse to which you [illegible] you that your teachers are [illegible] y first advice to the new- [illegible] to the good counsel which [illegible] few days from your parents and friends. There was more to strengthen you for the battle of life in that last hand-grasp of your father than you will find in all the addresses you will ever listen to. No words will help you as much as those which your mother breathed when you parted from her. Keep them ever in remembrance. Each of you has conceived a picture of his future as a student of medicine in bright or sober colours, according to his temperament, probably cheerful, simple, and perhaps with little meaning in it; but as the future becomes the present the visionary picture fades, and in its place is a real and totally different picture, beautiful or ugly, as you shall paint it, but always of great significance and never without light and shadow. Do not work only when the sun shines. Let no discouraging circumstance make you relax your efforts. Remember that some of the best work ever done has appeared for the time to be unfruitful, and that no one can always appreciate his progress. Real work never yet was a continuous pleasure, enthusiasm must ebb and a sense of duty take its place.

Your energies must at first be *devoted* entirely to the acquisition and storing of facts; see that they be well arranged and tidily stored. The best student is not necessarily the man who learns most easily, but he who has made it his habit to keep in order the storehouse of his knowledge that the grain of his harvesting be kept from decay. Of course, memory is made up of [illegible] in an equal degree by everyo[illegible] that effort and the habit of re[illegible] out which the best natural gifts are worthless, and by means of which the least favoured may attain to high proficiency in the art of remembering. But you will not long remain mere collectors of facts; you will soon be able to use them with understanding in the process of thinking for yourselves—an exercise pleasurable even in the smallest matters. May I read to you some quaint words of John Locke? "He that hawks at larks and sparrows has no less sport, though [illegible] soul so it is employed with a greater and more constant delight than any other. Its searches after truth are a sort of hawking and hunting wherein the very pursuit makes a great part of the pleasure Every step which the mind takes in its progress towards knowledge makes some discovery which is not only new, but the best too, for the time at least. For the understanding, like the eye, judging of objects only by its own sight, cannot but be pleased with what it discovers, having less regret for what has escaped it because it is unknown. Thus he who has raised himself above the alms basket, and not content to live lazily on scraps of begged opinion sets his own thoughts on work to find and follow truth, will (whatever he lights on) not miss the hunter's satisfaction. Every moment of his pursuit will reward his pains with some delight, and he will have reason to think his time not ill spent even when he cannot much boast of any great acquisition." In these words does not Locke discover an excellent spirit in which *to strive and to* meet in the right way the checks, blank drawings, throwings out and fallings off which are incidental to all work? As your ideas become more complex, and leaving the more sure ground of knowledge you travel towards the unknown, imagination comes to *you*, to be a help or danger as you use it well or ill—a help if firmly linked with what is known, a snare if uncontrolled.

Two words are often abused by students when they are speaking of one another. They are the words "practical" and "theoretical." "So and so is a practical man and So-and-so is theoretical" The former is used as a term of commendation, the latter in a disparaging sense. These terms must be thoroughly understood or they are dangerous to the young student. In its proper sense, as applied to a student, the word "practical" signifies that he has the faculty of applying knowledge to useful ends and therefore necessitates *the premiss that he possesses knowledge* But this word is so often misapplied that the beginner might almost be led to think it is a virtue to shun books and lectures, to turn out to grass his mind, and with a carpenter-like industry to busy only his neuro-muscular system in the more mechanical parts of work. When the word "theoretical" is properly made a term of contempt it is used in a debased sense, having no connexion with theory and signifying simply "not practical." I have not found that the mind of the unpractical man is overburdened with theory or with anything else save dreams and aspirations. The word "theory" in any of its dictionary meanings commands respect—whether it is used in the sense of "an explanation or system of anything" or "an exposition of the principles of a science or art," or as a hypothesis not yet proved or disproved by facts. Using the word in the last sense it is true that a theory is *sometimes only a will-o'-the wisp*, but at times it is the dawn of a bright new day of knowledge. And here is an instance especially pleasant to all of us. Until very recently the essential cause of rheumatic fever was unknown. It was conjectured to be a micro organism, but this was not proved, and for the time it was necessary to be content with the germ-theory of this disease. It has been the well-deserved good fortune of two St. Mary's Hospital men, who not very long ago were in your position, to give this theory substance, and their work will, I doubt not, in the coming time pave the way to the overthrow of that monster which has made desolate so many hearths, which has done to death so many of our loved ones.

Let me commend to the beginner the practical study of anatomy. It is in the knowledge of this subject that now and then a modern student compares unfavourably with his predecessors. The reason is not far to be sought. The studies of modern physiology and biology are so fascinating that the student's interest does not relax until the daylight fades and tired nature demands rest and tea. He learns a great deal about anatomy—all those things which can be taught him by the clever word-pictures of teachers and books—he passes anatomical examinations creditably enough, though the impressions on his mind are not vivid and lasting, but one might almost wish that the lecturer and demonstrators were less cunning in the art of teaching, for he relies more upon their words than upon his own handiwork in the dissecting-room; he cultivates the memory disproportionately to the faculty of observation, to the detriment and overburdening of the memory.

Examinations will loom large in your horizon in the next few years. They are not pleasant things, but neither are they intrinsically distressful ordeals. It is the imagination of the student which sometimes makes them so. Some men occupy themselves so with anxiety about approaching examinations, with wishing they may pass, with thinking what they will do if they do or do not pass, that they have no time for that work which can enable them to achieve success, and after failing perhaps they spend a month or two in mourning for themselves and in making an exhaustive review of the shortcomings of examiners The man who passes an examination brilliantly is to be envied. The man who, having been refused in spite of his best efforts, triumphs over his disappointment not permitting the weight of it to bend him one hair-breadth from his purpose, is even more to be envied.

To-morrow the librarian will sell many note-books. The penny note-book with its frail binding is the worst bargain; the note-book should be small and neat, and the name and address of the owner should be written in it. It will be required for some time. it must be easily carried about, and it is going to be of considerable value. Each note should be short and should contain the substance of a thought without much elaboration. It is to be used as a cue to reflection and mental repetition, not as a substitute for the text-book. The value of a note is very small unless it is read over and mastered while the connexions and perspectives given by the teacher are fresh in the student's mind. The beginning of each evening's work should be an overhauling, patching up, and mending of the day's notes, and to facilitate this notes should not be crowded together. Some note-books are embellished with names of many authorities The habit of connecting ideas with their authors is a graceful accomplishment and is believed to produce a "positive emotional state" in the nervous systems of the brotherhood of examiners in physiology. My own efforts in this direction were not without success, for I remember coupling together, as the joint authors of an excellent new piece of work, the great names of Hallam and Brown-Séquard. I can vouch for the emotional state of my examiners who in a kindly manner made it known to me for how many years horses had grazed upon the turf which covers all that is mortal of the once inquisitive Hallam.

The question of choosing the course to be followed in the matter of examinations has, perhaps, not been definitely decided by all of you. It is prudent not to expect, or rely upon, any considerable changes in the relative value of the various qualifications in the immediate future, but to base your choice upon the present conditions. The nature of the qualifications which the beginner is to select must depend upon his purse, his industry, and his ambition. If any one of you is hesitating as to the course to follow in this matter let me urge him to [illegible] qualifications. *No examination is so* [illegible] as to be beyond the power of an ordinary intellect, nor is the least successful effort without some reward. "All that I strove to be and was not comforts me," said a great man. When you are settled in practice and known by your work you will be sought for and loved and trusted by the public for your personal worth, and it will matter very little whether you are entitled to wear a hood or a red gown. But in the difficult early days of life's march it is a very great advantage to ride under a grand and imposing banner.

However engrossed in his work the good student may be he does not neglect his personal physiology and anatomy but goes in heartily for sports and exercise. The majority of our gold medalists and of our best house surgeons have been keen sportsmen. When to-morrow you begin work in the school remember that you are putting in the foundations of that house which is to last you your life and that upon their thoroughness will depend the value of their more imposing superstructure. Above all things do not devote yourselves too exclusively to any one subject. Be good men "all round." Do not decide upon taking up for your life work any one branch of the profession until you are qualified, and do not imagine that there is not scope for your genius in any subject; that a particular branch of medicine or surgery is limited and that finality has been reached is a belief which time is continually upsetting. Here is a good example. In Erichsen's great work and in the seventh edition published in 1877 we may read: "When we reflect upon the triumphs of the surgeon's art ...... we can scarcely believe otherwise than that little remains for the daring to devise or the skill of the most dexterous to accomplish in the extension of that art in the direction of its operative department, and that the *surgeon must in future* be content to repeat, though possibly in a modified manner, those operations which have been inaugurated by the genius and perfected by the skill of his predecessors." In that edition there is not mentioned a single operation upon the kidney. And there are no higher and no lower branches of the profession. There are two ranks in the profession. The first includes all those who benefit the world by adding new knowledge; the second rank all of the rest of us who apply old and new knowledge to the immediate needs of mankind.

In the course of your work you will have much to do with the London poor. They are perhaps the most intelligent and interesting poor people in the world. There is nothing picturesque about them, the uncleanness of some of them will shock you, and the respect in which you hold mankind may be in danger of falling. Indeed, if you are sufficiently ignorant of the influence of *environment* upon the good and bad qualities of man it may be an effort to sympathise thoroughly with all their misfortunes. But look at that poor woman who came in the other day with so many evidences of a miserable life voyage; she is dying and as you feel her failing pulse, she fumbles for a handkerchief to save your fingers from being offended with the cold sweat of death. That little child upon the operating table for the second time is a common little slum child, but she looks into your face and says, "Kiss me first, doctor," and you suddenly think of your own sister. As you come to know your patients you will see among them much that is heroic—such fortitude and patience and self-denial as you feel yourselves incapable of, and you will not blush to think that they are fellow-men. Medical students have always been the good genii of the hospital patients. The poor of

I

is done for them I do not think this is the case It is more true that, as a rule, they are not demonstrative This story was told me yesterday An old and rare eight dollar American gold piece was sent as a gift to a hospital Being an unusual kind of donation inquiries were made and the giver was found to be an old hospital patient It was a poor woman who was suffering from a incurable disease The coin had years before been given her by her mother and now, being unable to earn a living and feeling the pinch of poverty, the temptation to sell the coin came upon her, and to resist what seemed to her an impiety she gave her one treasure to that charity which we may be sure she loved and trusted most

I had reached this point in my discourse and had called to mind other stories and had arranged that each succeeding one should be more pathetic than the last when—and I dare-say you are very glad for it—I was interrupted by a call to the hospital To return home I took a cab The cabman thrashed the horse I remonstrated, irritatingly enough, I daresay The cabman repeated his cruelty I got out "'E's such an awkward 'orse," said he, "no one can't do no good with 'im" Now at this stage I ought to have turned on my heel, but foolishly I returned to the charge It was not met "Yes, sir, you're quite right, I ain't got no mercy on 'im," admitted the cabman, and I thought I had begun to score "But, cabman," I said, "if you are so cruel you will surely want a great deal of mercy yourself when you come to die" "I don't know, sir," said he, "as long as it ain't at St Mary's 'Ospital and under the care of Mr Collier I might do without" There was something familiar to me in the man's voice, and though the night was dark I thought I recognised one of my oldest and most regular out patients His chuckle was hearty and his "good night" was kindly, and I have seen him here since

Are you to be congratulated upon your choice of a profession? Certainly not, if you only care for riches and power and yourselves; certainly n
ease loving recluse Yes, if you
you love mankind and the throb
minds not being made up, you may say 'Well, but the profession sees so much of the bad side of human nature" True, experience will early rob you of many pleasing illusions, but you will also see more of the good side of humanity than most other people You will see more of man as he really is, without the disguise—often disfiguring—in which modern civilisation wraps him "And," you may continue, "one will have to come in contact with all classes of society' Yes, and you will see in each the proofs of man's high destiny "But is the work of the profession appreciated by the laity?" I think I can give you a good answer You have read of the great plague of London and how the people fled to Highgate, Hampstead, and Finchley, and the city was for a long time ruined and deserted And now the same enemy is knocking at our gates I do
ng papers that the good people of
their workshops and fleeing to the
of the citizens at the present time
is not the false trust that plague cannot spread widely in a modern city, but their confidence in that power of defence which medical knowledge alone can give The plague will not frighten them All that the townsmen will do will be to pull down and sweep away those nasty relics of times in which the science of preventive medicine was practically unknown and to reward, right well we may be sure, the splendid work which the health officers have done

And about your prospects? As we face the hill which all of us must climb it must be admitted that it has a rather harsh face and seems to be high and steep, but all of us, I believe, will sooner or later reach a table land of modest prosperity or, at any rate contentment Are there too many men in the profession? From the point of view of suffering humanity are there too many? Are all the sick well cared for? Are there too many workers in the field of research? Is all that is possible being done for the protection of our children from tubercle? Is the stamping out of rabies a quixotic achievement not to be imitated? Is the Royal Army Medical Corps overcrowded? Are none of us over-worked? But from the point of view of a livelihood—aye, there's the rub Let us hope that time—which mends all things—may hurry up in this business

I have now only to wish you as good a time as I have had May you meet with as much kindness and forbearance as you

nected with it become as dear to you as to me May I, on behalf of the staff and the students, thank you ladies for your presence We know how important it is that the armour of our young warriors should be buckled on by your
a surgeon gives a non-
his art, he should pay
uses of those great
blessings anæsthetics and antiseptics. I would do so and would link with them one more discoverer, Miss Nightingale, who discovered the modern nurse

Abstracts
OF
INTRODUCTORY ADDRESSES, ETC.,
DELIVERED AT THE
LONDON AND PROVINCIAL MEDICAL SCHOOLS
AT THE
Opening of the Session 1900-1901.

ST GEORGE S HOSPITAL

INTRODUCTORY ADDRESS BY F G, PENROSE, M D, F R C P LOND PHYSICIAN TO AND LECTURER ON MEDICINE AT, THE HOSPITAL

DR PENROSE began his address by offering a welcome on behalf of his colleagues to those who were joining the school for the first time He mentioned some of the vacancies which death had caused in the ranks of the governors of the hospital, referring particularly to the Duke of Westminster, Lord Clifden, and Mr George Shaw Stewart Speaking of the changes amongst the teachers in the school Dr Penrose mentioned especially the elevation of Mr Warrington Haward to the consulting staff and said how much he would be missed from the active work of the wards and the school He congratulated Dr W S Lazarus Barlow, who had resigned the curatorship of the museum, on his appointment to the charge of the clinical laboratories which had recently been opened at the Westminster Hospital He spoke of the gain to the hospital and school by the appointment of Mr H S Pendlebury as an assistant surgeon In alluding to the reconstitution of the University of London Dr Penrose said that it had been recognised for the past 20 years that the original institution was a university in name only, almost its only function being that of an examining body (a work which it had performed admirably), but that it did not in any way fill the position that the university of this metropolis should fill It might be hoped that, as newly organised, it would become the centre of the highest learning and the best teaching and that it might attract workers in all kinds of research, whilst still maintaining the high standard in its examinations and in the control of education that the old institution had done He hoped that one good result would be a reduction in the number of examinations which the future student would have to pass in order to obtain his qualifications and degree He thought that a primary, an intermediate, and a final examination would be quite sufficient to satisfy all necessary requirements The rest of Dr. Penrose s address was devoted to a consideration of some of the problems of medical education He said that at the present time, owing to the immense range of the subjects included under the term "medicine"—using the term in its broadest sense—and the minute subdivisions of the practice into numerous special branches, he thought that the best way was to ensure that students should be thoroughly grounded in the principles and technique of the chief sciences on which medicine and surgery were founded These he considered to be anatomy, biology, chemistry, and physiology The importance of a practical acquaintance with two of these sciences—viz, human anatomy and physiology—was already provided for As there were only two years available for the study of the fundamental sciences the time that could be devoted to biology and chemistry was very limited Dr Penrose thought that chemistry, particularly those branches which were known as physiological and pathological chemistry, were of such importance that he would like every student of medicine to have the opportunity of acquiring as thorough a practical knowledge of these subjects in the laboratory as he had of learning human anatomy in the dissecting-room. In order to make this possible he suggested that three years at least should be allotted to the subjects above-mentioned. He also looked forward to the establishment of a clinical laboratory which would provide men with an opportunity of following up chemical and other problems arising directly out of the work in the wards. Dr. Penrose alluded to the feeling which was held by some people that the subscriptions and donations to a hospital should be used only for the care and treatment of the patients, which feeling, he felt, was worthy of all respect, though he did not entirely agree with it. He quoted some remarks made by Lord Lister at the opening of the new laboratories at the Westminster Hospital in the early part of the summer[1] in support of those who considered that the funds of a charity might legitimately be spent in helping some forms of medical education and research. He thought that the subscribers should know exactly how the hospital funds were expended. He stated his belief that there were many wealthy philanthropic men in the country who would be willing to assist the hospitals and teaching schools by contributing directly to such objects, and he mentioned the munificent gift of Lord Iveagh to the Jenner Institute of Preventive Medicine as an example. Finally, he endeavoured to show that the remarkable advances that had been made in medicine and surgery during the past quarter of a century were due to a combination of work done in the laboratory and in the ward, yet the greatest results had come from the former rather than from the latter.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

INTRODUCTORY ADDRESS BY MISS L. B. ALDRICH-BLAKE, M.D., M.S. LOND.

MISS ALDRICH-BLAKE said: My most pleasant duty is to welcome, in the name of the London School of Medicine for Women, those students who to-day begin their life here. I chose for the subject of this opening address: Our Common Work, the Preparation for the Practice of the Profession of Medicine.

One great advantage of our profession as a field for our energies is the large number of faculties which may, and the considerable number which must, be cultivated in order that we may be even passable disciples of that science and art. Every good quality, either of intellect or character, can find scope in the daily life of a doctor, and those who have had the best opportunities for judging consider that the influence of character on the career is the greater. We need courage to attack difficulties, energy to overcome them, thoroughness to do our best in everything, and truth—which means accurate thinking as well as right speaking—and we must cultivate these qualities by every possible means. Bacon has said: "Since custome is the principall magistrate of man's life, let men by all means endeavour to obtain good customes. Certainly custome is most perfect when it beginneth in young years." We see that right habits are no less a public duty than a private duty, for Bacon continues: "But if the force of custome simple and separate be great, the force of custome copulate and conjoyned and collegiate is far greater. For there example teacheth, company comforteth, emulation quickeneth, glory raiseth, so as in such places the force of custome is in his exaltation." Therefore, both to the individual and to the school, the formation of right habits is of extreme importance.

A more difficult question is what are right customs in relation to the school, our work and our patients? This school was founded in 1874 and we now find ourselves established in a luxury of housing that is well to bear in mind as a thing to be grateful for. Our gratitude may best be shown by keeping alive in the school that spirit most conducive to good work. Some ancient has said: "What is not good for the hive is not good for the bee." As members of the school and afterwards as members of the medical profession, we can give thought to the whole without danger of swamping our individual interests. The influence of students upon one another is far greater than that which can possibly be exercised by the constituted authorities. It belongs to each one of you to make the spirit of this place worthy of its greater body. The spirit needed is of that nature which looks upon obstacles as things to be overcome. If some measure of public spirit has ruled your school life, medical etiquette, I think you will find, seldom requires of you more than the old maxim, "Do as you would be done by," would demand of any honourable person. "With regard to work," Dr. Arnold has said, "I suppose the desirable feeling to entertain is always to expect to succeed and never to think you have succeeded." Without hope work would, indeed, be a half-hearted sort of thing. Humility is a virtue, and perhaps the surprises of life are less apt to take a pleasant form for those whose estimate of their own worth is great than for those whose estimate is small, but beware of that humility which would paralyse honest effort. "Never to think you have succeeded" is quite as important. In the lives of all great men we cannot fail to be struck with the enormous energy with which they pursue their work, one thing leading to another—an energy which in our small way we ought to exercise, feeling that anything which we have attained is only an opportunity to do something further. You are preparing for a profession in which learning must continue as long as life lasts and for which self-instruction and self-reliance are absolutely essential. As Herbert Spencer has said: "It is not the knowledge stored up as intellectual fat which is of value, but that which has been converted into intellectual muscle." Now, though good teaching is absolutely essential, mere recipients of knowledge do not acquire the power of attacking new subjects on their own account. The difference between being educated and being crammed is that in the former the powers of observation and reflection are developed, whereas in the latter the mind is more passive and the brain is expected to receive an undue quantity of predigested matter to be retained as best it may. The great increase in the facilities for practical work compensates somewhat for the far larger ground which has to be gone over. Your course is accurately mapped out for you, but the liberty of doing or not doing your individual best always remains to you. Learn your anatomy, physiology, &c., not merely on account of examinations, but because your after-work requires that knowledge.

Cultivate by every means in your power habits of patient and accurate observation. A diagnosis does not mean the mere fitting of a disease with its name—what you want is a just view of the whole condition of the patient. Sir James Paget once said that it would be interesting if someone wrote a history, not of discovery but of oversights. He says: "We never pass a month, never a week, without finding observations made, discoveries made by persons at work in the same field that we are, or suppose ourselves to be, at work. And why do we not see these things? Surely, that these persons should have seen them clearly and that a crowd of others should not have observed them at all must be a proof that the crowd was either very careless or very idle, or really it was a proof that observation is very difficult and not to be acquired except by the most careful study and self-discipline." Opportunities for such study are yours if you will but use them. Attend all class examinations, for writing upon a subject shows how vague and indistinct are many impressions which we take for knowledge and attendance at these minor trials cultivates in one that most valuable quality, presence of mind. Do not be too much afraid of making mistakes. If on this account you avoid answering a question you waste a valuable opportunity of getting the correct solution impressed on your mind. Cultivate the habit of rapid reasoning, so that your answer, whether right or wrong, instead of being a mere guess has some real basis in your mind. The two chief sources of mistakes are ignorance and carelessness; if you avoid the latter the former will largely cure itself. Carelessness in work must be to us an unpardonable sin, and thoroughness in its widest sense must be our highest aim. Whatever duties we undertake let us remember that they are ours to fulfil to the best of our ability and that they ought not lightly to be given up because something better presents itself. Experience, valuable as it is, will be found to be dearly bought at the expense of a reputation for reliability.

In the treatment of the patient lies the test of the success of our education and none of you will imagine that treatment begins and ends with the presentation of a suitable prescription. If you are to be as useful as possible you must keep in mind the fact that you have to treat an individual and not a type, and that the wide knowledge which is only to be obtained by real study of human nature will enable you to do this successfully. There is no incompatibility whatever between science and that which one might call wisdom, but both are needed. Remember that your object is to heal. You must never give avoidable pain, either by touch, speech, or manner, and because you *will be obliged to do much that must necessarily give pain* be the more careful never to do so needlessly. However little a patient may be able to estimate your intellectual and technical attainments any one of them can appreciate your kindness. To be broad-minded, thorough, kind: the saying of it is easy, the doing will last us all our lives.

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[1] THE LANCET, June 16th, 1900, p. 1747.

ROYAL VETERINARY COLLEGE.

INTRODUCTORY ADDRESS BY PROFESSOR JOHN MCFADYEAN, M.B., C.M., F.R.S. EDIN., PROFESSOR OF COMPARATIVE PATHOLOGY AND BACTERIOLOGY AT THE COLLEGE.

AFTER referring to some of the principal events of the preceding session the lecturer observed that the occasion was in one respect a very special one, inasmuch as they stood at the close of the century which embraced almost the whole of the past history of the veterinary profession in Great Britain. From time immemorial man had endeavoured to interfere with the course of disease in the animals which he had domesticated, but the foundation of the oldest European veterinary colleges during the latter half of the eighteenth century was the real birth of veterinary science. 100 years ago the Royal Veterinary College was only in the tenth year [illegible] changes had come over [illegible] study of the methods [illegible] and knowledge in- [illegible] luable lessons for the members of the profession at the present day.

Referring in the first place to the growth of knowledge *regarding the causes of disease Professor McFadyean* instanced the cases of glanders and tuberculosis. At the beginning of the century the fact that glanders was con- [illegible] country, but it was [illegible] hat way. Coleman, [illegible] the first 39 years of the century, believed that the disease was more frequently generated than caught. Such a belief was never justified, and it only appeared to be so because outbreaks of the disease not infrequently occurred in stables into which no horse showing any symptom of glanders had ever been admitted and because it often broke out during or at the end of a voyage among horses that appeared to be perfectly healthy at the time when they were shipped. These were actual facts, of which illustrations continued to occur at the present time, but they did not prove or even make probable the spontaneous origin of glanders. One of the premisses necessary to justify the conclusion had been erroneously assumed to be true—viz., that the apparently healthy horses among which the disease broke out were all free from glanders. When large cargoes of horses were shipped over sea the disease often broke out among them simply because glanders was a very common disease throughout the whole of Europe and because many glandered horses retained for considerable periods the appearance of perfect [illegible] latter truth *neither* ger [illegible] All that was required [illegible] examination, which cou [illegible] glanderous lesions in many cases in which the horse showed no symptoms of the disease during life.

Judging from the literature of the time tuberculosis as a disease of the lower animals did not appear to have attracted much attention [illegible] in this country during the c [illegible] but when it came to be [illegible] common disease among cattl [illegible] then prevalent regarding human consumption, including a firm belief in its inheritance. As recently as 20 years ago [illegible] reditary [illegible] It was [illegible] of that view had been generally recognised. This belief was shattered (1) by recognition of the fact that contagion was at least one of the modes of origin of the disease, and (2) by careful post-mortem examination of the new-born calves of tuberculous cows. Observations of the latter kind had shown that except in comparatively rare instances the progeny of tuberculous cows came into the world without any trace of the disease in any of their organs, and recognition of the contagious nature of the disease made it almost absurd to ascribe its greater frequency in *particular families to congenital transmission.* The natural and correct interpretation of the facts was that the greater frequency of tuberculosis among the progeny of those who were themselves visibly affected with the disease was due to the offspring being almost invariably born into a place in which they were afterwards constantly exposed to the risk of infection. These and many other instances emphasised the importance of painstaking investigation along the lines of clinical observation and post-mortem examination. At the same time it was important to notice that the great majority of the discoveries of the century regarding the causes of disease had been made, not by greater assiduity in the collecting of clinical observations or in recording the appearances revealed by post-mortem examination, but by the application of new methods of research in which the use of the microscope, the artificial cultivation of bacteria, and experimentation with animals had played the chief part. It was difficult to apportion to each of these three methods of research the credit that belonged to it, mainly because they had usually been employed in combination. Immense strides in pathology had undoubtedly been made simply by the microscopical examination of diseased tissues, and a large part of their knowledge of the disease-producing bacteria had been acquired independently of experiment on the living animal, but no honest person acquainted with the facts could deny that they now knew much that was of the highest practical importance regarding both human and animal diseases of which they would still have been ignorant had experimentation on living animals been a forbidden method of investigation.

Discoveries which threw new light on the cause and nature *of disease necessarily influenced methods of treatment* and prevention, and the past century had witnessed great changes in the means adopted to counteract disease. There was no lack of alleged remedies at the beginning of the century, but many methods of treatment in which their [illegible] almost [illegible] There [illegible] ts than [illegible] l make them careful in estimating the effect of remedies in their own time. Blistering and firing were still much practised, and it might be said that they had stood the test of the century, but it was perhaps permissible to suggest that the clinical *evidence even of a* century might not be conclusive in such a question. At the time when every patient, human and equine, was bled and physicked there was no evidence as to the merits of less vigorous treatment, and so at the present day it might with much truth be said that the alleged overwhelming evidence in favour of firing and blistering was no evidence at all. Thousands of horses were fired and blistered (which involved a period of rest); many got well or were improved, and the result was set down to the credit of the counter-irritation. But at the present time no one with any considerable practice dared to treat his sprains, splints, and spavins by simple rest without blistering or firing, and neither the past nor the present furnished the *necessary data* from which to estimate the therapeutic value of severe counter-irritation.

They were, perhaps, entitled to regard as one of the advances of the century that they were more inclined than their forefathers to credit the sick or wounded animal with greater natural powers of recovery, and a fuller knowledge of pathology had done much to restrict the administration of internal medicines and to *emphasise the importance of all* that is included under the term "hygiene." They had come to recognise that not a few of the things that were at one time viewed as being themselves the essence of disease were in reality processes of defence or repair and did not require any repression by medication. When the cause of disease had been removed medicinal substances could do little or nothing to hurry nature in the process of repair, and great care should be exercised before saying of any drug that "if it did no good it could do no harm."

ANEURYSM OF THE RENAL ARTERY.

BY HENRY MORRIS,
VICE-PRESIDENT, AND CHAIRMAN OF THE COURT OF EXAMINERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; SURGEON TO THE MIDDLESEX HOSPITAL.

TRAUMATIC aneurysm is one of the consequences of injury to the pedicle of the kidney, but aneurysms of the renal artery and its branches also occur in man from causes other than injury. They have been met with likewise in the horse. In the human subject, however, renal aneurysms, whether traumatic or spontaneous, are amongst the rarest of all aneurysms. Two varieties are found after injuries: (1) small sacciform aneurysm, the walls of which are formed by some or all the coats of the artery; and (2) large, false aneurysm, the walls of which are composed of the condensed fibrous tissue developed around the extravasated and coagulated blood, and with which the surrounding organs and tissues become more or less firmly matted.

A false aneurysm has in some cases gone on growing for years and has ultimately attained an enormous size, as in the case under my care, which I report further on, and in which the tumour occupied half the abdomen. They develop in three ways—namely: (1) by the giving way of a small, true aneurysm, which may be either of spontaneous or traumatic origin; (2) by the yielding of a thrombus which temporarily closed a ruptured artery; and (3) by the immediate outpouring of blood from a ruptured artery.

A true aneurysm—always apparently of small size—if of traumatic origin may be associated with an extravasation of blood or urine or of blood and urine, both aneurysm and extravasation being the consequences of the same accident. One such case at least is on record (Reeves's). In this case the swelling detected during life was caused by the extravasation of blood and urine around the contused and lacerated kidney; the tumour was what some surgeons would describe as a false hydro-hæmato-nephrosis. The small aneurysm was a post-mortem coincidence and had no bearing on the cause of death, but none the less appears to have been an interesting and rare result of the injury.

A true aneurysm may be associated with a false aneurysm and both may be the direct results of the same accident. Thus, a small sacciform aneurysm may be situated on the renal artery and the artery or one of its branches may be torn across or lacerated further on and there open into the false aneurysmal sac. Such was the condition in Hilton's case.

TRUE ANEURYSM OF TRAUMATIC ORIGIN ASSOCIATED WITH FALSE HYDRO HÆMATO NEPHROSIS.

An instance of the sacciform variety was referred to in my book "Surgical Diseases of the Kidney," 1884, as Reeves's case. It is the same case as that published by the late Dr. F. C Turner.[1] It occurred in a lad, aged 19 years, who was thrown out of a cart on May 13th, 1884. Hæmaturia occurred from the sixth day onwards, being particularly profuse on the twenty-second and twenty-seventh days. There was pain in the right side with vomiting and irregular pyrexia of a hectic type. On June 10th—i.e., on the twenty-eighth day after the injury—a swelling appeared in the right loin and the lad died on June 13th. There were blood and inflammatory lymph in the peritoneal cavity and a hæmatoma in the right loin. The right kidney, which was entirely separated from its capsule, lay in a hæmorrhagic cyst filled up with disintegrated blood-clot; the kidney substance was disorganised except a small portion at the lower pole. The calyces were ulcerated and contained puriform fluid and communicated as did also the renal pelvis with the perinephric cavity. On the posterior surface of this kidney, near the hilum, was a well-defined encapsulated blood-clot of round outline and of the size of a cherry attached to the central branch of the renal artery, about half an inch from the point of division of the arterial trunk. The seventh and eighth ribs were fractured on the right side. There was blood-clot in the bladder and areas of suppuration were found in the cortical portion of the left kidney.

In this case the swelling detected during life was caused by the extravasation of blood and urine around the contused and lacerated kidney—it was what some surgeons would describe as a false [illegible] death was the disorg[illegible] nephritis of the oth[illegible]. The aneurysm was a coincidence in the case, but none the less a very rare and interesting result of the injury.

This and the following are the only cases of small sacciform traumatic aneurysm of which I know. Whether—if the injury to the kidney in these cases had been less severe and the patients had lived—the small aneurysms would have become cured, or remained stationary, or, preserving their true sac-like type, would have increased in size, or would have ultimately ruptured and led to a large false aneurysm, it is impossible to say.

TRUE ANEURYSM OF TRAUMATIC ORIGIN ASSOCIATED WITH FALSE ANEURYSM DUE TO RUPTURE OF THE ARTERY AND NOT OF THE SACCIFORM ANEURYSM.

The following case (referred to in my book) is also an illustration of a true sacciform aneurysm of traumatic origin. A man, aged 21 years, who had been struck by the buffer of an engine, was admitted into Guy's Hospital, under the care of Hilton,[2] on June 20th, 1866. On admission he vomited and complained of great pain in the abdomen just beneath the ribs which was aggravated on the slightest pressure; the next morning the vomiting and pain continued, but he was able to walk to the closet, where he passed both urine and fæces. On the day following the injury the catheter had to be passed and one and a half pints of bloody urine were withdrawn. Some improvement followed on the fourth and fifth days, but on the eighth there was an increased quantity of blood in the urine. From the fourteenth day till his death clots of blood accumulated in the bladder and gave rise to agonising pain in the hypogastrium and at the end of the penis. A dull swelling formed in the left side of the abdomen, tympanites and delirium supervened, and the patient died on the twenty sixth day. The left kidney was found to be ruptured across the middle and the lower segment was cracked transversely by numerous minute fissures. The left ureter and a branch of the left renal artery, on which was a small recent aneursym, opened into a large cavity surrounding the broken kidney, and was filled with grumous and vilely offensive blood-clot and urine. The renal vein was not injured. In the peritoneum, forming the anterior wall of this cavity, there was a ragged rent in a thin slough, through which offensive bloody serum was found to exude into the peritoneal sac. No positive evidence of peritonitis existed.

In this case though the branch of the renal artery upon which the aneurysm was situated opened into a large space containing blood-clot and urine, it would appear that the small sacciform aneurysm had not yielded and did not itself communicate directly with the false aneurysmal sac.

FALSE ANEURYSM DUE TO THE BURSTING OF A SACCIFORM ANEURYSM.

CASE 1.—An example of a large traumatic false aneurysm originating from a true aneurysm of the left renal artery was published in 1891 by Grüber.[3] The subject was a workman, aged 39 years, who was admitted into the Rochus Hospital on Dec. 14th, 1890, eight months after falling from a height of two metres and striking his back against a box. Great dyspnœa and great pain in the left loin immediately followed the injury and half an hour later his urine contained blood, and blood-clots of indefinite shape were passed during the next two days. For three months he suffered much pain in the loin, but there was no further hæmaturia; then without known cause hæmorrhages recurred on several occasions. On admission there was a tumour in the left hypochondrium which reached downwards into the false pelvis and inwards two fingers' breadth beyond the median line. This tumour was dull on percussion, of a soft solid consistence, smooth in outline, tender on pressure, and non-adherent to the abdominal wall. It did not pulsate and gave no auscultatory sign. Micturition was very frequent and there was hæmaturia which was aggravated by exercise. The symptoms increased and the man became very cachetic and died paraplegic in the beginning of February, 1891. At the post-mortem examination there was found a sac 20 centimetres by 12 centimetres. Where the left renal artery entered this sac it was dilated to the size of a child's fist.

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[1] Reeves: THE LANCET, Oct. 4th, 1884, p. 583, and Transactions of the Pathological Society of London, 1885, p. 277.

[2] Guy's Hospital Reports, 1868, third series, vol. xiii., p. 9

[3] Wiener Medicinische Wochenschrift, 1891, Band xli., p. 1646.

renal artery.

In this case the history is consistent with the post-mortem appearances: a fall followed by severe pain in the loin and [illegible] continuance of pain in the loin, [illegible] or three months; then when the [illegible] ecurrence of hæmorrhage and the [illegible] a tumour.

CASE 2.—Oestreich has published[4] a case which he described [illegible] aneurysm of the left renal artery, [illegible] onic endarteritis. It occurred [illegible] he fell in an unconscious state [illegible] February, 1891. Two months afterwards there was hæmorrhage, presumably from the left kidney, which daily became worse. On admission, three months or rather more after the fall, a large tumour was detected in the left renal region and the bladder was distended with a large quantity of clot and fluid blood. Death ensued three days later. At the post-mortem examination a large mass of laminated clot surrounded with layers of fresh blood-clot was found behind the peritoneum around the left kidney and descending colon. It was partly in the parenchyma of the lower end of the kidney and partly in the surrounding tissues, and was in communication with the renal pelvis. The branches of the renal artery were markedly dilated and tortuous.

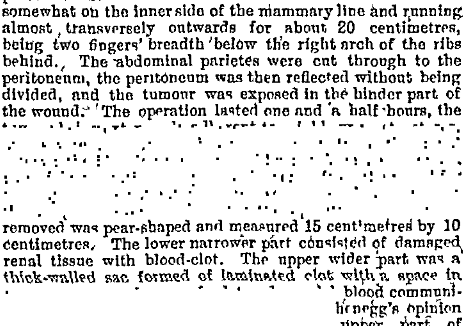
Daniel Nebel[5] describes a case of aneurysm of the aorta involving both renal arteries in a man over 30 years of age who had had his right testicle removed for malignant disease, both the disease of the testicle and the aneurysm being ascribed to a fall from a horse.

CASE 3.—He then goes on to relate briefly a case (probably of this variety) of renal aneurysm in a medical man who, in November, 1717, four years after falling from a horse on to his left side, experienced vehement pain and pulsation on the left side of the abdomen. The case was diagnosed as an aneurysm. At the post mortem examination a tumour of the size of the head of a child three years old was connected with the left kidney, which itself was flaccid and putrid. This aneurysm had burst into the peritoneum, causing sudden death. A large quantity of blood was found in the peritoneal cavity. The aorta above and below the aneurysm as well as the vena cava and its branches were empty of blood. In the wall of the aneurysm was an opening capable of admitting two fingers, and through this the large amount of blood found in the peritoneum had escaped.

A case of traumatic aneurysm is referred to by Titius (S.O.) in "De renum vitiis: Aneurysmatis arteriæ Renalis sinistræ exemplum, 1798, Vitebergæ." It occurred in the person of a medical man and resulted from a fall from a horse. No details, however, are given beyond the statement that it involved the left renal artery and proved fatal after four years. There seems to be good reason for considering this as merely a reference by Titius to Daniel Nebel's case.

FALSE ANEURYSM DUE TO YIELDING OF A THROMBUS IN A *RUPTURED ARTERY.*

Julius Hochenegg[6] reported a case of traumatic aneurysm of the right renal artery which is pretty certainly an example of a false aneurysm due to the yielding of a thrombus which for a time closed a rupture of the renal artery.[7] A gardener, aged 51 years, on April 19th, 1889, fell from a ladder a height of three metres, striking his right lumbar region violently against the upright of the ladder. H[illegible] pain in this loin and a[illegible] passed about a quarter o[illegible] spite of absolute rest, ergotin injections, and the application of cold, bleeding persisted for three days, but on the fourth it stopped. Recovery was slow. A month later, copious hæmorrhage lasting a week was followed by very severe cystitis for a fortnight. Two months later still the patient was dismissed as cured. Four months later after great exertion profuse hæmorrhage recurred and continued for three days, during which he lost three litres of blood. Recovery was again slow and this time imperfect. Previously to this time which was elastic, painless, and moveable, and of the size of two fists, was discovered in the right lumbar region. After another three months a further recurrence of hæmaturia occurred for which he rested two months in bed; and again after an interval of rather more than three months hæmorrhage returr[illegible] frequent and the [illegible] In the intervals [illegible] was normal or sho[illegible] tion a tumour la[illegible] right hypochondriu[illegible] on pressure and ch[illegible] It had a smooth [illegible] tinctly, but at the time of operation when the tumour was exposed no pulsation could be detected. Dr. Kunz now diagnosed a lesion of the kidney or a traumatic aneurysm of the renal artery and sent the man to Albert of Vienna[8] who removed [illegible] i.e., nearly t[illegible] placed on hi[illegible] somewhat on the inner side of the mammary line and running almost transversely outwards for about 20 centimetres, being two fingers' breadth below the right arch of the ribs behind. The abdominal parietes were cut through to the peritoneum, the peritoneum was then reflected without being divided, and the tumour was exposed in the hinder part of the wound. The operation lasted one and a half hours, the [illegible] removed was pear-shaped and measured 15 centimetres by 10 centimetres. The lower narrower part consisted of damaged renal tissue with blood-clot. The upper wider part was a thick-walled sac formed of laminated clot with a space in [illegible] blood communi[illegible]henegg's opinion [illegible] upper part of [illegible] red within the [illegible] at this led to the gradual development of the aneurysm. This view was considered to be supported by the specimen which shows the remnant of the kidney and the aneurysmal sac covered by the same capsule. (See Figure.)



Reproduced by Butterworth from the figure in Hochenegg's paper. Aneurysm of renal artery with kidney, removed during life by Albert of Vienna. A, Capsule. B, White laminated clot. C, Cavity. D, Kidney.

In this case the violent hæmaturia which occurred immediately after the accident indicated the rupture of a large vessel. The cessation of the hæmorrhage after a few days, the intervals of a month, two months, and four months between the recurrent hæmorrhages, and the non-appearance of a tumour in the lumbar region until seven months after the injury, suggest that the rent in the artery was from time to time closed by clot which ultimately gave away altogether and allowed of the growth of the aneurysm. If Hochenegg's view is correct that the artery was ruptured within the kidney the resistance offered by the renal substance and by the renal capsule may have delayed the development of a tumour.

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[4] [illegible] p. 1012.

[5] [illegible] Curiosorum

Bpl [illegible]

[6] [illegible] d iv, p. 471 and [illegible]

[7] This is the same case which is referred to in the Index Catalogue of the Library of the Surgeon General's Office as being reported by A. Illich in La Riforma Medicale, 1891, Anno vii., vol. ii., p. 481.

[8] A recipient of the Fellowship at the recent Centenary of the Royal College of Surgeons of England and since regrettably deceased.

FALSE ANEURYSM FOLLOWING IMMEDIATELY ON THE WOUND OF THE ARTERY.

The six following cases are examples of false aneurysm developing as an immediate result of a laceration of a branch of the renal artery, and not by the giving way of a true sacciform aneurysm or by the yielding of a thrombus which for a time closed a rent in the artery. Two of them (probably three) might also be described as false hæmato-nephroses, the third as a false aneurysm within the renal capsule; the fourth and fifth were true hæmato-nephroses.

CASE 1.—Hahn[9] reports the case of a large traumatic aneurysm of the left renal artery upon which he successfully operated. It occurred in a woman, aged 49 years, who in March, 1893, fell down several steps. She at once experienced a sudden sensation as if a ball were moving in the abdomen and she felt a lump under the border of the ribs on the left side. When admitted into hospital on May 2nd, 1893, there was a tumour of the size of a child's head in the left side of the abdomen; it was smooth, well-defined, elastic, and dull on percussion. It extended vertically from the costal margin to a hand's breadth below the level of the umbilicus and inwards to within three fingers' breadth of the linea alba. The tumour did not move with respiration or with change of posture, but could be moved between the hands on bimanual examination. There was no pulsation. The urine was normal. The diagnosis was considered to lie between hydro-nephrosis and a soft renal new growth. On May 8th the kidney was exposed by an oblique incision in the loin and appeared to be normal. On puncturing the tumour only blood escaped and on attempting to detach the lower end of the tumour a sudden profuse hæmorrhage occurred. The wound was then packed, the patient was turned on to her back, and an incision was made over the front of the tumour. On tearing through the capsule dark brown coagulum was found, but only a little fluid blood escaped. The tumour was removed after ligaturing the pedicle of the kidney. The operation lasted one and a half hours. Recovery ensued. On examining the specimen after removal it was found that the aneurysm was entirely separate from the kidney but was ensheathed in the same covering. The upper part of the kidney was normal; the lower end was atrophic and flattened. A branch of the renal artery communicated with the cavity.

The immediate development of a tumour in the left renal region and the woman's instantaneous sensation as if a ball were moving in the abdomen indicate that the ruptured artery at once discharged a considerable quantity of blood and that the formation of a false aneurysm was a primary result of the rupture.

CASE 2.—The following case occurred at the beginning of this year in my own practice. A farmer, aged 36 years, slipped and fell, striking his left side against the top of a low wall. This occurred five years before he came under my charge. Immediately after the accident he felt pain in his side and passed blood in his urine. Ruptured kidney was diagnosed by Dr. Sutton Pratt of Rugby, and for five months the patient kept his bed. During the whole of that time he was passing blood in his urine in the following way. A considerable quantity of blood with blood-clots was passed at intervals of a fortnight just for a single micturition but in the intervals the urine was merely blood-stained. Whilst keeping his bed he noticed that his ribs on the left side became bulged forwards, but no particular attention was given to this as he had no pain. At the end of six months after the accident the patient gradually resumed his occupations as a farmer and continued to do so almost to the time of my seeing him. For the last three years especially he thought his side had been getting larger and harder. For a period of two weeks during the last month prior to admission under me on Feb. 5th, 1900, he had kept his bed on account of pain in his left groin and thigh. On admission he complained of pain in the left groin, the left side of the scrotum, and the left sacro-iliac joint. His urine was normal except for an occasional very slight trace of blood. The temperature was normal. On inspection the whole left side of the abdomen, the lower part of the left side of the thorax, and the left loin were bulged by a tumour which was very hard and uniformly so, smooth, quite fixed, dull, non-fluctuating, and not tender, though of late somewhat painful. This tumour extended from the sixth rib in the nipple line to two inches below the level of the umbilicus and reached inwards to the median line. Its most prominent part was in the nipple line at the costal margin. The skin over the tumour was normal or but slightly reddened. Neither Dr. Cayley nor I detected pulsation, but my colleague, Mr. John Murray, thought he could feel a faint pulsation of an expansile character. When some days later the patient was under chloroform a careful examination was made by Mr. Murray, Mr. T. H. Kellock, and myself, but no pulsation could then be detected. There was a loud systolic bruit over the tumour which was best heard in front. It did not extend along the vessels to the groins nor was there any difference in the beat of the common femoral arteries on the two sides. Of late the swelling had been increasing much more rapidly. The diagnosis was thought to lie between a large circum-renal hæmatoma and a renal new growth, and Mr. Murray, believing he detected pulsation, diagnosed it as a renal aneurysm. The early onset after the injury of the swelling, its slow increase in size, its uniform consistence, and extreme hardness and fixity seemed to favour the view that there had been extravasation, coagulation, and organisation of blood in the perinephric tissue, whilst its recent more rapid increase and the supervention of pain suggested that part of the mass was beginning to soften and break down.

The patient readily consented to an exploratory operation, and on Feb. 13th an oblique lumbar incision was made, part of the tumour was exposed and tapped with a small trocar and cannula, and a little reddish-brown serous-like fluid escaped. A small incision was then made through the wall of the tumour and a pair of closed hæmostatic forceps were thrust into its substance. A piece of the contents was seized and withdrawn and on examination this was found to be old discoloured blood-clot of a dirty brown colour. The incision in the tumour capsule was enlarged so as to admit two fingers, and some four or five ounces of dirty brown laminated clot were cautiously removed piecemeal. Then suddenly there rushed against my fingers a stream of warm fluid and simultaneously arterial blood flowed violently from the wound. The situation was tragically critical; it was clear that if such bleeding continued for but a few seconds life would be extinct. A large prominent tumour between the anterior abdominal wall and the spinal column made direct compressure of the aorta impossible, and several pounds' weight of blood-clot were between the opening in the sac of the tumour and the position of the renal artery. Instant action was imperative, yet to attempt to control the hæmorrhage by packing with gauze seemed like stuffing a hole in a sinking ship with tow. I therefore immediately forced my hand across the tumour cavity in the direction of the renal artery and compressed the inner wall of the tumour against the spinal column, whilst with my other hand I pressed firmly upon the front of the tumour through the anterior abdominal wall. By this means I controlled the hæmorrhage almost completely, but not absolutely. I at the same time requested my colleague, Mr. Murray, to extend the incision in the abdominal parietes downwards and forwards towards the groin without dividing the peritoneum and to reflect the peritoneum towards the median line until he could compress the abdominal aorta above the level of the renal artery. I then removed as quickly as possible all the blood-clot—most of which was old and laminated—from the interior of the sac and found the opening of the renal artery by seeing blood come from it in a large jet on releasing pressure. I seized the mouth of the vessel with a large pair of clamp forceps. All hæmorrhage was now absolutely stopped and I was able to proceed with the removal of the sac. As the patient's pulse was somewhat failing one and a half pints of saline solution were injected into a vein in the arm and a dose of strychnine was hypodermically injected. Meanwhile the sac was sufficiently detached from its connexion for a ligature to be passed round the renal artery on the proximal side of the sac and the whole of the anterior and lower parts and a part of the inner and of the posterior wall of the sac were removed.

The rest of the wall was so adherent, especially above to the under surface of the diaphragm, that it could not be detached. The sac extended very high up into the thorax and the spleen with the diaphragm was pushed up a long way. In trying to separate the upper and back part of the sac wall the peritoneum was torn and the lower surface of the spleen was exposed. The rent in the peritoneum was closed with a continuous suture. A small iodoform gauze drain was placed in the loin and made to project at the back of the incision. The parietal wound, which measured eight inches, was closed by interrupted sutures The limbs were bandaged and raised, and after removal to bed an enema of brandy, beef-tea, and egg was administered. Hot-water bottles were placed around the trunk and another subcutaneous injection of strychnine was given. The patient rallied and recovered consciousness about an hour after returning to bed. About four hours after the operation he wished to be turned on his side, but finding this position less easy he requested to be placed back again. Shortly afterwards he vomited; then his respiration seemed to fail and within an hour he died.

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[9] Deutsche Medicinische Wochenschrift, August 9th, 1894, p. 637.

The blood-clot removed from the sac weighed several pounds and much of it was commencing to disintegrate. There seemed little room for doubting that had the case been left alone the sac would soon have broken through the peritoneum or diaphragm or have become the seat of suppuration The sac was composed of condensed fibrous tissue, and at one part of it a thin layer of scarcely recognisable kidney tissue formed part of its thickness. Microscopically, this was demonstrated to be renal parenchyma in a state of extreme chronic interstitial inflammation. There was no other trace of the left kidney, and neither in the tumour removed nor at the post-mortem examination was there any trace of the left suprarenal capsule.

At the necropsy there was no blood or free fluid in the peritoneal cavity, but two or three small extravasations of blood and a little recent blood-clot were seen behind the peritoneum in the left loin. The right kidney was healthy. The aorta and left renal artery were normal. A probe passed from the aorta along the trunk of the left renal artery was obstructed by the ligature around its distal extremity. A probe introduced into the left renal vein passed for several inches in the remnant of the wall of the sac but did not emerge into the cavity. The orifice of the renal artery where it opened into the aneurysm was large enough to admit a full-sized catheter. A part of the sac wall which had not been removed at the operation was so intimately incorporated with the under surface of the diaphragm that they could not be dissected apart.

CASE 3.- of the renal arte uppe,[10] is quoted Reins," tome iii., and cited by Bloch in his *Thèse de Paris* ("De la Contusion du Rein"), 1873. At Cadiz, on Oct. 28th, 1759, a robust young boatman, Pierre Veldhuisen, in entering his craft fell athwart the gunwale, the full force of the blow being concentrated on the right lumbar region. Severe pain, at this spot immediately ensued, which quite incapacitated him. An hour later a bruise as large as the palm of the hand was found at the seat of injury. He was bled from the arm twice within a few hours and a water dressing was applied to the side. The urine passed was highly charged with blood and the pain continued very severe. He was again bled and after a few days' quiet seemed to have completely recovered. Nine days after the accident, while getting into his bunk, he was seized with violent pain in the loin, became pale, faint, and emities and the apprehension of omen was then found by Rouppe the right side, but soft on the left. The patient soon became delirious and convulsed and died in ten hours with all the signs of hæmorrhage.

Rouppe made a necropsy the same day and found a hard dark mass, larger than an adult head, occupying the right half of the abdomen and formed by a retro-peritoneal hæmorrhage, in the midst of which, like the stone within a peach, lay a smaller and harder round mass. This smaller tumour was a multilocular sac, the several pouches of which were separated by membranous septa, and contained clot but of a firmer nature and laminated. The kidney was seen on laying open the sac of this second tumour surrounded by dark blood. On distending the renal artery with air some bubbles escaped just where the vessel entered the kidney, and on further examination the lesion was found just within the true capsule The blood had penetrated along the course of the vessels to the outer aspect of the kidney so that it entirely separated the capsule from the kidney substance, which itself was not found to have been penetrated.

This inclosure of a ruptured aneurysm or artery in a mass of blood-clot is a familiar experience in connexion with the most fruitful source of hæmorrhage in the lung—where the escaped blood collects and coagulates in a cavity around the vessel greatly obscuring its origin, but usually proving on careful search to be directly connected through the rent with other clot within its lumen.

CASE 4.—This was a case of traumatic aneurysm of the nature of a true hæmato-nephrosis: the orifice of the renal artery opened into the sac, all traces of pyramidal and cortical substance had disappeared, and there was a remittent tumour in the hypogastrium and left flank. The case is reported by M. Danyau, was commented upon by Rayer,[11] and was quoted in my book in 1884. A young workman, aged 15 years, was taken to the Hôtel Dieu in the early part of October, 1835; the anterior region of the left kidney had been contused against a counter; after this he passed blood with his urine. Some time afterwards, the hæmaturia for a while having ceased, he suddenly voided from three to four "palettes" of pure and bright blood. On Nov. 19th a remittent tumour was felt in the hypogastrium and left flank and seemed to be elongated in the direction of the ureter The bladder contained clots of blood; there was retention of urine, catheterism was very painful, and the tumour, without becoming more painful, was more prominent and larger. He died on Nov 26th. At the post-mortem examination the tumour consisted of the kidney, its pelvis, and the commencement of the ureter greatly distended and filled with a mass of black coagulum which had already commenced to decompose. There was no trace of either pyramidal or cortical substance of the kidney left; they had both disappeared as the result of intra-renal pressure caused by the effused blood. On examining the interior of the sac with care the orifice of a renal artery, plugged by a clot, was discovered. The walls of the tumour were formed by the fibrous tunic of the kidney and the condensed layers of the surrounding cellular tissue. The lower end of the left ureter and the kidney and ureter of the right side were healthy; the bladder was healthy and moderately distended with clear urine.

CASE 5.—Mounier[12] reported the following case of traumatic aneurysm within the renal capsule which he described as a "hæmato-nephrosis." A soldier, aged 25 years, was admitted on Jan. 20th, 1849, into the Val-de-Grâce military hospital three hours after having been knocked down by a handcart which passed across his abdomen from right to left at the umbilical line. He instantly felt the most agonising pain, which continued long after his admission and was accompanied by bilious vomiting, tympanites, and rapid respiration. The pain radiated over the whole abdomen, but at times was most marked in the left flank and left iliac fossa. On the second day the pain greatly abated and was limited to the left loin and left side. He went on improving up to the seventh day, when hæmaturia appeared and continued, but otherwise the patient was no worse. He had been getting up for several days when suddenly, on Feb. 9th (20 days after the accident), he was seized with the most violent pain in the left flank and with an intense desire to micturate, which, however, he was unable to accomplish. The next day there was only slight pain, increased, however, by pressure. As he had not passed urine naturally since the previous day a catheter was used and drew off one and a half litres of bloody urine Thus matters continued till Feb. 14th, when the lumbar pain increased. The hæmaturia resisted all treatment. The patient, enfeebled by the quantity of blood passed with the urine, by pain, and by the loss of blood from the frequent application of leeches, died on March 2nd, 41 days after the accident. No mention is made in the clinical account of the case of any tumour having been detected during life, but the description of the necropsy leaves no doubt that one must have been present.

At the post mortem examination, on opening the abdomen a voluminous tumour was seen to occupy the left flank and hypochondrium and even to encroach upon the right of the median line It was egg shaped with its larger pole upwards. It extended from the sixth rib to the anterior superior iliac spine and measured in its vertical and transverse diameters 25 centimetres and 20 centimetres respectively, and 65 centimetres and 50 centimetres in its circumferences. It weighed 3·490 grammes. After reflecting the peritoneum from off it the tumour was seen to be prominently embossed, having seven or eight large embossments separated by deep grooves, which gave it the appearance of the large intestine of a horse greatly distended. On the under surface of the tumour, which was similarly embossed, was seen a central depression where the renal vessels and ureter entered. On laying open one of the largest of the pouches on the inner aspect of the tumour a large quantity of soft clot, besides two litres of a turbid red fluid like the lees of wine, were removed, and then was seen the irregular gaping orifice, of the size of a chicken-quill, of a branch of the renal artery. The margins of this orifice were indurated and blackened by blood which had been effused into the tissues. The cavity of the pouch was lined with a whitish flocculent membrane and had the structure of mucous membrane. There were seven other similar cavities of large size with similar contents isolated from one another, but each communicating by one or two openings as large as goose-quills with the renal pelvis. The renal pelvis itself was not dilated and was of normal appearance, but contained a calculus of the size of a bean, irregular, and black on its surface, and adherent to the mucous membrane. The calculus consisted of organised material surrounded by a shell of oxalate of lime. Six other small oxalate of lime calculi and some cretaceous material were also found in the walls of this loculated sac. A cyst of the size of a hen's egg inclosing pus mixed with blood had no communication with the other cavities. The walls of the tumour were one centimetre thick, tough, and composed of fibrous tissue, with, in some places, a soft reddish tissue which was proved to be renal parenchyma. The ureter was obstructed by blood-clot, but otherwise was normal. The urinary bladder contained 250 grammes of bloody urine, but its mucous lining was natural. The left lung was crowded upwards and the heart occupied a horizontal position. The rest of the organs were natural.

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[10] Rouppe (D. Ludovico): "Nova Acta Physicho-Medica," tome iv., p 67, 1770.

[11] Traité des Maladies des Reins, vol. i., p. 250.

[12] Gazette des Hôpitaux, 1849, p. 148

Mounier thought that the calculi were formed subsequently to the rupture of the branch of the renal artery and to the dilatation of the cavity of the kidney, and gives plausible reasons for this opinion. It is not at all improbable, however, that the calculi pre-existed the injury and that the sacculation of the kidney was due to the calculus found in the renal pelvis. If this were so the blood from the ruptured renal artery found a sac ready for its reception. The case recorded by Danyau in which a large false aneurysm within the cavity of the kidney (hæmato-nephrosis) was formed in less than two months gives support to the opinion that a false aneurysm of the size and character which Mounier describes could be formed in 41 days without there being a pre-existing state of dilatation of the kidney.

CASE 6.—Mr. John Murray tells me of a case of traumatic false aneurysm of the renal artery which he saw when a student at the City Hospital in Dublin. There was a large tumour in the flank extending into the iliac fossa. It occurred in a man about 50 years of age, but was not diagnosed during life. A post-mortem examination disclosed a large mass of blood-clot and a rupture of the renal artery. The case has not been published.

ANEURYSM OF THE RENAL ARTERY NOT OF TRAUMATIC ORIGIN.

There are on record a few cases of true, and at least three of false, aneurysm which do not owe their origin to any injury so far as could be ascertained.

CASE 1.—Leudet[13] recorded a case of aneurysm of the right renal artery found on post-mortem examination of the body of a woman, aged 62 years, who died from nephritis, having suffered from albuminuria for two years and dyspnœa, cough, and general œdema for two months before death. The right kidney was less than half the size of the left, and just beyond the bifurcation of the right renal artery on the lower and smaller of the two branches into which it divided there was an aneurysm of the size of a haricot bean filled with rather soft yellowish material and communicating with the artery by an opening of almost capillary fineness. The walls of several of the arteries of this woman were calcareous. Leudet was of opinion that this little aneurysm was formed primarily in the walls of the vessel and opened subsequently into its lumen. He gives in the same journal a case of a woman, aged 70 years, who had two aneurysms on separate branches of the splenic artery. Each of them communicated with the lumen of the arterial branch on which it was situated and on one of these branches there was another small tumour of the size of a lentil inclosed in the substance of the arterial walls and projecting the outer surface of the vessel. Leudet remarks: "These aneurysms would seem, as regards their pathology, to be due to the mechanism first pointed out by Corvisart, then by Guthrie, and finally by Bérard—namely, that they are developed primarily in the thickness of the wall of the artery."

CASE 2.—Danner[14] describes an aneurysm of the size of a hazel-nut at the point of bifurcation of the right renal artery of a gouty man, aged 66 years, who had passed many uric acid and phosphate of lime calculi and who for five years before death suffered from dyspnœa, palpitations, and pulmonary congestion and who died suddenly in an attack of dyspnœa. The contents of the sac were of a blackish colour and rather adherent. The aorta, splenic and basilar arteries, and the arteries of the right kidney were calcareous and the heart was enormously hypertrophied. The right kidney was atrophied and cystic. The left kidney contained a calculus and much calculous débris.

In the Museum of St. Bartholomew's Hospital (Catalogue, vol. i., 1882, No. 1536) there is a specimen of a small aneurysm of a renal artery. The wall of the sac and of the adjacent part of the artery are thick and calcareous.

CASE 3.—Oestreich[15] reported a very interesting case of an aneurysm of the right renal artery of the size of an apple. It gave rise to no symptoms during life, developed between the kidney, suprarenal capsule, and the aorta, extended upwards behind the liver, and was almost completely filled with clot. Whether it arose within or outside the kidney is uncertain. It was discovered at the post-mortem examination of a young man who died from multiple embolisms and malignant endocarditis.

CASE 4.—Armstrong[16] published a case which he considered to be unique—viz., an aneurysm of an interlobular branch of the right renal artery. It was found after death in a man, aged 50 years, who was admitted into hospital on May 20th, 1879, with a tumour diagnosed to be of the right kidney, and who died comatose the same evening. At the post mortem examination there was chronic nephritis of the left kidney. The right kidney was apparently greatly enlarged, its capsule was adherent to the peritoneum and intestines, and there were other evidences of a circumscribed peritonitis; this enlargement was really due to a black blood-clot weighing 30 ounces beneath the capsule and surrounding the kidney itself. The renal capsule was ruptured and blood had escaped through the rupture into the peritoneal cavity. There was circumscribed peritonitis over the right kidney. In the external border of the kidney between the renal tubules was a small spherical cavity about one millimetre in diameter filled with well-organised fibrinous clot. This was the source of the hæmorrhage; and from the character of its contents and its shape Armstrong regarded it as an aneurysm. The etiology of the disease he considered to be alcohol, of which the state of other organs showed evidence.

CASE 5.—Dourlin[17] published a description of an aneurysmal tumour of the left renal artery in a man, aged 52 years, which occupied the whole of the left hypochondrium and left flank. There was no history of any injury. For two months before coming under the observation of Dourlin he had felt a considerable and disabling discomfort in the left hypochondrium and was unable to walk without suffering from time to time sudden and forcible retractions of the left testicle, accompanied by pain, which compelled him to cry out. In addition to the tumour the abdomen seemed to be tense and its walls slightly œdematous. The connexions of the tumour could not be satisfactorily made out; but the tumour increased in size and the patient suffered from time to time insupportable pains in the abdomen, the urine diminished in quantity, micturition became difficult, and vomiting and frequent attacks of months from the beginning of the symptoms. On post-mortem examination the tumour was found to be behind the peritoneum adherent by its upper end to the spleen, which was pushed upwards under the diaphragm, whilst its lower end extended into the iliac fossa. It was ovoid in form, contained about three pounds of blood, and on section proved to be a greatly loculated sac with no trace of parenchyma of kidney remaining. It communicated with the renal artery, which was dilated into an aneurysmal sac commencing immediately after its orifice from the aorta. The renal vein preserved its natural size and direction and its branches passed into the different partitions of the tumour.

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[13] Ibid, 1852, p. 583.

[14] Bulletin de la Société Anatomique, 1856, second série, tome I., xxxi 170

[15] Berliner Klinische Wochenschrift, 1891, Band xxviii., p. 1042.

[16] American Journal of the Medical Sciences, October, 1885, p. 453.

[17] Journal de Chirurgie et de Médecine, Vendémiaire an. xii. (October, 1803), tome vii., p. 252.

CASE 6.—Gossett[18] related before the Medical Society of London (Nov. 30th, 1829) the case of a woman, aged 43 years, who shortly after an attack of so called rheumatic fever began to complain of severe pain in the loins and extreme tenderness over the left kidney. She died from hæmorrhage caused by the bursting of an aneurysm of the left renal artery into the renal pelvis. There had been profuse arterial hæmorrhage with dysuria and frequent attempts at micturition during life, and five days before her death she had been actually at the point of dying from loss of blood. At the post-mortem examination there were about 18 ounces of coagulum in the urinary bladder. The other viscera were healthy. No description of the aneurysm is given, but from a careful perusal of the case it is clear that no abdominal swelling was detected during life.

CASE 7.—W. W. Keen[19] has quite recently published and illustrated a very complete account of a large false aneurysm of a branch of the right renal artery which occurred in an unmarried lady, aged 45 years, who had no recollection of ever having had an injury. The interest of this case is enhanced by the fact that, like the traumatic aneurysms reported by Hochenegg and Hahn, it was successfully removed by operation. The clinical symptoms were a tumour in the right side of the *abdomen which filled the entire space between the border* of the ribs and the iliac crest, and extended from the right flank to about five centimetres on the left of the middle line. It was tense, firm, not tender, not nodulated, but apparently cystic at the inner part. The right kidney had been known to be moveable and slightly enlarged for five years, and for this length of time the patient had experienced a sense of discomfort [illegible] she had thought to [illegible] these years she had [illegible] chilliness and fever followed by nausea without vomiting. The temperature in one of the attacks reached 105° F. One attack had lasted for 10 days and another about five weeks. The urine contained neither sugar, blood, casts, crystals, albumin, nor tubercle bacilli. The diagnosis lay between hydro nephrosis and a renal new growth. Keen removed the tumour with the kidney across the abdomen (transperitoneally) through an incision 17 centimetres long over the front of the tumour. The pedicle was so broad that it had to be secured in seven different sections, the arteries being numerous and large and the veins enormously distended. The tumour was readily isolated as soon as the outer layer of the meso-colon was torn through. The operation lasted less than 30 minutes but was attended by very profound shock. The patient made a rapid recovery and left the home on the nineteenth day after the operation. After removal the tumour was found to consist of a large central mass of coagulum and a capsule. The capsule was continuous with the capsule of the kidney. The larger part of the tumour was formed of laminated blood-clot of different ages. The outer surface of the clot was recent and soft, whilst the central part consisted of older and almost completely decolourised fibrin. The renal artery and its branches ran over the wall of the sac and the lower branch of the renal artery opened into the sac. The sac did not communicate with the renal pelvis. The kidney tissue showed advanced chronic inflammatory changes and near the hilum there were a number of small renal cysts. The walls, especially the intima of the blood-vessels throughout the kidney, were of extraordinary thickness. Keen gives an illustration showing the tumour and kidney.

Although the cases I have here collected are the only instances of aneurysm of the renal artery or its branches with which I am acquainted, it is probable that many others tions or, if detected, have remained unrecorded. Now that attention is drawn to their occurrence there will, I anticipate, be other examples forthcoming in the near future.

As a result of injury [illegible] sacciform or diffused type, is of [illegible] If of the sacciform type it woul[illegible] associated with some other injur[illegible]elvis which gives rise to hæmaturia or to a large tumour consisting of blood and urine; or the sacciform aneurysm after a time ruptures and a false aneurysm is formed.

A false aneurysm, whether caused by the rupture of a sacciform aneurysm or by the direct rupture of the walls of the artery, gives rise to a tumour of great clinical interest, puzzling to diagnose, difficult and dangerous to treat, and hitherto, if not operated upon, invariably fatal to the individual afflicted.

The knowledge that an aneurysmal tumour occasionally may be a late and not an immediate consequence of injury; that it may be caused by an accident which either slightly or extensively damages the kidney; that it often ultimately leads to absolute destruction by atrophy or inflammation of the whole or a considerable part of the organ; and finally that there is great risk attached to operative treatment and certain death if such treatment is not adopted,—such knowledge ought to be an additional inducement to surgeons, if other conditions do not contra-indicate the operation, to explore early every kidney which is seriously damaged by an accident.

ETIOLOGY.

Of the 19 cases of renal aneurysm which I have collected (the case of Titius and the specimen which is in St. Bartholomew's Hospital Museum with the others make 21 cases, but they are not analysed with them because no particulars are given) 12 were traumatic and seven spontaneous. Of the traumatic cases two were sacciform when discovered after death and nine were false and one doubtful. Of the nine *false aneurysms two occurred from the bursting of a* sacciform aneurysm; one followed after a time from the yielding of a thrombus in the ruptured artery, without having been preceded by a sacciform aneurysm; five were the immediate consequence of rupture of the artery; and in one (Daniel Nebel's) the nature of the aneurysm is not described. Of the seven spontaneous aneurysms three were sacciform; one of these was of the size of an apple, and two are described as being of the size of a haricot bean and of a hazel nut respectively. One was a false aneurysm in the form of a true hæmato-nephrosis. In one case no description of the aneurysm is given beyond the fact that it ruptured into the renal pelvis. The sixth was probably sacciform originally but ruptured and became a false aneurysm, forming an intracapsular tumour surrounding the kidney. The seventh seems to have been a false aneurysm from the beginning.

Sex.—Of the 12 traumatic cases ten were in men and two were in women. In the case of one of the women there might be some doubt as to whether the sacciform aneurysm which subsequently ruptured was really of traumatic origin because, though she had a fall on a staircase, she had apoplexy from a hæmorrhage into the left thalamus and was the subject of endarteritis, her aorta and other arteries being affected. The branches of the renal artery next the clot were markedly dilated and tortuous. Of the seven spontaneous aneurysms four were in males and three were in females.

Age.—Of the traumatic cases the age is stated in ten. One was 15 years, one 19 years, one 21 years, one 25 years, one 36 years, another 30 years, and four were between the ages of 49 and 51 years. Of those whose ages are not given both were men in active life. One is described as a "young boatman"; the other as a "doctor" whose aneurysm resulted from a fall from a horse four years before his death. Of the spontaneous cases the ages of six are stated; they were all over 40 years; the youngest was 43 years and the oldest was 66 years. The seventh was described as "a young man."

Nature of injury or disease.—Of the traumatic cases one patient was thrown out of a cart; another was struck by the buffer of an engine; a third was thrown from a horse; two fell from a height, striking the loin of the side of the injured kidney; one slipped and struck his loin on the gunwale of his boat; one fell against a counter and contused his side; one fell against a box; another slipped and fell against the edge of a low wall; one was run over by a handcart; and two fell against steps or a staircase. Of the spontaneous cases malignant endocarditis with multiple embolisms was present in one case; calcareous degeneration of the coats of the arteries was present in two others. Another died from nephritis; the fifth died comatose with destruction of one kidney from the aneurysm and chronic nephritis of the opposite kidney. In the sixth the patient had what must have been erroneously called an attack of "rheumatic fever," for it passed off in five days. It seems probable that an embolism or a thrombus led to the development of the aneurysm. In the seventh case there was absolutely no assignable cause. Leudet, following Corvisart, Guthrie, and Bérard, thought the small aneurysms were developed in the substance of the wall of the vessel and subsequently opened into the lumen of the artery.

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[18] THE LANCET, 1829-1830, vol i., p. 88.
[19] Philadelphia Medical Journal, May 5th, 1900, p. 1032.

PATHOLOGICAL CONSEQUENCES.

As long as a sacciform aneurysm remains unruptured it seems not to produce any distinct changes in the kidney or part around. If situated within the kidney capsule the little tumour may press aside and more or less flatten some of the tubules, but without destroying them, as in Armstrong's case. If a sacciform aneurysm bursts into the renal pelvis profuse hæmorrhage is the result; the bladder may become distended with blood and blood-clot, and blood may flow away from the urethra, as in Gossett's and Oestreich's cases. The patient thus dies from sheer loss of blood, or from this cause combined with the pain and other effects of blood-clots distending, and decomposing within, the bladder.

When a false aneurysm is formed, whether as the effect of injury or disease and whether indirectly by the rupture of a sacciform aneurysm or directly by the giving way of the artery matters not, then serious damage is generally done to the kidney, and extensive pressure changes and displacements are wrought in the surrounding tissues and organs. The blood may distend the pelvis and calyces, and, producing complete absorption of the renal parenchyma, create a true hæmato-nephrosis; or it may be extravasated entirely within the capsule, between it and the renal parenchyma; or partly within the renal capsule and partly into the perinephric tissue; or it may be entirely outside the renal capsule completely or partially surrounding it. The kidney may have undergone complete or partial atrophy; or the kidney, if any remains of it, may be spread out in the wall of the sac as it was in the case under my own care in which the kidney had almost, and its adrenal had completely, disappeared.

When part of the kidney has been flattened out or absorbed the rest of the organ may appear to be covered by the same capsule. Even when the aneurysm has been stated to be entirely separate from the kidney it is yet described as being in the same capsule (Hahn). This condition of the capsule is, I have no doubt, in some cases only apparent, not real. The matting together of the sac of the aneurysm and the structures adjacent becomes so intimate and firm that it is impossible to say where renal capsule ends and sac begins. It is the same with the capsule of an adrenal tumour, as I pointed out in an article on Tumours of the Adrenal published in another journal some months ago.[20]

The blood may filter along the course of the vessels and thus get within the capsule of the kidney and thence break into the calyces. If the blood is really extravasated within the renal capsule it may either break down and disintegrate the parenchyma and rupture the capsule or spread between the parenchyma and the capsule (Armstrong's and Rouppe's cases).

If the capsule is stripped up from the parenchyma the latter may be undamaged except that its outer surface is slightly roughened or eroded; but the capsule may be greatly distended and even ruptured, and thus blood may escape into the peritoneal cavity (Armstrong's case) as well as into the retro-peritoneal tissue.

The tumour may displace and become extensively adherent to neighbouring structures The colon is commonly displaced towards the median line, the liver and spleen are pressed upwards, and the diaphragm may be raised upwards. Some of the adhesions of the sac wall may be loose and easily separated, others may be so dense and strong that they are absolutely inseparable—as was the case between the sac and the diaphragm and the sac and some parts of the peritoneum in my patient

The contents of the sac are, for the most part, blood-clot; there is sometimes only a very little fluid blood or blood serum, so that not more than a drachm or two can be drawn off when the tumour is tapped in the course of exploring it

The clot in the sac is of different ages, colour, and consistence. In some cases it has been found nearly all laminated; in others chiefly passive; in others, again, disintegrated.

When a small sacciform aneurysm and a blood tumour co-exist the source of the blood which forms the tumour is not always the vessel upon which the small sacciform aneurysm is situated. The blood may be derived from a ruptured vein or from the parenchyma (Reeves's case), neither the artery on which the aneurysm is situated nor the small aneurysm itself being lacerated. The blood may be derived from the vessel on which a small aneurysm is situated and not from the aneurysm itself (Hilton's case); when this is so two aneurysmal conditions really co-exist in connexion with the same vessel—namely, a small sacciform aneurysm and a large false aneurysm.

The perinephric tumour co-existing with the small sacciform aneurysm may be composed partly of blood and partly of urine, the blood being derived either from the aneurysm or the artery on which it is placed or from a different source altogether. The urine comes from a lacerated renal pelvis or calyx (Reeves's and Hilton's cases) or ureter. Either a spontaneous (Gossett's) or a traumatic (Oestreich's) aneurysm may burst into the renal pelvis. In Daniel Nebel's case as well as in Armstrong's death was caused by the rupture of the aneurysm into the peritoneal cavity. Both local and general peritonitis have been caused by the aneurysm, and in Hilton's case there was a slough with a perforation in the peritoneum over the tumour.

SYMPTOMS.

An unruptured sacciform aneurysm gives rise to no clinical symptoms and is only discovered at the post-mortem examination of a person who has died from some other disease or from some other effects of the same accident which caused the aneurysm.

It is possible that a small unruptured aneurysm no larger than a haricot bean may assist in producing atrophy of the kidney (Leudet's and Danner's cases), but this would be unattended with any clinical signs.

A false aneurysm, no matter how formed, whether traumatic or spontaneous, probably always causes, sooner or later, a tumour, and nearly always gives rise to hæmaturia. There are no symptoms other than these (tumour and hæmaturia) which are commonly due to the rupture of a sacciform renal aneurysm or of the wall of the renal artery itself.

Tumour.—A tumour was detected during life in 14 out of the 19 cases, and in one other it is quite certain that a tumour must have existed. The size of the tumour varies from that of a double fist to a swelling which fills half the abdominal cavity, reaching vertically from the false pelvis to the dome of the diaphragm which it pushes upwards, and laterally from the side of the flank inwards as far as or beyond the median line, bulging the loin backwards and outwards and the abdominal parietes forwards.

The date of its appearance and the rate of its growth vary according to the degree of resistance of the tissues into which the blood is effused and the extent and firmness of the coagulum which for a time may close the rent in the vessel or the aneurysmal wall. In one case (Rouppe's) which ended fatally and suddenly on the tenth day—no doubt from the rupture of the false aneurysmal sac which was formed by the capsule of the kidney—the tumour was only detected a few hours before death. When the extravasation is into the perinephric tissue it does not follow that the tumour appears earlier or grows more rapidly than when it is within the capsule or actually within the pelvis and calyces of the kidney. If the first effect of the injury is the formation of a small sacciform aneurysm, or of a rent in the vessel wall which becomes plugged by coagulum all the immediate clinical symptoms due to the accident may pass off, and the patient may be dismissed as quite well, and a longer or shorter interval may elapse before any signs at all are detected of a tumour. On the other hand, the presence of a swelling may be detected at once, or within a few days after the injury, as in Hahn's case and my own. It is possible that a small aneurysm might rupture into the renal pelvis or a calyx and cause death by hæmorrhage without giving rise to a tumour; unfortunately, in one case in which death was brought about in this way no description of the aneurysm is supplied (Gossett's). In Oestreich's case of traumatic aneurysm where hæmorrhage into the renal pelvis occurred there was a large tumour in communication with the renal pelvis.

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[20] Brit. Med. Jour., Nov. 11th, 1899

The tumour, on bedside examination, is generally neither irregular nor nodulated on the surface, and no case is related where the kidney formed a projection upon the tumour, as it does sometimes in perinephric extravasations and in some tumours of the kidney or adrenal. The tumour is but slightly moveable, if it is not actually fixed; it rarely if ever moves with ordinary respiration or by change of posture, though in several of the cases there has been some antero-posterior mobility on bimanual examination (*ballottement*). The abdominal parietes may be tightly stretched over the tumour, but have no appearance of being adherent to it or infiltrated by it. No enlarged veins in the parietes, no recently developed varicocele such as is seen in some cases of new growth of the kidney and adrenal, no œdema (except a slight degree in Dourlin's case), and no marked redness have been noted.

Pain.—The tumour is not generally tender on pressure or the seat of acute pain. On the other hand, it may give rise [illegible] Dourlin's and other cases. If it [illegible] may cause some discomfort or a [illegible] pain in the loin occurred for three months before a tumour was detected; in another there was severe pain in the sacral region from time to time, especially on sitting. Pain and tenderness may exist if localised peritonitis is present. In Gossett's case the tenderness over the kidney of the affected side was so great that the patient could scarcely bear the pressure of her clothes. In most of the cases there has been severe pain immediately after the injury which caused the aneurysm. In Dourlin's patient retraction of the testes of the same side was a striking symptom.

Hæmaturia.—This is a very common symptom and the next most important to tumour. Indeed, it may be the most important symptom and may possibly be fatal before any tumour has been formed. More frequently than tumour hæmaturia is the earliest symptom and may precede tumour by many months or even a year or two. It may commence immediately and go on for months after the injury or to the end of life; or beginning at the outset of the case it may cease after a day or two and remain absent for months; in my case it commenced immediately after the injury, continued for five months, then ceased, and did not re-appear, though the patient survived for four and a half years longer. It may not commence, however, till long after a tumour has been known to exist, as in Keen's case of spontaneous false aneurysm, and then it was but a trace, and only noticed on one occasion. A small sacciform aneurysm may rupture immediately into the renal pelvis or a false aneurysm may open by ulceration into it, and then the hæmorrhage may be profuse and fatal. There may be hæmaturia, without any direct communication between the renal pelvis and the aneurysm, owing to the extravasated blood burrowing inwards from the hilum and breaking into a calyx or disintegrating the parenchyma. Hæmaturia may be coincidental and not directly connected with the aneurysm, but may arise from other injuries to the kidney, as probably was the case in Reeves's patient.

When the hæmorrhage is very profuse the blood may flow away freely through the bladder and out of the external urethral meatus; or long clots may be extruded from the urethra. If this happens in the female it may be mistaken for uterine hæmorrhage or bleeding from the genitalia (as in Gossett's and Oestreich's cases) unless a careful examination is made.

Pulsation.—This symptom, so characteristic of most other aneurysms, is remarkable by its absence in renal aneurysm. In two cases (Hahn's and my own) it was suspected to exist and in each of these it was very indistinct if really present; in neither instance could it be made out on most careful palpation of the tumour just before and during the operation. In one case (Daniel Nebel's) pulsation was detected and the case diagnosed as an aneurysm. In Gruber's case it is stated there was no pulsation, neither were there any auscultation signs. As Keen has remarked: "The chief reason why the diagnosis has not been made is that the artery is relatively small and the sac very large, hence the impulse of the blood is not sufficient to distend the large sac and produce pulsation."

Auscultation.—Observation on this point seems only to have been made in one case beside my own and in that case no bruit was detected. In my patient's tumour there was no thrill, but there was a loud systolic bruit over the tumour, best heard in front, but which did not extend along the vessels towards the groins.

The urine.—Except for the presence of blood, or of a little albumin in the intervals between the attacks of hæmaturia, the urine is normal. If some independent disease affects the kidney, or if pyelitis follows a laceration of the kidney caused by the same accident which produced the aneurysm (Reeves's case), then albumin, renal casts, or pus may be passed. Dysuria and frequent micturition have been noted when blood-clots were passing or when the bladder was filled with blood or decomposing blood-clot, and also in Dourlin's case in which hæmaturia is not mentioned as having occurred.

The general symptoms.—These are only such as would be expected from the loss of blood and the pressure effects of the tumour. Loss of strength, loss of flesh, pallor, nausea with or without vomiting, and gastro-intestinal disturbances, such as loss of appetite, indigestion, flatulent distension, and constipation, have been complained of by some, but by no means all, of the patients. Rigors, fever, and rapid emaciation do not occur unless, indeed, the so-called "bilious attacks" with high temperature described in Keen's case can be ascribed to the aneurysm, which is most improbable.

DIAGNOSIS.

As a small sacciform aneurysm, so far as is at present known, causes no symptoms whatever, the question of diagnosis in such cases does not arise. I should not be surprised, however, as time goes on if the symptoms attributed to renal calculus prove on exploration to be in very exceptional cases due to a small aneurysm of the renal trunk or one of its branches.

It is the tumour caused by a false aneurysm which is so difficult to diagnose. The affections with which it is most apt to be confused are renal and adrenal new growths, true and false hydro- or hæmato-nephrosis, and ruptured kidney. The history of an injury is but of little help when the tumour occurs a few months after a fall unless there has been continuous hæmaturia or frequent recurrences of hæmaturia ever since the accident, because malignant growths are also apt to follow injury. Neither is hæmorrhage, no matter how profuse or how bright the blood which flows, in favour of aneurysm as distinct from renal new growths, especially new growths of the renal pelvis. Nor does the rate of increase of the swelling render much assistance in distinguishing the one from the other. Pain and tenderness, rapid emaciation, large veins on the abdominal parietes, varicocele recently developed, and the presence or suspicion of a malignant growth in some *other part or organ would point to malignant* renal, or adrenal, tumour. Hydro-nephrosis is usually more elastic if not fluctuating, often intermits contemporaneously with marked variations in the quantity of urine passed, is in many cases very painful or even agonising at the times of great distension of the kidneys, is seldom if ever accompanied by hæmaturia, and is never attended by profuse hæmorrhage, and more frequently than not is unassociated with any history of injury. Hæmato-nephrosis develops quickly or even suddenly, often without violence, gives rise to intense pain and much constitutional disturbance, and has most likely been preceded by the symptoms of some other renal affection, such as tumour, calculus, or ureteral obstruction; but the true hæmato-nephrosis, it should be remembered, may be really a false aneurysm either of traumatic or spontaneous origin. In false hydro- or hydro-hæmato-nephrosis following ruptured kidney the tumour is generally developed very rapidly, is attended with great pain, and if the renal cavity is opened there is a diminished amount of urine passed naturally; the urine, at a later stage, will probably contain pus if the patient survives. There is, too, in these cases generally much more shock at the time of the injury and a great deal of constitutional disturbance, with, in some cases, rigors, high temperature, or hectic when the condition has advanced.

It must be borne in mind, however, that perinephric extravasation due to injured kidney or ureter is sometimes delayed for weeks after the accident, and, on the other hand, a hæmatoma from a ruptured renal artery (that is, a false aneurysm) may commence to form from the moment of the accident. In the absence of pulsation in the tumour there handcart; and two fell against steps or a staircase. Of the spontaneous cases malignant endocarditis with multiple embolisms was present in one case; calcareous degeneration of the coats of the arteries was present in two others. Another died from nephritis; the fifth died comatose with destruction of one kidney from the aneurysm and chronic nephritis of the opposite kidney. In the sixth the patient had what must have been erroneously called an attack of "rheumatic fever," for it passed off in five days. It seems probable that an embolism or a thrombus led to the development of the aneurysm. In the seventh case there was absolutely no assignable cause Leudet, following Corvisart, Guthrie, and Bérard, thought the small aneurysms were developed in the substance of the wall of the vessel and subsequently opened into the lumen of the artery.

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The contents of the sac are, for the most part, blood-clot; there is sometimes only a very little fluid blood or blood serum, so that not more than a drachm or two can be drawn off when the tumour is tapped in the course of exploring it.

The clot in the sac is of different ages, colour, and consistence. In some cases it has been found nearly all laminated; in others chiefly passive; in others, again, disintegrated.

When a small sacciform aneurysm and a blood tumour co-exist the source of the blood which forms the tumour is not always the vessel upon which the small sacciform aneurysm is situated. The blood may be derived from a ruptured vein or from the parenchyma (Reeves's case), neither the artery on which the aneurysm is situated nor the small aneurysm itself being lacerated. The blood may be derived from the vessel on which a small aneurysm is situated and not from the aneurysm itself (Hilton's case); when this is so two aneurysmal conditions really co-exist in connexion with the same vessel—namely, a small sacciform aneurysm and a large false aneurysm.

The perinephric tumour co-existing with the small sacciform aneurysm may be composed partly of blood and partly of urine, the blood being derived either from the aneurysm or the artery on which it is placed or from a different source altogether. The urine comes from a lacerated renal pelvis or calyx (Reeves's and Hilton's cases) or ureter.—Either a spontaneous (Gossett's) or a traumatic (Oestreich's) aneurysm may burst into the renal pelvis. In Daniel Nebel's case as well as in Armstrong's death was caused by the rupture of the aneurysm into the peritoneal cavity. Both local and general peritonitis have been caused by the aneurysm, and in Hilton's case there was a slough with a perforation in the peritoneum over the tumour.

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It is possible that a small unruptured aneurysm no larger than a haricot bean may assist in producing atrophy of the kidney (Leudet's and Danner's cases), but this would be unattended with any clinical signs.

A false aneurysm, no matter how formed, whether traumatic or spor[illegible] causes, sooner or later, a tumour, [illegible] rise to hæmaturia. There are no sy[illegible]ese (tumour and hæmaturia) whic[illegible] the rupture of a sacciform renal aneurysm or of the wall of the renal artery itself.

Tumour.—A tumour was detected during life in 14 out of the 19 cases, and in one other it is quite certain that a tumour must have existed. The size of the tumour varies from that of a double fist to a swelling which fills half the abdominal cavity, reaching vertically from the false pelvis to the dome of the diaphragm, which it pushes upwards, and laterally from the [illegible] of the [illegible] inwards as far as or beyond the median line, bulging the loin backwards and outwards and the abdominal parietes forwards.

The date of its appearance and the rate of its growth vary according to the degree of resistance of the tissues into which the blood is effused and the extent and firmness of the coagulum which for a time may close the rent in the vessel or the aneurysmal wall. In one case (Rouppe's) which ended fatally and suddenly on the tenth day—no doubt from the rupture of the false aneurysmal sac which was formed by the capsule of the kidney—the tumour was only detected a few hours before death. When the extravasation is into the perinephric tissue it does not follow that the tumour appears earlier or grows more rapidly than when it is within the capsule or actually within the pelvis and calyces of the kidney. If the first effect of the injury is the formation of a small sacciform aneurysm, or of a rent in the vessel wall which becomes plugged by coagulum all the immediate clinical symptoms due to the accident may pass off, and the patient may be dismissed as quite well, and a longer or shorter interval may elapse before any signs at all are detected of a tumour. On the other hand, the presence of a swelling may be detected at once, or within a few days after the injury, as in Hahn's case and my own. It is possible that a small aneurysm might rupture into the renal pelvis or a calyx and cause death by hæmorrhage without giving rise to a tumour; unfortunately, in one case in which death was brought about in this way no description of the aneurysm is supplied (Gossett's). In Oestreich's case of traumatic aneurysm where hæmorrhage into the renal pelvis occurred there was a large tumour in communication with the renal pelvis.

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[20] Brit Med Jour., Nov 11th, 1899

The tumour, on bedside examination, is generally neither irregular nor nodulated on the surface, and no case is *related where the kidney formed a projection upon* the tumour, as it does sometimes in perinephric extravasations and in some tumours of the kidney or adrenal. The tumour is but slightly moveable, if it is not actually fixed; it rarely if ever moves with ordinary respiration or by change of posture, though in several of the cases there has been some antero-posterior mobility on bimanual examination (*ballottement*). The abdominal parietes may be tightly stretched over the tumour, but have no appearance of being adherent to it or infiltrated by it. No enlarged veins in the parietes, no recently developed varicocele such as is seen in some cases of new growth of the kidney and adrenal, no œdema (except a slight degree in Dourlin's case), and no marked redness have been noted.

Pain.—The tumour is not generally tender on pressure or the seat of acute pain. On the other hand, it may give rise to insupportable pain, as in Dourlin's and other cases. If it attains to a great size it may cause some discomfort or a dull aching. In one case pain in the loin occurred for three months before a tumour was detected; in another there was severe pain in the sacral region from time to time, especially on sitting. Pain and tenderness may exist if localised peritonitis is present. In Gossett's case the tenderness over the kidney of the affected side was so great that the patient could scarcely bear the pressure of her clothes. In most of the cases there has been severe pain [illegible] hich caused the *aneurysm.* [illegible] the testes of the same side [illegible] common symptom and the next most important to tumour. Indeed, it may be the most important symptom and may possibly be fatal before any tumour has been formed. More frequently than tumour *hæmaturia is the earliest symptom and may precede tumour* by many months or even a year or two. It may commence immediately and go on for months after the injury or to the end of life; or beginning at the outset of the case it may cease after a day or two and remain absent for months; in my case it commenced immediately after the injury, continued for five months, then ceased, and did not re-appear, though the patient survived for four and a half years longer. It may not commence, however, till long after a tumour has been known to exist, as in Keen's case of spontaneous false aneurysm, and then it was but a trace, and only noticed on one occasion. A small sacciform aneurysm may rupture immediately into the renal pelvis or a false aneurysm may open by ulceration into it, and then the hæmorrhage may be profuse and fatal. There may be hæmaturia, without any direct communication between the renal pelvis and the aneurysm, owing to the extravasated blood burrowing inwards from the hilum and breaking into a calyx or disintegrating the parenchyma. Hæmaturia may be coincidental and not directly connected with the aneurysm, but may arise from other injuries to the kidney, as probably was the case in Reeves's patient.

When the hæmorrhage is very profuse the blood may flow away freely through the bladder and out of the external urethral meatus; or long clots may be extruded from the urethra. *If this happens in the female it may be mistaken for uterine hæmorrhage or bleeding from the genitalia* (as in Gossett's and Oestreich's cases) unless a careful examination is made.

Pulsation.—This symptom, so characteristic of most other aneurysms, is remarkable by its absence in renal aneurysm. In two cases (Hahn's and my own) it was suspected to exist and in each of these it was very indistinct if really present; in neither instance could it be made out on most careful palpation of the tumour just before and during the operation. In one case (Daniel Nebel's) pulsation was detected and the case diagnosed as an aneurysm. In Gruber's case it is stated there was no pulsation, neither were there any auscultation signs. As Keen has remarked: "*The chief reason why the diagnosis has not been made is* that the artery is relatively small and the sac very large, hence the impulse of the blood is not sufficient to distend the large sac and produce pulsation."

Auscultation.—Observation on this point seems only to have been made in one case beside my own and in that case no bruit was detected. In my patient's tumour there was no thrill, but there was a loud systolic bruit over the tumour, best heard in front, but which did not extend along the vessels towards the groins.

The urine.—Except for the presence of blood, *or of a little albumin in the intervals between* the attacks of hæmaturia, the urine is [illegible] disease affects the kidney [illegible] of the kidney caused by [illegible] the aneurysm (Reeves's case), then *albumin, renal casts,* or pus may be passed. Dysuria and frequent micturition have been noted when blood-clots were passing or when the bladder was filled with blood or decomposing blood-clot, and also in Dourlin's case in which hæmaturia is not *mentioned as having occurred.*

The general symptoms [illegible] expected from the loss [illegible] the tumour. Loss of st [illegible] with or without vomiting [illegible] such as loss of appetite, [illegible] constipation, have been complained of by some, but by *no* means all, of the patients. Rigors, fever, and rapid emaciation do not occur unless, indeed, the so-called "bilious attacks" with high temperature described in Keen's case can be ascribed to the aneurysm, which is most improbable.

DIAGNOSIS.

As a small sacciform aneurysm, so far as is at present known, causes no symptoms whatever, the question of diagnosis in such cases does not arise. I should not be surprised, however, as time goes on if the symptoms attributed to renal calculus prove on exploration to be in *very exceptional cases due to a small aneurysm of the* renal trunk or one of its branches.

It is the tumour caused by a false aneurysm which is so difficult to diagnose. The affections with which it is most apt to be confused are renal and adrenal new growths, true and false hydro- or hæmato nephrosis, and ruptured kidney. The history of an injury is but of little help *when the tumour occurs a few months after a fall* unless there has been continuous hæmaturia or frequent recurrences of hæmaturia ever since the accident, because malignant growths are also apt to follow injury. Neither is hæmorrhage, no matter how profuse or how bright the blood which flows, in favour of aneurysm as distinct from renal new growths, especially new growths of the renal pelvis. *Nor* does the rate of increase of the swelling render much assistance in distinguishing the one from the other. Pain and tenderness, rapid emaciation, large veins on the abdominal parietes, varicocele recently developed, and the presence or suspicion of a malignant growth in some other part or organ would point to malignant renal, or adrenal, tumour. Hydro-nephrosis is usually more elastic if not fluctuating, often intermits contemporaneously with marked variations in the quantity of urine passed, is in many cases very *painful or even agonising* at the times of great distension of the kidneys, is seldom if ever accompanied by hæmaturia, and is never attended by profuse hæmorrhage, and more frequently than not is unassociated with any history of injury.[1] Hæmato-nephrosis develops quickly or even suddenly, often without violence, gives rise to intense pain and much constitutional disturbance, and has most likely been preceded by the symptoms of some other renal affection, such as tumour, calculus, or ureteral obstruction; but the true hæmato-*nephrosis*, it should be remembered, may be really a false aneurysm either of traumatic or spontaneous origin. In false hydro- or hydro-hæmato-nephrosis following ruptured kidney the tumour is generally developed very rapidly, is attended with great pain, and if the *renal cavity is opened* there is a diminished amount of urine passed naturally; the urine, at a later stage, will probably contain pus if the patient survives. There is, too, in these cases generally much more shock at the time of the injury and a great deal of constitutional disturbance, with, in some cases, rigors, high temperature, or hectic when the condition has advanced.

It must be borne in mind, however, that perinephric extravasation due to injured kidney or ureter is sometimes delayed for weeks after the accident, and, on the other hand, a hæmatoma from a ruptured renal artery (that is, a false aneurysm) may commence to form from the moment of the accident. In the absence of pulsation in the tumour there is absolutely no way that I know of, except by an exploratory operation, to distinguish a simple hæmatoma or a true hæmato-nephrosis due to a ruptured vein or ruptured renal parenchyma from a hæmatoma or a hæmato-nephrosis due to a ruptured artery—i.e., a primary false aneurysm. If some weeks or months after an injury, and perhaps after a period of apparent health, a tumour develops having the characters above described, a suspicion of renal aneurysm ought to be aroused and the treatment ought to be directed accordingly.

PROGNOSIS.

The prognosis in false aneurysm is most unfavourable; all the cases hitherto reported which have not been operated upon have died. Only four have been operated upon and three out of the four recovered; the other died. The three successful cases are Albert's, Hahn's, and Keen's. The two former were of traumatic origin. Keen's was a spontaneous false aneurysm. In the unsuccessful case the operation was rapidly followed by a fatal result. This may possibly have been in part attributable to the nature of the operation employed, but the enormous size and the firm adhesions and the other conditions of the tumour would, I think, have made any operation unsuccessful. The descriptions of the operations show how very severe they were and with what great risks they were attended.

All the patients with aneurysmal tumours not operated upon died from their aneurysms. Another case (Reeves's) where a small aneurysm was associated with a tumour caused by perinephric extravasation of blood and urine from laceration of the kidney was also fatal, but not from the aneurysm. One patient in whom no tumour was present died from hæmorrhage due to the rupture of the aneurysm into the renal pelvis. In the remaining three out of the total of 19 cases the aneurysms were quite small and were found in persons who died from causes other than the aneurysm.

The causes of death of the patients not operated upon have been profuse hæmorrhage from rupture into the renal pelvis (three cases), [illegible]ritoneal cavity, hæmorrhage into th[illegible] from rupture of the false sac, ar[illegible] case in which the patient died af[illegible] due to shock and loss of blood, [illegible] been operated upon his life could not have been much prolonged, as the contents of the sac were beginning to break down. Some of the aneurysms have existed a long time before death occurred or before the operation was performed. In Keen's case and my own five years had elapsed; in the case of the medical man who fell from his horse four years; and in Hochenegg's case two years. In Gruber's case the patient lived only ten months after the accident and but two months after the detection of the tumour. The most rapidly fatal cases were those in which the aneurysm burst into the renal pelvis; in one of them—a case of spontaneous aneurysm—the first symptoms referable to the kidney were pain and tenderness, and death from hæmorrhage followed on the ninth day.

In another, a case of traumatic aneurysm, the injury happened three months before death, but the tumour was detected only three days before: hæmaturia commenced about a month after the fall, rapidly became worse, then excessive, and continued to the end of life. In Hahn's case two months elapsed after the accident before a tumour was found and the operation was performed a week later; there seem to have been no hæmaturia and no albuminuria throughout and their absence no doubt was a reason why the tumour was diagnosed as being hydro-nephrosis.

In Rouppe's case a tumour suddenly developed with violent pain, faintness, and thirst nine days after the accident, and the patient was dead in 10 hours. Hæmaturia, in this case at first considerable, had ceased some days before the tumour appeared. In Mounier's case the accident occurred on Jan. 20th and death followed on Feb. 14th. In Danyau's case the accident occurred in the early part of October and death took place on Nov. 26th.

TREATMENT.

When a tumour due to a renal aneurysm exists the only prospect of saving life is by nephrectomy and the removal of the whole or the greater part of the aneurysmal swelling. The operation will in most instances have to be commenced as an exploratory proceeding, for though the surgeon may suspect an aneurysm he cannot diagnose it from a hæmatoma due to a ruptured vein or lacerated kidney unless there be pulsation, which, as we have seen, there rarely, if ever, is. In other cases the tumour will be mistaken for a new growth or a hydro-nephrosis. The course to pursue is to commence by making an oblique incision in the loin. As soon, however, as the nature of the tumour is ascertained either the lumbar incision should be considerably prolonged forwards and the renal pedicle reached and cleared by reflecting the peritoneum inwards from off the tumour; or, what is even better if the tumour is very large, the patient should be turned over and a transperitoneal operation performed by opening the abdomen in front along the linea semilunaris of the same side as the tumour, then the peritoneum should be divided along the outer side of the colon, and reflected inwards thereby the pedicle of the kidney is cleared. The whole pedicle should be secured, or at any rate the renal artery should be ligatured before attempting to empty or remove the sac. The nature of the tumour will not at once be revealed on exposing the sac from the loin, but it soon will be if a small incision is made through the sac wall and the contents are found to consist of laminated blood-clot. There may be very little fluid in the sac, and that of a thin pinkish or pinkish-yellow or dirty light brown colour, which will not at all assist the diagnosis, so that a mere puncture of the sac-wall with a trocar and cannula is not sufficient. If, when the sac is incised and a little of its solid contents are removed for examination hæmorrhage occurs, the small opening should be immediately plugged with gauze and the pedicle secured in the manner just described. It is undesirable and dangerous to proceed to remove much of the clot. All that is necessary or safe to be done is to make a small incision through the sac wall sufficient to remove enough of the contents for diagnostic purposes, and as soon as the laminated nature of the clot is detected to cease from further disturbing the sac contents till the vessels of the pedicle are securely tied. It was by not following this course (but by adopting the plan which John Bell employed and so graphically described in a case of gluteal aneurysm and which I once successfully employed in a large aneurysm near the bifurcation of the carotid) that the alarming character and some of the difficulty of the operation in my case of renal aneurysm were due, and I thus specially refer to it as a warning to others. It is the first and only case of renal aneurysm I have had to operate upon, and should it fall to my lot to operate again in a similar case I shall do so by the method and with the precautions I now inculcate. The plan adopted by Albert was a nearly transverse incision from a point a little inside the mammary line outwards for about 20 centimetres and passing about two fingers' breadth below the right arch of the ribs posteriorly. The peritoneum was not opened but was reflected inwards so as to expose the tumour in the hinder part of the wound. The patient was placed on his left side during the operation. Keen's operation was an ordinary anterior or transperitoneal one. Hahn combined the lumbar and transperitoneal methods.

The risks necessarily attending the operation are hæmorrhage and shock. Albert met with severe hæmorrhage from laceration of the renal artery on separating the loose adhesions. This was arrested by iodoform gauze packing and a pair of hæmostatic forceps which were left in place for five days. Hahn on puncturing the tumour through a lumbar incision drew blood, and on attempting to loosen the inferior pole of the tumour a sudden profuse hæmorrhage occurred which he checked by packing the wound. He then proceeded by the anterior incision. In Keen's case, which was commenced and completed through an anterior incision, the patient, in spite of the injection of the saline solution into the veins of the arm, and also of the fact that not over four ounces of blood were lost, was "very profoundly shocked." The pedicle in Keen's case also gave some trouble, being "so broad that it had to be secured in seven different sections, the arteries being numerous and large and the veins especially enormously distended." Another risk is due to the adhesions which may unite the wall of the aneurysm with the peritoneum and bowel, the diaphragm, solid viscera, and prævertebral vessels. If the adhesions are tough and firm, as they were in my patient, it may be impossible to remove the whole of the sac wall. When such tough connexions are present entire separation of the cyst should not be attempted. As much of its wall as possible should be removed and the rest left and drained.

Cavendish-square, W.

A CASE OF ACUTE ALBUMINURIA (ACUTE RENAL CONGESTION) WITH URÆMIA; RECOVERY.

BY F C EVILL, M R C S ENG; L R C P LOND

WITH TWO SIMILAR CASES AND COMMENTS

BY SAMUEL WEST, M D. OXON., F.R.C.P LOND

ON Jan 28th, 1900, I was called to see a man, aged 36 years, who was suffering from insomnia, dyspnœa, and acute headache. As to his family history, his father had died from Bright's disease at the age of 57 years; other members of his family were living and were in good health The previous history of the patient showed that he had had no serious illness During the last nine years he had been sole manager of a large business entailing much and constant mental strain; and coupled with this was the fact that for the whole of this period he had never had a reasonable holiday Three weeks before I saw him he had what he thought was influenza (for which he had no medical advice) and he had not since recovered his usual health The patient was naturally a man of strong physique and he thought nothing of taking a 50-mile walk at a stretch for "exercise" On Jan 28th he complained of intense headache, inability to sleep, and a choking sensation in his throat The respirations were 24, with constant coughing, straining, and retching His face, neck, hands, and wrists were puffy. There was no ascites or œdema of the legs or of the body The pulse was 84 and small and the arteries were soft and compressible The lungs were clear; there were no adventitious sounds and no cardiac lesion The urine was smoky, blood and casts were present, and about one third of albumin was apparent on boiling it The patient was ordered bed, warmth, woollen garments, and a milk diet, and a mixture containing tincture of digitalis, spirit of nitrous ether, and solution of citrate of ammonia, was prescribed On the 29th he had had a sleepless night All his symptoms were intensified The quantity of urine had amounted in 24 hours to 20 ounces More blood and one half of albumin were present The bowels opened freely with compound powder of jalap One tenth of a grain of pilocarpin was injected The skin was very dry. On the 30th
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quantity and was solid with albumin on boiling The patient's condition was steadily growing worse in spite of counter irritation and dry cupping over the kidneys and the
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passed in the 24 hours At no time had the temperature risen above 99 4° F On the 2nd I was called at 3 A M and found the patient semi conscious, fighting for breath as though choking retching and straining, and throwing himself about the bed, calling out constantly from the agonising pain in his head The respirations varied between 45 and 56 and the pulse was 112, small, and irregular. I performed venesection and removed 20 ounces of blood, this moderated the pain in the head and relieved the general condition perceptibly I telegraphed to Dr Samuel West, asking him to see the patient At 8 A M, while preparing the patient for a vapour-bath, he was suddenly seized with a violent uræmic fit which lasted about 15 minutes and left him in a semi comatose condition At 10 A M Dr West saw him with me and at that time the patient had reverted to very much the same condition as that in which he had been before the fit The same treatment was continued with increased doses of diaphoretics and with dry cupping vapour baths, and pilocarpin as before A diet of milk and raw meat juice was ordered There was free purging By the evening the patient seemed easier and by midnight, some oxygen at Dr West's suggestion, having been procured, the gas was administered for 20 minutes at a time every two hours The good effect of the oxygen was most marked, the dyspnœa being relieved, the patient being quieted, and sleep being procured. On the morning of the 3rd there was a decided improvement though there was still grave cause for anxiety The same treatment was continued and from this time steady improvement resulted. There were no more convulsions, the skin began to act freely, and the kidneys recovered their functions On the 4th 24 ounces of urine were passed with less blood and albumin present Each day more urine was secreted, till from the 10th to the 15th the daily average amount was 76 ounces, the partial suppression giving place to over-secretion There were no hindrances to recovery. Pilocarpin was discontinued on Feb 8th, vapour baths on the
of adm
12th
all dyspnœa had disappeared, for the reason that the gas seemed to act as an antidote to the toxins in the blood and to do good in purifying the system long after its use was indicated simply to relieve dyspnœa By the 22nd all albumin had disappeared from the patient's urine and there has been no trace of it since After five weeks' holiday the patient returned to his ordinary occupation and ordinary habits and has since been perfectly well

The interest of the case lies in the rarity of the kind of attack and in the still greater rarity of recovery from it. The acute renal congestion was not an intercurrent attack in the course of chronic renal disease There were, and are, no signs or symptoms of granular kidney, no cardiac hypertrophy, and no changes in the retinal or other arteries. Beyond the supposed attack of influenza three weeks before there were no indications of its being a sequela or complication of any other disease, and the cause of it is veiled in obscurity At the time of the uræmic convulsions the patient's condition was most grave and Dr West agreed with me in thinking it to be almost desperate The patient's recovery must be attributed primarily to his own vigorous constitution, and I consider the most potent factors in the treatment were (1) the free venesection at the critical moment, and (2) the subsequent administration of oxygen, which latter was most efficacious in cleansing the blood from the toxins the presence of which was the exciting cause of all the grave and distressing symptoms

NOTE BY DR WEST.

This case is an extremely interesting one The attack described above was very severe and the patient passed very rapidly into a uræmic state When I saw him (a few hours after the convulsive attack) he was in a condition of great restlessness and excitability, hardly lying still for a second, rolling from side to side, throwing the clothes off, complaining constantly of headache and occasionally twitching With all that his mind was clear This excitability was greatly relieved by the inhalation of oxygen It is very remarkable that this patient lived, and still more remarkable that he should now be perfectly well and without a trace of albumin in the urine

Strange to say, about the same time I saw two similar cases in consultation, the patient in one of which died, while the other made complete recovery I saw the patient who died in consultation with Dr Clemow who has furnished me with the following notes "A gentleman, 41 years of age, who had been ailing for a few months, but without any definite symptoms, was attacked with influenza which left him still weaker Three weeks after this attack he was seized quite suddenly with severe headache and lumbar pain The temperature was raised for a day or two, reaching at its maximum 103° F Three days later he passed very little urine and on examination it was found to be nearly solid with albumin and to contain much blood and many casts. There was no œdema of the ankles or buttocks or any puffiness of the face, and none developed About the same time he had a good deal of *muco purulent discharge from the* nose, but there was no evidence of diphtheria He was treated in the usual way for acute albuminuria"

I saw him after he had been one week ill At that time he was in a similar condition to that described in the first case, being very restless, unable to sleep, with constant headache, occasional sickness, and a good deal of subjective dyspnœa for which no cause was evident Hiccough set in and became severe It added greatly to his misery and kept him from getting even snatches of sleep The urine was reduced to four or five ounces only a day Various methods of treatment were adopted but no relief was given, and the patient died a few days later, after about 14 days of illness, having at the last had a few slight fits.

The two cases described were the exact counterparts of one another, though one died and the other recovered. Both, strange to say, had had attacks of influenza two or three weeks previously and they had not taken sufficient care of themselves afterwards. I cannot assert that influenza had anything to do with the attack in either case, but the association is worth noting.

The third case I saw in consultation with Dr. Coates and Dr. Webb. It was that of a man, aged about 60 years, who had been much overworked for many months. His first symptom was sudden headache and general illness, for which no cause was obvious. Routine examination of the urine—for no special symptoms suggested renal mischief—showed the urine to be nearly solid with albumin. The night of the attack he slept hardly at all; he was constantly muttering and wandering, was very restless and was suffering intensely with general headache. He was treated on general principles. This condition lasted for three or four days and then improvement set in, both in the symptoms and in the state of the urine, and by the end of the week all albumin had disappeared from the urine and, except for debility, the patient was convalescent.

It is a remarkable experience that three cases of this kind should come under my observation in about as many weeks, for they must be extremely rare. They were all instances of most acute albuminuria, with blood, casts, and great diminution in the amount of urine, in the fatal case amounting almost to suppression (there were from four to five ounces only in the 24 hours), and in the two cases of recovery amounting to from 10 ounces to 15 ounces. These patients all passed at once into a condition of acute renal toxæmia, but not that form in which fits are predominant. The prognosis in all seemed desperate, yet when once improvement commenced it was very rapid and recovery became complete. The group of cases most resembling these is that in which acute albuminuria develops in the course of specific fevers—for instance, in scarlet fever; but there was nothing of the kind in these cases, unless the influenza of a few weeks previously is to be held responsible. Moreover, cases of such severity following specific fevers are almost invariably fatal.

A CASE OF ANTHRAX.

By EDWARD F. M. NEAVE, M.B., Ch.B.Edin.

Anthrax is such a very fatal disease that any point, however small, bearing on its etiology should be put on record. Though primarily a disease of cattle men are often affected by anthrax, due to accidental inoculation of the virus. In this country the disease occurs in two chief forms, the external or malignant pustule and the internal, of which there are two varieties, the pulmonary and intestinal. Most of the cases of malignant pustule in this country have come under observation at Guy's Hospital, probably owing to its vicinity to the great leather manufactories and tan-yards at Bermondsey and Rotherhithe.

The late Mr. Davies-Colley, to whom we owe a great deal for our present knowledge of the external form of anthrax, says[1] that most of the cases that came under his care at Guy's Hospital exhibited the external lesion or malignant pustule, infection thus occurring through the skin. At Bradford, on the other hand (where the disease goes under the synonym of wool-sorter's disease), it seems that infection takes place through the lungs, most of the cases exhibiting an asthenic form of pneumonia. Outside these two great centres the disease (in man) is not common, but amongst animals epidemics occur now and again in different parts of the country. Anthrax usually attacks animals by way of the intestines, the food being infected by foreign fodder, litter, and manures, or the animals may be infected by feeding on pastures in which the germs have been preserved. The outbreaks on certain farms which occur now and again may be explained by the fact that the spores can live in the earth for an indefinite time.

Malignant pustule usually occurs in men who come into contact with the hides or fleeces of diseased animals or with the diseased animals themselves, the poison gaining entrance through a wound or an abrasion of the skin. Thus we find that butchers, shepherds, and knackers are very liable to be inoculated with the virus of anthrax. In all such cases the infection is, as a rule, easily traced, but there are certain isolated cases which sometimes occur where the infection cannot be easily traced. The following is a case in point. I shall first give the notes of the case and then discuss the interesting features in detail.

The patient was a middle-sized, muscular man, aged 50 years. He came to me on May 6th, 1900, complaining of an itchiness on the left side of the chest. He said that on the previous day he had felt the left side of his chest itchy and had been scratching it. At that time he noticed what he thought was a pimple above the left nipple. Since then the pimple had been growing larger and the skin around had become swollen and inflamed-looking. Otherwise he said that he felt quite well. On examination, on the left side of the chest, two inches above the nipple, there was a ring of small vesicles with a slightly depressed centre. The ring was of about the size of a threepenny-piece. Beyond the ring of vesicles there were slight swelling and redness of the skin. No enlarged glands could be felt in the axilla. The pulse and the temperature were normal. On the 7th the patient seemed to be fairly well, although the vesicles were larger and the surrounding skin was more swollen, redder, and œdematous. He was going about, but he said he did not feel quite able for his work.

When I saw him on the following day (the 8th) I learned that he had had slight rigors and had suffered from slight sickness and vomiting during the night. The vesicles were still larger and had become confluent, forming a large vesicular ring in the centre of which there was a small dark brown eschar of about the size of a pin-head. Round about there were great swelling, induration and œdema. The skin was dark-coloured, being almost black in patches, and the spreading edge of inflammation was irregular. Owing to the swelling and induration no enlarged glands could be felt in the axilla. The spleen was slightly enlarged. The breathing was regular and was 20 per minute. There was no cough. The pulse was 100, regular, and of good quality. The temperature was 99.4° F. On the whole the patient's general condition was fairly good. On the following night he slept fairly well, but next morning he was much weaker and was suffering from dyspnœa and cyanosis. The dyspnœa and cyanosis increased very rapidly and the patient died the same evening (the 9th), his mental faculties remaining clear to the end.

Through the kindness of Dr. McLagan Wedderburn, the medical officer of health of the county, the serum in the vesicles (obtained just after death) was examined bacteriologically and was found to contain large numbers of the anthrax bacilli (bacillus anthracis). Pure cultures were obtained on agar-agar and a guinea-pig inoculated with the serum died with symptoms of anthrax. The following are the interesting features of the case.

1. *The source of infection.*—On inquiry it appeared that there were no suffering animals on the farm or in the neighbourhood, nor was there anthrax amongst animals in the county at this time. As regards the man's work he had been engaged for the fortnight previously to his illness in sowing different kinds of grain along with artificial manure in the form of bone dust. The question is, therefore, Did infection occur from the grain or from the bone dust? The grain that the patient had been sowing three or four days previously to the beginning of his illness was grown on his own farm, and as no case of anthrax has been known to have occurred for a number of years in the neighbourhood, and as the period of incubation of malignant pustule is said to be from two to three days, I think we may put aside the grain as the source of infection. Bone dust, on the other hand, is known as a source of infection of anthrax. A sample of the bone dust which the man had been handling was examined bacteriologically but with a negative result. Notwithstanding this failure to cultivate the organism from the bone dust I am still of the opinion that the bone dust was the source of infection and that the patient had inoculated himself, his hands conveying the infection. This seems the more likely from the fact that the patient had been in the habit of putting his hand underneath his shirt and scratching his breast. On inquiry it appears that the bones from which the bone dust is prepared are imported from abroad. Greenfield[2] says that animals may occasionally

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[1] Transactions of the Royal Medical and Chirurgical Society, 1882.

[2] Quain's Dictionary of Medicine.

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infected by bone dust directly.

2. *The rapid course of the disease.*—The patient first complained of the itching on May 5th and he died on the 9th—i.e., four days after the onset of the disease. This is about the earliest period at which death may occur, although several cases have been reported in which death took place on the third day. As a rule, however, the disease lasts longer than four days.

3. *The temperature.*—The patient's temperature did not rise above 100° F. Some say that the temperature in malignant pustule does not rise at all. Greenfield[3] says: "This may be true in some cases in which there is no general infection. In other cases, while the surface temperature may be subnormal, the rectal temperature is elevated." Other authorities say that in cases of malignant pustule the temperature never rises above 102°.

4. *The site of the lesion.*—In this case the site of the lesion was unusual, for in no case which I have come across has the lesion been situated on the breast. The commonest sites are the face, neck, arms, and hands. In this

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5. *The absence of pain and severe constitutional symptoms*—The absence of pain is of interest as distinguishing malignant pustule from phlegmonous erysipelas, a disease in which there is severe pain and with which malignant pustule is

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features to

which many writers refer.

The treatment which I adopted from the beginning was strong carbolic dressings locally and tonics. The majority of surgeons advise excision of the pustule, although it is said there is great danger in the operation in allowing the entrance of the bacilli into the blood stream. Others advise the injection of carbolic acid subcutaneously around the seat of inoculation.

Trinckheim, N.B

ON THE LIMITS OF THE HEART DULNESS IN CASES OF ANÆMIA AND CHLOROSIS.

BY R. WYBAUW, M.D.,

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DURING recent years the diagnosis of valvular disease of the heart has undergone a remarkable change. 20 years ago the principal object of the physician was to recognise exactly the seat and the nature of the supposed valvular trouble, and to give a precise anatomical name to it. Nowadays this is no longer sufficient, and much more attention is paid to the state of nutrition and to the function of the heart muscle itself, its strength, and its ability to overcome the increased resistance of the blood.

Normally the wall of the heart, and especially that of the ventricle, has sufficient strength to expel the blood from its cavities into the arterial system, even when the blood-pressure is slightly increased. Of course, if the muscle loses its strength because its nutrition is impaired a complete contraction will be impossible and dilatation will occur. German and Swedish observers have studied minutely the mechanism of "dilatation from overstrain" (Ueberanstrengungs dilatation) in cases of valvular diseases, of general affections, of anæmia, &c. It is produced when the relation between the blood-pressure in the heart cavity (and more particularly in the ventricle) and the strength of the muscle is no longer normal, the latter being unequal to the former. This may occur in two ways: (1) the blood-pressure may be abnormally increased; and (2) the muscle may be abnormally weak and its contraction less effective.

character in many kinds of valvular diseases or of infection (diphtheria, scarlet fever, typhoid fever, &c.), when the nutrition of the muscle cells is impaired because the blood of the coronary system is more venous or less oxidised, or because its chemical constitution is abnormal. In anæmia and in chlorosis the same conditions exist. In them an acute dilatation of the heart has been frequently observed, with or without recovery and return to the normal size of the heart when the disease had passed away. Recovery is, however, not always possible, for it seems probable that a certain amount of hypertrophy may be added to the primary dilatation.

What happens in chlorosis? The cause of the disease is still unknown—it may be a nervous, trophic, or chemical influence; it is certain, however, that many muscle cells, and especially unstriped muscle cells, lose their tonus and consequently the cavities in the wall of which they are contained have a well-marked tendency to dilate. Dilatation of the stomach and dilatation of the intestine are very frequently found. Professor Glax of Abbazia thinks that in chlorosis there is a general infiltration of the tissues by effused blood-serum—indeed, when the condition of the patient begins to improve the quantity of urine increases and the weight diminishes. Even here where the pure air, the walks, &c., cause an increase of weight in normal individuals after a few days passed in Spa, I often saw the weight of anæmic girls diminish whilst the symptoms markedly improved. It is possible that a similar infiltration as supposed by Professor Glax may exist in the heart tissue and cause a diminishing of force leading to dilatation of the organ as well as in the intestine or stomach. Of course no reference is here made to the common symptoms of heart murmurs in anæmia and chlorosis, only the functional strength of the muscle is at present under consideration. It is well known that a marked murmur may be produced by very little change in the heart's condition (accidental murmurs), or the contrary may be found in many cases. The trouble of the heart function itself is only to be detected by percussion, by examining the pulse, or by the use of radiography (Grünmach).

As it is very difficult for practitioners in bath resorts to obtain a complete history of patients, I here give the history of a young girl whom I saw in Professor Destrée's

e was 16 years of age and

1899. Her father died

elf quite well until five

days before her admission, when she suddenly suffered from severe pain in the right hypochondrium and the epigastrium. On examination no other trouble was detected than great anæmia with loss of hæmoglobin and a well marked increase of the heart dulness, relative and absolute. The relative dulness extended upwards to the second rib and downwards to the lower border of the sixth rib. It extended three centimetres (one and a quarter inches) to the right and 10 centimetres (four inches) to the left from the medio-sternal line. Absolute rest was prescribed and the pain disappeared after three days. The patient soon left the hospital, saying that she felt quite well, the area of the heart dulness being little changed. Immediately after leaving she continued her ordinary hard work and was obliged to re-enter the hospital on July 27th. She only complained of pain in the epigastrium and in the left side. Her general state of health was worse. The stomach was neither displaced nor dilated, but the heart extended 11½ centimetres towards the left, and four and a half centimetres to the right. The apex beat was to be felt in the sixth intercostal space. The patient remained three weeks in the hospital. The limits of the heart dulness changed a little (11 centimetres at the left and three centimetres at the right side of the medio-sternal line). There was no tubercle.

In this case the extent of the dulness outwards and downwards without the slightest sign of heart disease, and its rapid increase during the hard work from the end of April to the end of July, clearly indicated the existence of an uncomplicated dilatation of the heart. This question is a very important one, for several German writers, including von Noorden, Müller, and others, think that in chlorosis there is no dilatation but only a displacement of the heart. The dulness would only seem enlarged because the diaphragm in those patients is higher than normal and causes the heart to be pushed upwards, its greater diameter becoming more horizontal and its right border being displaced towards the right, and the apex outwards but not downwards. Grünmach published in the *Therapeutische Monatshefte* the result of radiographic examinations and demonstrated the displacement of the diaphragm in cases of chlorosis and other similar diseases. Such cases, no doubt, exist, but in medical science it is desirable to avoid generalising too hastily. I had recently an opportunity of observing several cases in which the apex beat was really displaced outwards but not downwards; it was even found to be in the fourth intercostal space. I think that in those cases there is no dilatation at all, but I find it imprudent to deny completely the possibility of dilatation in chlorosis Both are possible, and it may be said that in many cases of chlorosis and anæmia there exists a dilatation of the heart cavities causing an increase in the size of the heart dulness, the apex beat being displaced outwards and downwards. On the other hand, dilatation may be only simulated by a displacement of the diaphragm causing the great diameter of the heart to be more horizontal and the apex-beat to be displaced outwards and downwards.

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[3] Ibid.

[4] Ibid.

I saw once a very tall youth, aged 16 years, who was in a very bad condition of health which was caused by improper hygienic conditions. He suffered from pain in the epigastrium, and examination revealed only an enlargement of the left ventricle. After several days of absolute rest this dilatation ceased and the limits of the heart became normal. There was no murmur to be heard, but there was cyclic albuminuria which appeared every afternoon. The patient left the hospital after a week's treatment, and soon afterwards (in five weeks) came back with his heart considerably enlarged. Rest and appropriate diet sufficed to restore him a second time, but the cyclic albuminuria remained. Such cases occurring amongst young men may also be considered as a frequent cause of heart dilatation. The muscular wall of the ventricle being in a bad state of nutrition, the blood is incapable of nourishing the muscle cells.

With regard to the treatment in cases of anæmia the greatest importance should be attached to the functional state of the heart. In many cases, especially in commencing chlorosis, walking and other forms of exercise are recommended and often with a good result, but in more advanced cases absolute rest is necessary in order to strengthen the heart and to prevent oppression, &c. It is interesting to notice that in general the patients complain not only of heart palpitation but of pain in the epigastrium. Many of them, having a well-marked heart dilatation, do not notice any abnormal feeling in the præcordial area, and the epigastric pain often disappears when the dulness regains its normal size.

In a bathing-place like Spa, where hydropathic treatment is almost always combined with the internal use of the ferruginous waters, the examination of the heart must never be omitted; indeed, stimulating the circulation and torpid nervous system will greatly help the internal action of the absorbed iron. That combined action, indeed, gives the best result. In cases, however, where the heart is enlarged and the oppression is intense and in some other cases the use of douches may be dangerous, the patient not being able to stand the sudden shock of the water. In such cases baths of natural carbonic acid water are generally found very useful.

Baths of carbonic acid water may be given in cases of chlorosis and anæmia with increase in the area of cardiac dulness. (Palpitation may be nervous and is not a criterion as to the condition of the heart; pure nervous palpitation is often improved by hydropathic treatment with cold water.) As already mentioned the heart becomes enlarged because the blood-pressure is too strong for its feeble muscle. The carbonic acid bath causes a gentle but general action on all parts of the skin. Soon after entering it the patient feels the bubbles of carbonic acid on every part of his body and the skin becomes red, the peripheral vessels are dilated, and the pulse becomes markedly slower and increases in strength. All cutaneous blood-vessels dilate, thereby diminishing the work of the heart. It is, of course, in the same manner that the baths of Nauheim so greatly improve many cases of heart disease—namely, by diminishing the pressure in the vascular system. Indeed, carbonic acid baths, associated with the internal use of chalybeate water, give the best results in the treatment of anæmia with heart weakness. It is necessary to ascertain the extent of the heart-dulness accurately in order to determine whether exercise or rest is required in the treatment or whether douches or baths will be the more efficacious.

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Spa, Belgium.

CASE OF SUPRA-HEPATIC HYDATID CYST.

BY GEORGE W. DAVIS, M.D., B.S.DURH.,
L.R.C.P.LOND., M.R.C.S.ENG.

THIS was a hydatid of about 25 ounces capacity situated between the liver and the diaphragm. The diagnosis was difficult even beyond the generality of hydatids. The patient had a healthy appearance and there was an absence of any concrete symptoms other than that of the percussion outline and skiagram.

A symptom of remarkable character was the diminished urination, almost amounting to anuria, which in association with menorrhagia and slight swelling of the legs was evidently due to pressure on the vena cava by the cyst, probably at the point of the passage of the vein through the diaphragm.

In spite of the apparent well-being of the patient her life was imperceptibly but very definitely ebbing away. She was very gradually losing strength and energy; from being a woman who took an active part in the household management she could merely lie on her bed or sofa, walk short distances, and go about in a bath chair, and even this slight exertion was accomplished with increasing difficulty.

The case was seen by Sir William Broadbent, Bart., by Mr. Charters Symonds, by Mr. Golding-Bird, by Mr. G. H. Makins, by Mr. F. G. Larkin, and by Dr. Barry Blacker. She was first seen by me on Nov. 12th, 1898 The operations were performed on April 12th and 16th, 1899, by Mr. G. H. Makins and the convalescent period extended over two and a half months, during the whole of which time there was much danger of septic infection from the character of the walls of the cyst which kept it gaping and in continual movement.

The patient was a multipara, aged 36 years, and had four healthy children between the ages of seven and 16 years. Her father died from enlargement of the liver at 60 years of age, her mother died from "cancer" at 60 years of age, and an aunt is suffering from multiple abdominal tumours the character of which have not been diagnosed. She has eight brothers and two sisters alive and healthy. Except for confinements and three miscarriages the patient had never ailed until 1894 when Mr F. G. Larkin discovered the abdominal hydatid which was removed by operation in two stages by Mr. Charters Symonds.

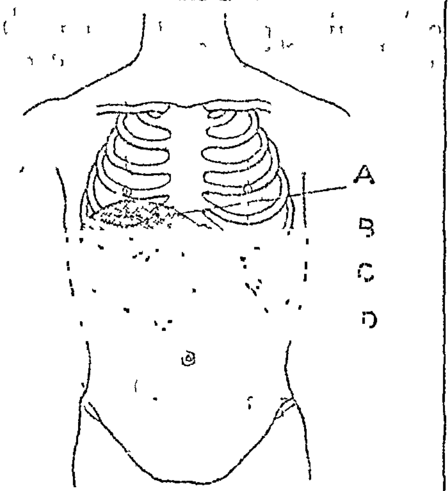
On Nov. 12th, 1898, I was first consulted on account of blood passed by the bowel, apparently due to some obstruction of the vena portæ This led to a careful examination of the liver, but it will be easier to grasp the main facts of the case by reviewing the chief symptoms separately during the period of five months preceding the operation, then describing the operation, and afterwards the convalescence.

The patient was fair-complexioned, fresh in colour, very young looking, and had such an appearance of absolute health that it was extremely difficult to impress upon the minds of those who saw her for the first time that actually she was seriously ill—as a matter of fact, fading gradually both as to weight and strength. Her weight in November, 1898, was 8 st 12 lb, and in April, 1899, it was but 8 st. The difficulties of obtaining recognition of the gravity of her condition were further increased by the fact of her occasional improvement in health. Thus at one time she regained 4 lb.

The entire right chest was rather more prominent than the left chest, the measurements being 15⅛ inches on the right side and 14¼ inches on the left. The dulness of the liver by percussion—the arms being extended by the side of the head—was seven inches vertically in the middle line, five inches on the right side of the ensiform cartilage, and five inches in the posterior axillary line. The dulness could not be defined posteriorly. I found that I could percuss out the liver much more correctly when standing to the left of the patient (Fig. 1).

The dome-like character of the cyst made it difficult to define by percussion and in February I had a skiagram taken by Dr Barry Blacker which [illegible] the diagnosis by percussio[illegible] globular outline of the cyst (Fig 2). Pain was felt occasionally at the side of the right chest and any pressure on the

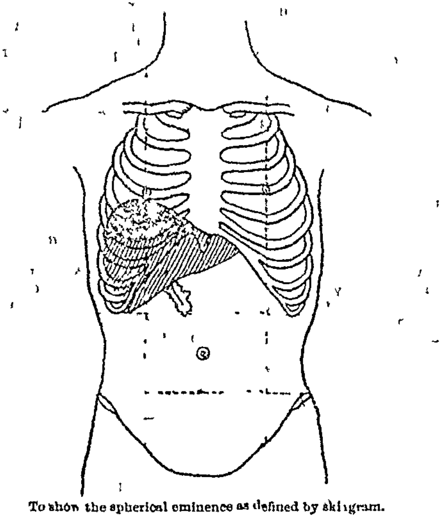
FIG 1.



A, Actual line of dulness B Normal liver outline C, Actual line of dulness D, Scar of previous operation

liver below the ribs caused much pain The patient's loss of energy may be estimated from the fact that in June, 1898, she cycled for four miles on several occasions, but by March, 1899, she could only walk with difficulty and even bath chair exercise exhausted her so much that she came

FIG 2



To show the spherical eminence as defined by skiagram.

home blue about the lips, faint and miserable. Menstruation was *much more profuse and often the flow would* occur in gushes

The diminution of urine passed was a most remarkable symptom and was doubtless due to pressure by the cyst on the vena cava as it passed through the diaphragm, causing [illegible] no conjugative sweating The urine was of average specific gravity and contained no abnormal constituents The amount of urine passed in 24 hours was as follows —

—	Number of observations	Average ounces.	Maximum ounces	Minimum ounces
November, 1898	9	18	28	18
December, 1893	17	12¼	20	5
January, 1899	24	12½	24	4
February, 1899	24	14	25	6½
March, 1899	24	10	19	3

The amount of fluid taken at this time averaged about 30 ounces in 24 hours

Her temperature ranged between 96 4° and 98° F, but was subnormal for the entire period The approximate averages were as follows —November, 93°, December, 97 8°; January, 97 5°, February, 97 6°, and March, 97 4°. The pulse, which was poor in quality, was very constant, about 72 The respiration was about an average of 22 The nervous symptoms may be described as some increase of the left knee reflex, much vertical headache, and sleeplessness

As already mentioned, the operations for the removal of the cyst were performed on April 12th and 16th, 1899, by Mr G. H Makins The [illegible] d in the usual manner at 9 30 [illegible] inis tered by Mr Walter Tyrre[illegible] was *made below the ensiform* cartilage and through this the lower surface of the liver was explored with negative result as to any secondary cyst A long exploring needle was now thrust into the liver and at the fourth thrust sufficient fluid was obtained to confirm the diagnosis by the discovery of many booklets The central incision was now closed and about two inches of the seventh rib were resected in the right mid axillary line, the intercostal muscles and both parietal and visceral layers of the pleura were divided and stitched around the opening left by the resection of the rib, leaving the cyst wall apparent On April 16th Mr Walter Tyrrell gave the anæsthetic at 11 30 A M A crucial incision was made into the *cyst to the extent of the opening, and from 25 to 30 ounces* of lemon coloured fluid came away No daughter cysts were present The hyaline cyst floated free within the cavity and was so friable as to be with difficulty removed by means of ovum forceps The cavity was six and a half inches across. A large drainage tube was put right into it and the whole was dressed in the usual manner The temperature rose until on April 19th it reached 103° and did not become normal until May 9th An ice cradle was kept on whenever *the temperature reached 100° until April 25th* On April 24th I aspirated in the sixth space at the back of the right chest and removed two ounces of highly coagulable fluid Sloughy pieces of cyst wall continued to come away until a month after the operation The cyst cavity was prevented from bridging over and closing superficially before it closed deeply by gauze packing and by the drainage tube being kept in for a long time (it was not removed until June 3rd, 1899) Twice daily for five weeks I syringed the cyst out with solution of creolin (1 in 160) and then introduced some emulsion of europhen in glycerine and iodoform gauze All dressings were sterilised by steam before use throughout the convalescence The right chest was strapped *from May 12th onwards until the sinus completely* closed

On June 19th the patient left for the seaside and passed from my observation for a month and at the end of that time she was completely cured

This case appears to be important to record for two reasons Firstly, it well illustrates that the history of a case of hydatid is often that of a deterioration of health so gradual as to be imperceptible to the patient's friends, but which is measurably demonstrable if a strict record of the patient's powers is taken at intervals If this deterioration is not arrested, by removal of the cyst, before the patient has become too weak to bear the exhaustion entailed by a necessarily debilitating convalescence the end of such a case, apart from suppuration or bursting of the cyst, must be death after the failure of force has gradually deprived the victim of function by function until the whole gamut has been passed from perfect enjoyment of full energy to a mere bedridden existence. The second point is of extreme interest physiologically as showing the marked diminution of urinary secretion which follows obstruction to the venous outflow from the kidney by pressure on the inferior vena cava.

Sidcup, Kent.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus Morb.*, lib. iv. Proœmium.

TOTTENHAM HOSPITAL.

A CASE OF AN UNUSUAL FORM OF INTUSSUSCEPTION.

(Under the care of Mr. HERBERT W. CARSON.)

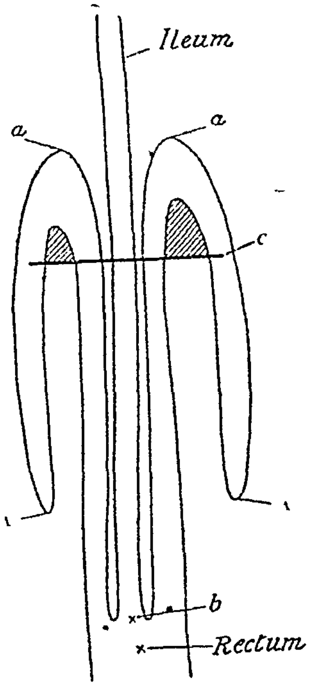
IN infants under the age of six months intussusception is always a very serious condition, even though laparotomy be performed early, but if when the abdomen has been opened it is not possible to reduce the intussusception the prognosis is extremely grave, for whatever method of treatment be adopted a fatal result is almost certain to ensue. Three courses are open to the surgeon: in the first place he may incise the ensheathing layer and may then excise the included bowel; or secondly, he may excise the whole intussusception, performing anastomosis between the healthy bowel above and the healthy bowel below; or lastly, a portion of the bowel immediately above the invagination may be brought up to the surface and an artificial anus made. Inasmuch as shock is the main cause of death after operation for intussusception in infants it is probable that the last method will give the best results. The complexity of the intussusception in the case recorded below is indeed remarkable.

A female, aged five months, was admitted into the Tottenham Hospital on May 14th, 1900, with an abdominal tumour and a history of passing blood and mucus. The child was quite well till the 9th, when she had diarrhœa; passed a little blood, and "the bowel came down." This was replaced by the mother who then obtained medical advice. No tumour was then felt in the abdomen; the child looked fairly well and was not sick. On the 12th the bowels acted and the child vomited after a screaming fit. There was no further sickness before admission to the hospital, but slime and blood were passed per rectum on the 13th and 14th (the day of admission).

On admission the child was quiet, the pulse was fair, and her general condition was good. There was no abdominal distension. A definite small tumour was felt in the left lumbar region above and internal to the anterior superior spine. Per rectum the sphincter was found to be relaxed. The presenting part of an intussusception was felt just above the internal sphincter having two openings, the lumen of the bowel and the mouth of the appendix. As seen per speculum the presenting mass was of a brownish-grey colour. An unsuccessful attempt had been made to reduce the intussusception by injections.

Under chloroform the abdomen was opened a little to the left of the middle line and the intussusception was easily found in the situation of the lower part of the descending colon. It measured some five or six inches in length. At the upper end the ileum entered the intussusception and the lower end presented an almost identical appearance, with the exception that the rectum took the place of the ileum. Attempts at reduction proving unsuccessful the tumour was drawn outside the abdomen and shut off from the peritoneal cavity, and the intussuscipiens was opened by the longitudinal incision recommended by Barker, the ileum and ensheathing layer having been first united by interrupted sutures. The intussusceptum was then cut through *in situ* at the upper part, as it was impossible to bring it through the incision. This resulted in freeing a deeply congested portion of bowel about two inches long having the mucous membrane external. The rectum was then easily reduced and clamped. The intussuscipiens was then found to consist of four layers measuring 15 inches when unfolded. The upper and lower ends of this at the ileo-cæcal junction and at the junction of the colon with the sigmoid flexure were so congested that there was no alternative but to excise the whole of it. This was done and the ileum was united to the rectum over a bone bobbin. The patient died about an hour after returning to bed.

Remarks by Mr. CARSON.—This case seems to be a good instance of those rare cases of intussusception in which "a descending intussusception is associated with an ascending one, the two occupying the same segment of bowel."[1] The accompanying diagram will make the condition clearer, the intervals between the layers being left for the sake of clearness. In the present case the descending intussusception was of the ileo-cæcal type, the ascending one being of the colic variety, and thus differs from the case quoted by Mr. Treves[2] in which the descending and ascending intussusceptions were both colic in origin. Mr. Treves also quotes from Leichtenstern who gives eight cases of double intussusception, and from M. Besnier and Nothnagel, in the latter cases the double intussusception being in the large intestine and occurring in cases of chronic obstruction. The only case I can find in recent literature which at all resembles the one detailed above is that described by Mr. W. H. Brown[3] in which an ileo-cæcal (?) intussusception was complicated by a short longitudinal fold of the intussusception on itself. The dilatation of the sphincter so often noted in cases of intussusception was well marked in this case. It would be interesting to know whether in replacing "the bowel which came down" the mother really reduced a mere prolapse of the rectum or pushed back the advancing apex of the intussusception. Taking into consideration the condition of the child on admission it seems improbable that the apex of the intussusception could have been at the sphincter from the 9th to the 14th (six days), though the condition of the bowel itself pointed to a somewhat prolonged strangulation.



a and x were firmly adherent to ileum and rectum respectively. *b*, Ileo-cæcal valve *c*, Incision *in situ* freeing the small shaded part.

ST. MARY'S HOSPITAL, MANCHESTER.

A CASE OF CÆSAREAN SECTION IN A PRIMIPARA ON ACCOUNT OF THE PELVIC CAVITY BEING BLOCKED BY A FIBROID TUMOUR OF THE UTERUS; RECOVERY; CHILD LIVING.

(Under the care of Dr. LLOYD ROBERTS.)

IN the following very interesting case of Cæsarean section the employment of anti-streptococcic serum seems to have

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[1] Treves: Intestinal Obstruction, p. 152.

[2] Ibid.

[3] THE LANCET, August 20th, 1898, p. 484.

[illegible] septic temperature, but the [illegible] been much enhanced if an [illegible] the presence of any micro- [illegible] this was merely a case of [illegible] serum cannot be credited with the improvement, while if a streptococcus was really present in the patient's blood we should be justified in thinking that the serum had had an important share in bringing about the recovery. It is only by exact observations in every case that we can arrive at any trustworthy estimate of the value of anti-streptococcic serum. For the notes of the case we are indebted to Dr. J. S. Ross, house surgeon.

A married woman, aged 34 years, was admitted into St. Mary's Hospital, Manchester, on April 30th. The patient had been married 12 months and up to July, 1899, menstruation had been regular every four weeks, the duration of the flow being three days, rather copious in amount, but not accompanied by dysmenorrhœa. She had slight leucorrhœa. In July menstruation ceased suddenly and the patient presumed that she was pregnant. Up to the time of labour beginning she was unaware of anything abnormal. On April 29th, 1900, at 11 P.M. the pains began and on April 30th Dr. J. A. W. Watts of Hyde examined the patient and on his recommendation she was removed to St. Mary's Hospital. On admission the patient had a normal pulse and temperature. The abdomen had the appearance of normal pregnancy at about nine months and the fœtal heart was heard. Per vaginam the posterior fornix was filled with a hard mass which was quite fixed in the pelvis, the os could just be touched very high up in front; only about one and a-half inches of conjugate was left. Per rectum the retro-uterine mass was made out to be separate from the bony pelvis; it was in front of the rectum.

On May 1st ether was administered and an incision was made into the abdominal wall from the umbilicus to the pubes. The uterus was incised in the middle line and the placenta was found to be attached to its anterior surface; the membranes were opened, and the fœtus, a living male of about eight and a half months was extracted by the leg. The placenta was now detached, all clots and remains of membrane were removed, and the uterus after being lifted through the abdominal opening was compressed, its edges being brought together with interrupted silk sutures passed through the peritoneum, uterine muscle, and mucous membrane. The pelvic tumour was found to be a fibroid growing from the posterior wall of the uterus; it was so firmly adherent to the rectum and to the sigmoid as to preclude removal; whilst investigating the attachments of the tumour considerable bleeding occurred from its fleshy pedicle and a number of silk sutures had to be used to arrest it. The abdomen was closed with silkworm gut and a gauze drain was pushed from the vagina into the uterus.

The after progress was fairly satisfactory up to May 4th when the pulse ran up to 130 and the abdomen was slightly distended; the lochia, which had never been very profuse, were rather fœtid. On the 7th the patient was still very ill, the abdomen, though distended, still moved with respiration; the bowels had been kept constantly loose with calomel and with turpentine enemas. Anti-streptococcic serum was injected at 6 P.M.; the temperature fell in four hours from 104·2° to 100·6° F. and the pulse from 140 to 130. On the 8th the temperature rose again in the evening to 103·6°, the pulse varying from 130 to 140. One grain of calomel was ordered every four hours. On the 9th the note is as follows: "Condition about the same; the highest temperature at 6 P.M. 103°, and at 10 P.M. the serum was again injected; the temperature fell from 101·2° to 100·8°; the pulse remained about 130. The abdominal wound had been dressed and a little suppuration was noticed along the lowest two sutures." From the 11th to the 20th the patient improved slowly but steadily; no more serum was used, but quinine was freely given; the temperature ran up occasionally to about 101°, but the pulse fell to 120. After May 31st the temperature never rose above 100°, but it was not thoroughly normal throughout the day until the middle of June. Since then the patient has steadily improved. The uterus has shrunk to a hard mass still quite fixed in the pelvis. The child was fed artificially and is healthy.

Remarks by Dr. LLOYD ROBERTS.—Cæsarean section was performed in this case because the pelvic cavity was blocked by a fibroid tumour of the uterus so that the conjugate diameter was reduced to one and a half inches, rendering even cephalotripsy impracticable. The tumour sprang from the posterior wall of the uterus, and it was my intention to remove it at the time of the operation but it was found to be so firmly adherent to the rectum and the sigmoid flexure as to prohibit any further interference. The uterus was not drawn through the abdominal wound until it was opened and emptied of its contents. This procedure allows of more easy manual compression and thus prevents hæmorrhage; it also facilitates accurate suturing of the uterine wall and a thorough cleansing of the abdominal and pelvic cavities. The sutures used were of silk and they were passed through the peritoneum, the uterine muscle, and the mucous membrane. No abdominal or pelvic drainage was adopted, but the uterus was packed with gauze through the vagina. The acute sepsis which occurred was, I think, benefited by the injection of anti-streptococcic serum.

Reviews and Notices of Books.

Leçons sur les Maladies du Sang. (*Lectures upon the Diseases of the Blood.*) Par GEORGES HAYEM. Paris: Masson et Cie 1900 8vo, pp. 700, with four Coloured Plates. Price 15 francs.

THE book before us contains a series of 44 clinical lectures by Professor Hayem who is a well-known worker upon the blood and its diseases. These lectures are reported by M. Parmentier and M. Bensaude and many of them have appeared in the French medical journals.

After a preliminary lecture upon clinical instruction and another suggested by the death of M. Pasteur upon the importance to the medical profession of the work of that eminent investigator, Professor Hayem commences the subject upon which he is more strictly engaged by a lecture on intravenous saline injections He deals with transfusion more particularly in relation to cholera, but other infections in which it has been looked upon as useful are also mentioned. He figures and describes a simple apparatus devised by his pupils M. Hallion and M. Carrion The next subject dealt with is entitled Considerations upon the Origin of Serum-therapy, but Professor Hayem's treatment of this important matter is somewhat disappointing.

In Lectures IV. to VIII. the examination of the blood is described. The author obtains sufficient blood by pricking the finger and letting the blood drop into a small sterilised glass vessel which holds from 2·5 to 3 cubic centimetres. The mode of flow, the characters of the blood as a whole, its coagulability, and the characters of the clot and serum are carefully noted. The methods of fixing and staining blood films are next given. Long ago Professor Hayem divided the leucocytes into (1) the translucent and colourless mononucleated; (2) the opaque and coloured mononucleated; (3) the polynucleated; and (4) the coarsely granular white globules, and he prefers this classification to that of Ehrlich. Among the red cells much importance is attributed in this book to the so-called "hæmatoblasts" in the pathology of some blood diseases.

A very full consideration is given to the subject of chlorosis in Lectures IX. to XVII. The relations of this disease to tuberculosis, Bright's disease, and gastropathies are described in detail. Some curious cases of chlorosis are also related in which death took place through obliteration of the pulmonary artery. The discussion on the nature of chlorosis adds little to our present very imperfect knowledge of this subject. Professor Hayem divides its treatment into (1) rest, (2) gastric treatment, and (3) suitable iron preparations He believes in the use of small doses of iron and recommends the protoxalate, the daily dose not exceeding from 15 to 20 centigrammes.

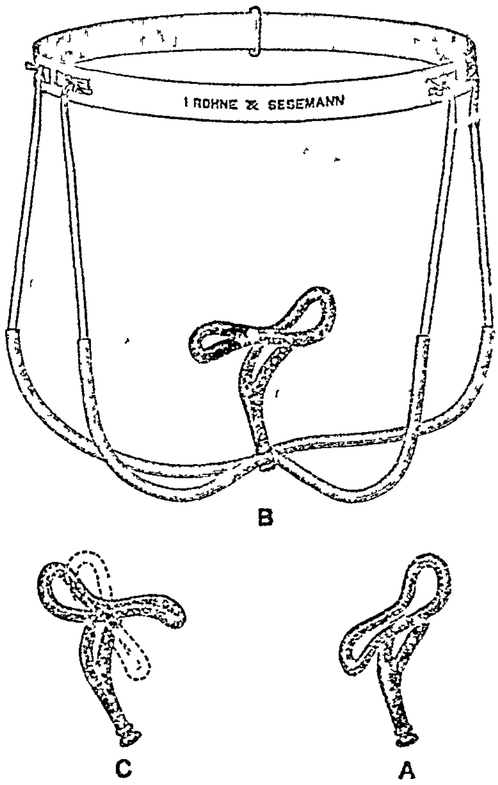
The eighteenth lecture deals with Progressive Protopathic Pernicious Anæmia. The characters of the blood in this disease are extreme deglobulisation, irregularity in the diameter of the red cells, and diminution in the number of

The Quarterly Journal of Microscopical Science. Edited by E. Ray Lankester, F.R.S., Adam Sedgwick, F.R.S, W. F. R. Weldon, F.R S., and Sydney J. Hickson, F.R.S With Lithographic Plates and Engravings on Wood. London: J. & A Churchill. September, 1900 Vol. XLIII. Part 4. Price 10*s.*—The articles contained in this part are: 1. Hippolyte Varians: a Study in Colour Change; by F. W. Gamble, D.Sc., Owens College, Manchester, and F. W. Keeble, M.A., Caius College, Cambridge; with five plates. In this interesting paper the remarkable faculty possessed by a species of prawn of changing its colour in accordance with the prevailing tint around it has been carefully observed. Specimens of this prawn are shown *in situ* clinging to various forms of seaweed and so closely simulating the colour of the weed, whether green, brown, or red, that close inspection is required to recognise their position. The rate of change is slow and takes place even in the dark, though much more rapidly in light. At night the general tint is blue; as day breaks and proceeds other colours appear, so that there is distinct periodicity due to the action of light; variations of temperature and electrical currents also induce changes of colour in these animals. The second article is by Edwin S. Goodrich, M.A, Aldrichian Demonstrator of Comparative Anatomy, Oxford, and is devoted to the consideration of the Nephridia of the Polychæta. It is illustrated by six plates. The author describes the nephridia of Alciopinæ, Phyllodocinæ, Syllidæ, Amphinomidæ, and Polygordiaceæ, and gives a general *résumé* of the most important facts described in this part and in two papers published in preceding numbers of the journal. 3. The last article is entitled "Nouvelles Observations sur les Peripatus de la Collèction du Musée Britannique," par E. L. Bouvier, Professeur au Muséum de l'Histoire Naturelle de Paris. The title and contents of the forty-third volume conclude the part.

New Inventions.

A NEW PESSARY.

The new instrument which I wish to introduce to the profession is our old friend "Hodge" in a new, and I deem an improved, guise, hinged, and with a stem. That there exists no satisfactory pessary for prolapsus uteri in its worst form or for ante-version or ante-flexion is, I believe, incontrovertible. In cases of prolapsus uteri "cup and stem" pessaries, temporarily convenient, are in the end failures. Probably the ulcerated os has been caused or aggravated by their use; besides, they mostly retain foul secretions, become merely vehicles for absorption of septic matter, and at the best are uncomfortable in use. Again, most of them subject the uterus and appendages to violent shock in any undue movement of the body, whilst the bladder and rectum are both, in many mechanical appliances, interfered with In my instrument I claim: 1. Simplicity in construction and, therefore, that it is easy in application and practically aseptic. 2. The hinge action—in deviation about from 75° to 90°—simulates and acts harmoniously with the swing of the broad ligament and thereby lessens or annuls the danger of shock to the organs on impact upon the stem. 3. Neither bladder nor rectum are interfered with, and the dragging down and prolapse of the former are absolutely prevented This hinge action in the ante-version and ante-flexion pessary is checked at a certain angle so that no pressure can act on the bladder; and in the pessary for retro-version or retro flexion the same holds good, and the driving down of the posterior limb upon the rectum is avoided, pressure acting instead along the stem and therefore upon the rubber supports and waistband. 4. Although I have for the present adopted "Hodge" as a model I shall probably modify its shape, as with the forked and hinged stem I can, if necessary, adopt a ring pattern. The whole apparatus can be self-applied by the patient with very little instruction from the medical attendant, and it can be easily cleansed. Old ulcerations induced by friction from badly-fitting pessaries or from external violence are soon cured, as by its use all pressure in the neighbourhood of the ulceration is removed. The size of the pessary, its length of stem, &c., can, of course, be modified to suit each particular requirement. My instructions and ideas have been carried out in a most satisfactory manner by Messrs. Krohne and Sesemann who have spared no trouble in order to meet my wishes.



A, Ante-version pessary ready for insertion. B, Ante-version pessary *in situ* C, Retro-version pessary range of hinge movement.

Hughes R. Davies, L.R.C.P. Lond., M.R C.S. Eng.
Bow, E.

Diphtheria in Leicester.—The outbreak of diphtheria in Leicester continues to increase, 73 fresh cases and nine deaths being notified the week before last, as against 58, 54, and 39 notifications for the three preceding weeks, the resultant mortality in the latter case being 13, nine, and nine respectively. At Tuesday week's meeting of the Leicester Town Council the Sanitary Committee reported that 444 cases of the disease had been notified during the quarter, compared with 212 for the June quarter. The mayor, who is chairman of the committee, said that Mr. H. G. H. Monk, the medical officer of health, had visited every case of diphtheria which had been notified and had given it as his opinion that there was no cause for the disease, but that it spread from one child to the other. The mayor added that the Sanitary Committee were working in harmony with the School Board in the matter and strict injunctions had been given to see that children coming from a house where there was diphtheria should stay away from school for a month —Councillor Hincks said he understood that one of the most fruitful sources of spreading diphtheria was the children's love of cats. That being so it might be well to get rid of the cats.—Councillor C. F. Bryan. M R C S, was afraid that if they got rid of the cats mice would spread the disease. Another cause of spreading the disease was to be found in the slates used by the children at school. The children licked their fingers for the purpose of cleaning their slates and in that way the disease was often communicated.

THE LANCET.

LONDON: SATURDAY, OCTOBER 6, 1900.

It is somewhat surprising that bacteriology should so far have done but little to advance our knowledge of those common infectious fevers which are constantly breaking out in epidemic form in our midst. Many have been the efforts made to discover the specific germs of measles, rotheln, small-pox, and scarlet fever, but so far without success The discovery of the germ of scarlet fever has been announced so often that every new claimant must be prepared to be received with a considerable amount of scepticism. Most of the germs which have been put forward as the microbes of scarlet fever have been described as streptococci, the principal exception being a rod-shaped bacillus found by Edington. Streptococci are certainly very frequently present in the exudation on the throat and in secondary lesions such as otitis media, and recently they have been found by Courtois in the urine of patients suffering from scarlet fever; but there has been nothing distinctive about the streptococci ordinarily met with in scarlet fever and it has been practically impossible to differentiate them from the streptococcus, pyogenes and the streptococci of erysipelas. The organisms described by Klein in connexion with the now historical so-called "Hendon cow disease" were also not to be distinguished from streptococcus pyogenes. The whole matter was dealt with at great length by Professor Crookshank in his reports to the Agricultural Department of the Privy Council, and the arguments against Klein's streptococcus as the cause of scarlet fever seemed to be overwhelming. There are still, however, some who look upon Klein's streptococcus as the specific microbe of the disease. Dr. M. H. Gordon in the twenty-eighth annual report of the medical officer of the Local Government Board refers to the streptococcus scarlatinæ and says that it is acknowledged to be probable that those persons alone who have this streptococcus in their throats are able to infect others. As far as we are aware, however, no proofs have ever been brought forward that the so-called streptococcus scarlatinæ is capable of producing scarlet fever We drew attention nearly a year ago[1] in these columns to the preliminary announcement by Dr. William J Class of Chicago of his discovery in cases of scarlet fever of a diplococcus having a peculiar morphology which he believed to be the long-looked for specific germ of the disease. Dr. Class's further communication on the etiology of scarlet fever which appeared in The Lancet of Sept. 29th (p 927) is of such great importance as to demand some special notice.

The microbe described by Dr. Class has a special morphology which cannot be said of the previously described streptococci. When grown on a special medium it assumes a form resembling a very large gonococcus. The special medium is earth agar, which is glycerine agar to which is added about 5 per cent of black garden earth previously sterilised by discontinuous heating. This form is not constantly met with, but it can always be obtained by successive transplantations on earth agar. The biscuit-shaped appearance is best seen in lightly-stained specimens. In very old cultures grown under favourable conditions the microbe has the appearance of an enormous coccus having a slightly cupped contour, the dividing line between the two portions being very indistinct in the more deeply stained specimens Smaller organisms arise by division of the large diplococcus and may group themselves together. While the form is very constant when the germ is grown on the special medium it is capable of very great variability when grown in different media. Sometimes it forms chains, sometimes clusters, sometimes resembling a streptococcus, sometimes a staphylococcus Its one distinguishing morphological feature appears to be its diplococcus form when grown on earth agar. Long chains have never been obtained by Dr. Class, in an experience of hundreds of cases, from uncomplicated cases of scarlet fever. It is quite possible, as Dr. Class suggests, that the same organisms have been previously observed and described by some as streptococci and by Crajkowski as diplococci, but to find a germ in a certain disease and to establish its relation to that disease are two very different matters

Dr Class next maintains that this diplococcus is constantly present in scarlet fever He has found it in 300 successive cases and his findings have been confirmed by Grodwohl and Jaques. He says that he is absolutely certain of his ability to demonstrate the presence of the diplococcus in the blood, throat secretions, and scales of every typical case of scarlet fever. Assuming the accuracy of these observations that the organism is a constant feature of cases of scarlet fever we have next to be satisfied that it is the cause of the disease. To demonstrate this in a satisfactory manner is a very difficult matter. It is not possible experimentally to inoculate a human subject with a culture of the diplococcus with the object of seeing whether it will produce scarlet fever. We have at present no certain way of recognising scarlet fever, if such exists, among the lower animals. There is nothing characteristic in the morbid anatomy of scarlet fever in the human subject, and we are still less in a position to affirm from post-mortem examination of an animal that it presents characteristic lesions of scarlet fever.

What Dr. Class has established in the case of the lower animals, however, amounts to this—that the organism is pathogenic to mice, swine, and guinea-pigs. Mice are most susceptible, death as a rule following within 12 hours after subcutaneous injection of a small quantity of a virulent culture. Swine are unaffected by subcutaneous injections except when a very large quantity of a virulent culture is used, but intra abdominal injections are followed by grave symptoms and even death. Intravenous injections, however, are the most certain. Guinea-pigs are killed by intra-abdominal injections of virulent cultures. The diplococcus can, as a rule, be recovered from the bodies of the affected animals.

In white swine Dr. Class has succeeded in producing by intravenous injections of virulent cultures of the diplococcus a disease resembling scarlet fever. The injections produce malaise and rise of temperature within a few hours. In three or four days there is reddening of the skin followed after a week or two by profuse scaling. Sometimes the eruption is papular rather than erythematous. A considerable number of experiments were made with the same result.

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[1] The Lancet, Nov. 18th, 1899, p. 1385

We do not attach very much importance to the statement that the post-mortem appearances resembled those of scarlet fever. Similar appearances were observed by KLEIN as the result of inoculation with cultures of the Hendon streptococcus. Nephritis and enlargement of the spleen cannot be said to be peculiar effects of the scarlatinal poison. Nor can we draw any important conclusion from the fact that the disease inoculated in swine and mice appeared to be of a contagious nature—healthy animals placed with inoculated animals contracting similar affections — for this is a probable result in the case of any inoculable disease.

The observations made as to the influence of the blood of patients just recovering from scarlet fever on the activity of the germ are of interest. The blood inhibited to a certain degree the growth of cultures, and mice treated with subcutaneous injections of blood serum survived longer after inoculation than the other animals. These results lend further support to the contention that the diplococcus is the germ of scarlet fever. It would be still more convincing if it were found that the blood of patients suffering or recovering from scarlet fever had an agglutinating effect upon homogeneous cultures of the diplococcus.

Two further observations are brought forward by Dr. CLASS in conclusion. The first is that the diplococcus is found not only in cases of undoubted scarlet fever but also in cases of scarlatinal sore-throat and in cases of surgical scarlet fever. If, therefore, the diplococcus is the germ of scarlet fever, the nature of these hitherto debateable diseases is established. The second is that the diplococcus will grow in milk without producing any visible change in it. Many epidemics of scarlet fever have been connected with milk, as was the outbreak in Marylebone, which was traced to the milk distributed from the dairy farm in Hendon. It is accordingly in the highest degree probable that the germ of scarlet fever does not sensibly alter the appearance or the character of milk. The fact that the diplococcus does not alter milk in which it grows is not only consistent with, but also in favour of, the view that it is the specific germ.

Although it cannot be said to be proved absolutely that the diplococcus discovered by Dr. CLASS is the specific germ of scarlet fever all the evidence so carefully collected points in this direction. The streptococcus recently described by ADOLPH BAGINSKY and PAUL SOMMERFELD before the Berlin Medical Society and in the columns of the *Berliner Klinische Wochenschrift* as constantly present in the throat secretions and blood of patients suffering from scarlet fever may possibly be the same microbe as that discovered by Dr CLASS, but Dr. CLASS has pushed his investigations much further than have the German observers, and we trust that he will be able successfully to complete the work which he has so far advanced.

WHATEVER success may attend the appeal of the late Government to the nation on the questions of war and of the future of South Africa it will do well to take notice that equally great questions within the sphere of domestic politics will demand the attention of Parliament in the immediate future. Not only so, but the credit of the new Ministry (however it may be constituted) and its claim to the gratitude of the nation and of posterity will depend as much on its attention to these questions affecting our own people as on its foreign policy. Indeed, it is not too much to say that a foreign policy which absorbed all the attention of the country and of the Parliament and allowed no time for consideration of both the physical and moral health of the people would stand self-condemned. Of such questions none can exceed in importance that of the housing of the working classes. Much admirable work has been done of late years by the London County Council and by other bodies in multiplying open spaces in the metropolis and other large towns. But this is of little avail unless the living space within and about houses—that is, the space necessary for health and morals—can be increased. The open spaces are available as playgrounds only on holidays and at rare intervals and can tell comparatively little upon health, but an increase in the cubic space allowed for each member of a household in living-rooms and bedrooms would effect immediately a reduction of mortality both from tuberculosis and the ordinary epidemics and would bring an enormous accession to the brightness and pleasure of life among the poor. This may seem a trite and common-place object to occupy statesmen and politicians. But he is a superficial observer who thinks it so and there are evidences on all sides that it is one the furtherance of which is exercising the mind of the nation.

During the late session the Government showed some sense of the importance of the subject by bringing in, and passing, a Bill the main provision of which was one to enable local authorities to establish or acquire lodging-houses for the working classes outside their respective districts. The Manchester City Council lately adopted a report for the purchase of 237 acres for this purpose at a distance of four miles from that city. The Northamptonshire County Council under the Housing of the Working Classes Act (1890) recently agreed to sanction the adoption of Part III. of that Act by the Brixworth District Council in respect of a Northamptonshire village named Spratton. Towering high above all parties and the mere politics of parties are the words of His Royal Highness the PRINCE OF WALES: "There is no question at the present time of greater social importance than that of the housing of the working classes. ..... I hope the Legislature will be able to deal with the case of those who are responsible for insanitary property." The nation cannot but feel grateful to the PRINCE OF WALES for boldly giving utterance to such sentiments, which are worthy of him, as they would have been worthy of his illustrious father. The Church Congress, too, has shown its sense of the gravity of this subject by finding a place for it in its proceedings at the recent meeting at Newcastle. The Rev. J. W. HORSLEY was the principal speaker, and he adduced some of those terrible statistics that disturb the complacency with which we are too apt to regard our boasted civilisation. In his civil parish 124,000 people live on less than a square mile. There are nearly half a million persons in London in whose case home consists of one room; of 4575 one-roomed tenements in Spitalfields 1400 are occupied by from four to seven persons. He adduced other instances, such as the following: 17 persons in one room in Clerkenwell; 3000 persons to an acre through the agency of industrial dwellings in one part of Whitechapel; whole families in workhouses because the fathers, though in work, cannot find rooms; the large profits of slum landlords, illustrated by a six-roomed tenement in a city slum inhabited by six families at 6s. a week each, equal to £93 12s. per annum for a cottage in an alley, and much more to the same effect. To expect purity and health and temperance in such conditions is to expect to gather grapes of thorns or figs of thistles.

It is more easy to depict the evils of such a state of matters than to assign blame. But surely there is blame in all directions; ARTHUR HELPS thought that much was attached to architects and builders, and declared that they had made less advance since the time of the Romans than any other class. The slum owners are amongst the principal culprits; we have seen how exacting they are in the matter of profits and we know how careless they are apt to be in respect of the sanitary conditions of their property. The State has been too fastidious in regarding the rights of the property owner and too slack in insisting on his duties. It seems a mere truism to say that a house should be safe to live in both as regards its size and its appointments, and a matter of course to require that the landlord should be punished for any gross defect in this respect. Instead of this much of the legislation that has been passed has been of such a nature as to pay the landlord far above its value for his rotten and defective property. The best remedy for this will be in the more severe application of scientific and medical tests of the sanitary value of such property. This will enable sanitary authorities to buy it and to deal with it at such prices as will be consistent with justice to the poor and to the taxpayers as well as to the owners. Legislation in this direction will do little good if it is not accompanied by other legislation that will help the poor to save themselves. Society and religious bodies are becoming alive to their own risks and responsibilities in this matter. Society is like an organism: "if one member suffer, all the members suffer with it." We cannot divest ourselves of interest in slum-life by the exercise of any amount of selfishness. No luxury of the upper ranks of Society will save them in the long run from the dangers arising from the condition of misery and squalor of the poverty-stricken. Still, men must work out their own salvation. The poor must be helped, but they must help themselves. It seems monstrous that a working man should have to spend a third or a fourth of his wages in house-rent for one or two rooms. But it is equally monstrous that he, sometimes assisted by his wife, should spend the same proportion in beer or spirits. This regrettable fact is partly attributable to the very discomfort of his domestic conditions; but the tendency nowadays is to flatter the working man by assigning all his intemperance to his misfortune and none to his fault. This is another extreme. What is wanted is a little common-sense all round, including some wholesome legislation that will discourage drunkenness and divert to better uses some of the £162,000,000 spent yearly in cultivating it. Canon MOORE EDE said at the Church Congress that what is wanted is not so much to build houses as to raise the standard of those who lived in them. The Mayor of Newcastle, too, made a very terse remark—namely, that well-to-do artisans may be left to take care of themselves. They are as capable of doing so as any other class of the community. The State and sanitary authorities have enough to do in catering for the really poor and this must be done without harm to their self-dependence and self-respect. Such problems as those which we have indicated above are most urgent and yet most difficult, and not the least satisfactory bearing of the ending of the war in South Africa is that it may enable proper attention to be given to their solution.

A RECENTLY issued Parliamentary paper supplies us with information upon certain points of interest in connexion with the working of the Inebriates Act of 1898, and serves to remind us that the House of Commons which has been dissolved did two years ago pass a small Act dealing with one of the phases of the great question of the prevention of drunkenness in this country. Under this Act habitual drunkards convicted on indictment of crimes committed through "drink" and serious enough to warrant imprisonment can be sent to a State inebriate reformatory or to any certified inebriate reformatory willing to receive them instead of being consigned to penal servitude or hard labour. The return before us, however, informs us authoritatively that "no State reformatories have been instituted or are to be instituted," so that criminal drunkards of the more serious type are left to undergo purely penal treatment unless there is a reformatory voluntarily instituted by charitable individuals or by public local bodies willing to receive them. This omission of the Government to aid in giving effect to a salutary measure passed during its tenure of office can hardly be due to the ample accommodation which it found in course of being provided from other sources. It is a matter of notoriety that there has been considerable difficulty in finding accommodation for those habitual drunkards who should have been sent to certified reformatories after repeated convictions before magistrates for minor offences, and it is in consequence of this known difficulty that the number of convictions under the Act figuring in the report before us does not enable us in any way to estimate its possible future usefulness. We learn, however, from the same document that a number of reformatories are promised and that various localities propose to contribute to them or to others, the rate of payment apparently deemed sufficient being £1000 for the right to seven beds, with an additional weekly charge of 3s. 6d. for each case taken in. As this gives about 6s. per head per week for the board, lodging, supervision, medical attendance, and all else that is necessary for each inebriate under treatment, assuming that the subscribing locality makes full use of its rights, it is to be presumed that private benevolence will still have to help largely in the charitable work of reforming the drunkard. It is not, however, to past measures but to the possibility of future legislation that we should turn our eyes with a general election proceeding and with the promises of future members of a reorganised Cabinet published broadcast in their electioneering addresses and the reports of their speeches. We have already on two occasions[1] expressed our opinion that there rests a duty upon those responsible for the government of the country to give effect on an early occasion to the work of the Royal Commission which, under the presidency of Lord PEEL, spent three years in inquiring into the administration and operation of the laws relating to the sale of intoxicating liquors.

There is every probability that the Unionist party will return to office with a majority strong enough to enable it, independently *alike of those interested in the liquor traffic and of* its extreme opponents, to bring in and pass a thorough and effective measure of reform for the benefit of the whole community. Such a measure would hand down to posterity the names of those responsible for it adorned with a fame as lasting and as honourable as that earned by the successful and courageous conduct of an arduous and memorable war. There is, however, nothing in the addresses and speeches to which we have alluded to indicate that such a measure is contemplated, and the omission is ominous. That such an omission should be made out of deference to the wishes and voting powers of those engaged in a trade the abuses and not the usefulness of which it is desired to check is not to the credit of honourable politicians. The Unionist party occupies a position strong enough to enable it to avow and to carry out any intentions that it may have, and any want of courage shown either now or hereafter is likely to be long remembered by the enemies of those who exhibit it, while it is not likely to be forgotten even by their friends.

Annotations.

"Ne quid nimis."

THE HUXLEY LECTURE.

ON page 985 will be found the full text of the Huxley Lecture on Early Researches Leading up to the Antiseptic System of Surgery delivered by Lord Lister on Oct. 2nd at the opening of the winter session of Charing-cross Hospital Medical School. The proceedings took place in St. Martin's Town Hall, not far from the hospital, Mr. J. H. Morgan, the treasurer of the school, being in the chair. This lectureship was founded after the death of Professor Huxley out of a sum raised by the Medical School and its friends to commemorate the fact that Huxley received the whole of his medical education at Charing-cross Hospital. The lecture is a biennial one and Lord Lister's is the third of the series, the first having been delivered by Sir Michael Foster in October, 1896, and the second by Professor Virchow in October, 1898. It will, therefore, be seen that the Charing-cross Hospital Medical School has so far been singularly fortunate in being able to have representative men, pre-eminent in their several departments, as the speakers on these occasions. At the conclusion of the lecture a vote of thanks to Lord Lister was proposed by Dr. T. H. Green, and seconded by the Rev. Prebendary J. F. Kitto. In acknowledging the vote of thanks Lord Lister expressed the pleasure it gave him, now that he had retired from surgical practice, to be again speaking among colleagues.

FOOD PRESERVATIVES COMMITTEE.

THE members of the Food Preservatives Committee, Dr. Timbrell Bulstrode and Dr. F. W. Tunnicliffe, and Mr. Charles J. Huddart, its secretary, who proceeded last month to Ireland for the purpose of investigating the dairying industry of that country in relation to the use of chemical preservatives have now returned to town. The inquiries which they made embraced the city of Dublin and the surrounding district anc the great butter-making centres in the south and west o Ireland. In the north, time sufficed only for a visit to the county of Cavan, but in that county, as well as in those which were visited in the south and west, large tracts o country were traversed and detailed inspection was made of farms and farm premises and of the several operations which precede the actual despatch of milk t the large creameries and of butter to the markets anc factories. The processes of manufacture at creameries anc butter factories, as well as at bacon and margarine factories also engaged the attention of the Committee at one anc another place. In Dublin itself, not only were the official of the *Government departments interviewed*, but the Committee had the advantage of repeated conferences with Si Charles A. Cameron, the medical officer of health of Dublin and with his colleagues. The mass of information acquired a the result both of the visit paid to the continent (especiall to Denmark) and of the visit to Ireland just concluded wil need collation and summarising with a view to the presentation to the whole Committee of reports on those results which reports will need very careful consideration before th Committee proceed to draw up their report upon the evidenc before them.

RAILWAY MISMANAGEMENT.

EVERY few months, probably whenever the exigencies o space permit the editor to insert them, the columns of th *Times* are invaded by a score of letters complaining of th scandalous discomfort and unpunctuality. of the Englis southern railway companies. That recurrent period ha apparently again come round and the columns of our contemporary have borne their usual crop of correspondenc on this subject. We ourselves are not, of course, concerned directly with problems of railway management but all matters which touch upon questions of hygien concern us, and some of the defects of the administration and management of the railway lines which the letter in the *Times* reveal have a distinct bearing upon healt and therefore call for notice in our columns. Whereve there is dirt there is the possibility of disease, and dirty condition of the carriages calls for the stronges reprobation. Wherever there is over-crowding, even th temporary over-crowding of a railway compartment, ther is the possibility of danger to health, and the habitua over-crowding of trains into and out of London at certai hours of the day on all the southern lines, and unhappil on some of the northern lines also, is a matter callin earnestly for attention. Nor is the question of th gross unpunctuality which has prevailed for years on th southern lines without importance from the purely medica and hygienic standpoint. Anything which tends t enable the Londoner, and, to a less degree, the worke in all our great towns, to live away from his worl to pass every night at least in the purer air of th *country*, is advantageous to health. On the other han anything which tends to discourage the worker in tow from living in the country and obtaining his dail supply of fresh and unexhausted air is greatly t be deprecated, and it cannot be doubted that th habitual unpunctuality of the train service on the lines south of the Thames, together with the habitual overcrowding of the compartments during the busy hours of the day, constitute a serious hindrance to the growth of the practice which has grown up among business men of having their houses in the country. If the merchant, or the banker, or the professional man can leave his house in Kent, Surrey, or Sussex at a fixed hour each day certain of arriving in London without discomfort at the hour at which he is timed to arrive, and if he can leave London in the evening with the same certainty of reaching home without discomfort or unpunctuality, no arrangement would be more satisfactory for him alike from the point of view of health and of enjoyment. If, however, living in the country means for the London man of business two journeys in over-crowded compartments by trains which may arrive anywhere between 15 and 45 minutes after time, with all the rush and hurry and irritation, not to speak of possible pecuniary loss, which such delays mean, it is not astonishing if he comes to the conclusion that country air and country enjoyment may be purchased too dear and falls back upon a house in Chelsea or South Kensington. It must not be imagined because we have spoken in the main of railways in and out of London that this question is of importance in London alone. The same evils, though we are happy to believe in a less extreme degree, prevail on the railways to and from the other great towns of England where there is any considerable body of business men living in the surrounding districts. The difficulty of coping with this local traffic is, of course, very great, but it is not beyond the power of care and money to meet it successfully. The cost would no doubt be considerable. All great evils which have been permitted to grow till they have reached unendurable proportions are apt to require drastic and costly remedies. But that is not a reason for permitting the managers of our railways to shirk them altogether. Indeed, in the case of railways the existence of the evil in its present magnitude is in itself *sufficient condemnation of their administration.*

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[1] THE LANCET, July 29th, 1899, p. 288; Sept. 8th, 1900, p. 743.

BUILDING BY-LAWS IN CREWE.

ALTHOUGH a quarter of a century has elapsed since it became incumbent upon local sanitary authorities to appoint a medical officer of health, there are still some members of these bodies who are ignorant of that official's duties and who appear to be only too anxious to minimise his influence. This indifference to the well-being of those whose interests they are supposed to serve is usually to be found in small rural districts where the evils resulting from inattention to hygienic laws are often counteracted by an abundance of pure air and by the simple habits of life of the inhabitants. In a large progressive town such as Crewe has of late years shown itself to be we should have expected to find more enlightenment, but to judge from a more or less acrimonious newspaper correspondence that has lately been passing between an alderman of the borough and the former medical officer of health our expectation would be vain. In his last annual report upon the sanitary condition of Crewe Dr. Meredith Young referred to the unsatisfactory manner in which some of the building by-laws were being carried out, upon which Alderman Briggs questioned the desirability of the medical officer of health interfering with the erection of new buildings or with the enforcement of the building by-laws. The particular by-law which Dr. Young was anxious to have more rigidly enforced referred to the concreting of the sites of dwelling-houses, and as Crewe is situated upon a bed of stiff clay it is surprising that any person should object to his recommendation. That a medical officer of health does not exceed his duty in calling attention to breaches of building by-laws is made clear in a communication to Dr Young from Dr. Franklin Parsons, assistant medical officer to the Local Government Board, in which he says that By-law No. 10 in Model Series 4, requiring a concrete layer under floors of houses, is made under the powers of Section 157 (2) Public Health Act, 1875, as one "with respect to the foundations of new buildings for the purposes of health." Article 18 (5) of the Local Government Board General Order of March, 1891, with respect to the duties of the medical officer of health, prescribes that "he shall advise the sanitary authority on any question relating to health involved in the framing and subsequent working of such by-laws and regulations as they may have power to make." Clearly, therefore, says Dr. Parsons, a medical officer of health is right to call attention (of course in temperate and judicious language) to conditions injurious or dangerous to health which are allowed to come into existence owing to failure to carry out the by-laws.

TREATMENT OF THE INSANE IN THE EAST.

ON August 6th there was opened on one of the lower slopes of Mount Lebanon, Syria, near to the carriage road from Beyrout to Damascus, a newly-built hospital for the care of lunatics. It has been founded by Mr. Theophilus Waldmeier, a veteran missionary in Abyssinia and Syria, and consists of a central administration block and two pavilions, for male and female patients respectively, accommodating 20 of each sex. 17 patients are already under care. A considerable area of land and gardens for the growth of wheat, olives, and other fruit surrounds the houses. Dr. Wolff, from the Munsterlingen Asylum, Switzerland, is the medical superintendent. This is the first organised lunatic hospital in Syria and it has in consequence attracted much attention, the need for such institutions in the East being great. It will probably be dependent upon support from Europe for a good many years. Dr. Percy Smith is the chairman of the committee in London, which includes amongst others Dr Robert Jones of Claybury and Dr. Bedford Pierce of York; Sir R. Tangye acts as treasurer.

GANGRENE OF THE INTESTINE FROM PORTAL THROMBOSIS.

AT the meeting of the Société Médicale des Hôpitaux de Paris on July 13th M. Edgard Hirtz and M. M. O. Josué read an important paper on this rare condition. When the mesenteric veins are obliterated as a result of portal thrombosis profound alterations occur in the intestine—sanguineou infiltration and *necrobiosis—which may be rapidly* fatal. The following case is an example. A woman, aged 33 years, noticed that her abdomen was enlarging. The increase in size was of sudden onset and at first took place rapidly and then more slowly. About the ninth day paroxysmal pains in the dorsal and lumbar regions appeared. The patient rapidly became weaker and diarrhœa (but not melæna) occurred. At the end of three weeks when she was admitted into the hospital she was very feeble and the abdomen was greatly enlarged. In the distended abdominal wall a collateral venous circulation was well *developed; round the umbilicus* was a network of veins in communication with the thoracic veins. There was much ascites The liver appeared to be of normal size; the spleen was enlarged. The lower limbs were œdematous. The jugular veins were distended. On the third day after admission the patient vomited twice or thrice and complained of acute abdominal pain. The features became drawn, the eyes sunken, and the nose pinched—in short, the *facies péritoneal* was present. During the night she was delirious and *on the next day* comatose. On the following day she died. At the necropsy a large quantity of serous fluid was found in the abdomen. At its middle for a distance of 20 inches the small intestine was of a red, enabling the Board to enforce upon a defaulting local authority the performance of its statutory duties, but it is certainly a question worthy of serious consideration whether the putting in force of the powers of the Board in one or two instances would not have a salutary effect upon other authorities who are exhibiting a spirit of indifference to their responsibilities.

ALCOHOL AND THE TROOPS RETURNED FROM THE WAR.

IN our issue of July 28th (p. 273) we drew attention to the desirability that the welcome offered to those who have fought and bled for their country, and we might add for us who have stayed at home, should not include the treating of them with an overplus of alcoholic drinks. We are induced to return to this subject owing to the announcement that the City of London Imperial Volunteers are expected home about the beginning of November. Some will be convalescent from wounds or sickness or possibly from both. Of the warmth of their reception there can be no doubt and it is fitting that they should be greeted with gratitude as well as with joy. They are the first volunteers as distinguished from regulars to serve in the fighting line who have left these islands; they have by all accounts seen plenty of fighting and have borne themselves nobly. Their home-coming, therefore, should be marked by a welcome which, although hearty, should be commensurate in dignity with the serious work which they have so well carried out. For these reasons we would beg enthusiastic friends and countrymen not to mar the return of these or of any troops by temptation to over-indulgence.

THE SMOKE NUISANCE.

OUR remarks last week about the recrudescence of the smoke nuisance promise to stir up public opinion with good effect on the desirability of suppressing this intolerable evil. The newspapers in general expressed the opinion that we "waxed somewhat strongly" on the subject, but we do not admit that our words were too emphatic. The *Westminster Gazette* in quoting our article added the stale remark that "it is unfortunately easier to point out the evil than to suggest a permanent remedy." This remark hardly needs reply from us, since Sir William Richmond promptly cleared the mind of the writer of it on this point. Sir William Richmond's answer was as follows :—

> It is cheaper to consume smoke than to allow it to pass into the atmosphere. Smoke is wasted fuel. At a comparatively small cost all factories, electric lighting stations, &c., can be provided with smoke-consuming apparatus. This being the case the public has only to demand a clear atmosphere—anyhow as far as the smoke from factories, steamers, and railway engines is concerned—and they will get it. The vestries and the L.C.C. do not enforce the law against smoke partly on account of apathy, but chiefly because in those bodies there are many smoke-makers, or friends of such.

Sir William Richmond wrote a similar letter in the *Daily Graphic*, Oct. 3rd, *à propos* of our remarks. As a reference to our correspondence columns this week will show, Sir William Richmond has also addressed us upon the subject. We most sincerely hope that his appeal will receive the support of all who are interested in keeping "a clean sky" and stopping once and for all the vestries and other authorities from "making it dirty." It is sheer nonsense to say that smoke cannot be prevented. The fact is the question is not seriously considered. It has been demonstrated again and again that properly constructed boiler furnaces when properly fixed need not smoke. The best example that we know of in this connexion is in the case of Nottingham, where black smoke was practically abolished because the nuisance proved to be injurious to the lace produced there. This is a complete answer to the observation that "it is unfortunately easier to point out the evil than to suggest a permanent remedy." It is nothing of the kind. More than that, when preventive measures are taken, it is a source of added revenue. It is just as important, in our opinion, that our public health authorities should see that the atmosphere which we breathe is untainted as that the water which we drink is unpolluted and the food which we eat is unadulterated.

THE UNIVERSITY OF LONDON.

THE first meeting of the Senate of the University of London will take place on Oct. 24th and the members of the various bodies appointed to serve thereon must be soon elected. The Royal College of Physicians of London has appointed Dr. P. H. Pye-Smith and Dr. W. H. Allchin, and the Royal College of Surgeons of England Mr. H. G. Howse and Mr. A. Pearce Gould as their representatives. These gentlemen have the advantage of being old graduates of the University and are well versed in the movements for its conversion into a teaching university and the opposition to such a change. On Oct. 9th, at 5 P.M., a meeting of Convocation will be held at the University new building at South Kensington, in the East Conference Hall, for the appointment of the members to serve on the Senate under the statutes made by the Commissioners. The registered graduates in medicine and in surgery are urged to elect Dr. Thomas Barlow and Dr. J. Frank Payne on the one hand, or Dr. S. Ringer and Mr. Quarry Silcock on the other, but two only can be elected. Dr. Barlow and Dr. Payne are frankly in accord with the views put forward by us for the establishment of a real teaching university in London, whilst Dr. Ringer and Mr. Silcock have the strong support of the so-called Graduates' Association, urging strongly that the existing work of the University is to be kept up as far as possible as it now is. The question of external students in arts and science, on which so much stress is laid in the circular of the association, does not much concern the medical student, but a re-organisation of examinations, so that he may not be examined twice or thrice in the same subject, is a far more necessary reform for the proper teaching of medical science and practice.

THE HARD CASE OF THE ROYAL LONDON OPHTHALMIC HOSPITAL.

WE have already[1] expressed our sympathy with the movement which has for its object the exemption of hospitals and similar charitable institutions from the payment of local rates, and a case has just occurred which shows with painful clearness how seriously this burden may affect the financial position of a hospital. The Governors of the Royal London Ophthalmic Hospital (Moorfields Eye Hospital), City-road, E.C., received a summons for non-payment of rates amounting to £324, and although the secretary explained at the hearing of the case that it was impossible for so large a sum to be forthcoming at present, the court held that it could do no more than make an order for payment in 14 days. This claim seems to be particularly hard in view of the fact that the new building has only been occupied for one year, and during that time the hospital has actually paid £540 in rates. Besides suffering like all other charities by the diversion of subscriptions to the various war funds and the Indian Famine Fund, this hospital has to meet an increase of expenditure consequent upon the occupation of larger buildings in the way of an increase in wages and in the cost of lighting and heating. It also has now to pay £1210 a year ground-rent, whereas the old property at Moorfields was freehold, and its rates are now £870 as against £50 at Moorfields The sale of the old site will pay for the erection and equipment of the new building, but the committee earnestly appeal for new subscriptions to meet the increased cost of maintenance under the present improved conditions

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[1] THE LANCET, March 10th, 1900, p. 715.

KERATOLYSIS OR SKIN-SHEDDING

IN the *Journal of the American Medical Association* of Sept 1st Dr R M Stone has recorded a case of this curious affection which is analogous to the moulting of birds The subject was a strong, healthy man, aged 50 years, who shed his skin every year He was born in May, 1849, and shed his skin in the following July, and since then every summer In 1893 1899, and 1900 he shed his skin twice at intervals of a month The period of shedding is ushered in by a feeling of malaise and chilliness and is followed by fever with a temperature as high as 103° F The skin of the body desquamates, but that of the palms, elbows buttocks, penis and scrotum, knee caps, and feet comes off in a mass The hair of the head, eyebrows, and moustache falls The patient does not become bald, but the hair falls little by little, as after typhoid fever The nails also participate in the shedding During the period of shedding the patient is able to work When the skin begins to be shed perspiration ceases and the epidermis becomes raised and hard so that when struck it gives off a sound like that of celluloid The patient's family history is good and no relative has been similarly affected

UP to the time of going to press the following medical candidates have been re elected Members of Parliament —John Dillon, L R C S Irel (Mayo East), Sir M Foster, M D Lond, K C B (London University), C K D Tanner, M D, M Ch R U I (Mid Cork), and Sir J Batty Tuke, M D Edin (Edinburgh and St Andrews Universities)

THE opening address at the London School of Tropical Medicine was delivered on the evening of Oct 3rd by Sir William McGregor, K C M G, M D, the subject being Some Problems in Tropical Medicine The address will appear in full in THE LANCET next week

THE First Hunterian Lecture will be delivered before the Hunterian Society at the London Institution, E C by Dr Norman Moore on Oct 10th at 8 30 P M The subject will be the Clinical Study of Heart Disease Members of the medical profession are invited to attend,

WE have received the report of the Commissioners in Lunacy for England and Wales for the year 1899 We hope shortly to publish an extended notice of the report

A REUTER'S telegram of Sept 30th from Brisbane states that a case of plague has been reported at Charters Towers Queensland

WE are informed that a meeting of the Penal Cases Committee of the General Medical Council was held on Oct 2nd.

BRITISH DENTAL ASSOCIATION — The annual general meeting of the South Wales and Monmouthshire branch of the British Dental Association was held at Newport on Sept 27th Mr J C Oliver in an interesting address said that the point as to whether it was legal for an unregistered person to practise dentistry for profit had never been decided by the law courts Mr Graham White was elected president for the ensuing year It was decided to hold the next annual meeting at Cardiff

THE FERRUGINOUS BATHS OF SHANKLIN SPA

SHANKLIN in the Isle of Wight has long possessed a ferruginous spring of some merit, but like so many other meritorious natural mineral waters in this country its value has not been widely recognised In spite of representations to the contrary English people still visit the various spas of the continent, whatever may be the advantages which may be had at similar places in this country Fashion is doubtless the chief factor which has hitherto been unfavourable to enterprise in regard to the development of English spas Yet if a list of the natural springs of Great Britain be consulted it will be found that almost all kinds of mineral waters occur in this country We have thermal waters at Bath, sulphur waters at Harrogate and Llanwrtyd in Wales, and saline springs and barium springs in Wales not to speak of the chalybeate springs at Tunbridge Wells, Brighton, and elsewhere In some instances, of course great effort has been made to equip these places on a scale similar to Homburg, Wiesbaden, and Schwalbach on the continent, but our home resorts do not possess the renown of the foreign spas Individual enterprise has done what it could but patronage has failed In particular however, it would appear that attention has never been seriously directed in this country towards utilising ferruginous water for bathing purposes, at least we know of no installation of this sort, although as is well known, there are several celebrated chalybeate waters abroad as at Schwalbach and Homburg in Germany and Spa in Belgium, where natural ferruginous water is heated in a specially constructed bath for immersion purposes These waters are chiefly employed for cases of anæmia and general debility

Although in England chalybeate waters are fairly abundant no attempts have been made to utilise them on any scale for bathing purposes or it may be that the yield of ferruginous water is not consistent with the erection of baths on any important scale At Shanklin, however, there is an abundant supply of pure ferruginous water which if circumstances needed could be further developed Hitherto the ferruginous waters at Shanklin have been practically allowed to run to waste but arrangements have recently been made for the storage of this water in view of its adaptation to bathing purposes on a plan exactly coincident with that adopted at the "Stahlbrunnen" abroad, and the promoters of the scheme have gone the right way to work, for they have wisely studied the method in vogue at the continental resorts before deciding to embark upon an installation of ferruginous baths at this very accessible and healthy seaside resort The initial difficulty is to heat up cold ferruginous water to the necessary temperature for a bath without disturbing the natural state of its mineral and gaseous ingredients As a rule the ferruginous waters of this country contain protocarbonate of iron held in solution by the carbonic acid of the water As soon as such waters reach the surface rapid oxidation of the iron ensues red ferric oxide deposits, and carbonic acid gas is set free This disintegration is hastened when the water is heated and an unsightly mixture is presented to the bather, besides which at that point it could not be said that he was taking a bath in the water in exactly the same condition as it flows from his natural source The promoters of the Royal Shanklin Spa, as we have said, did wisely by gaining the experience of others with regard to the elucidation of this problem and they appointed delegates to visit the ferruginous spas abroad with a view of adopting the same successful methods at Shanklin The work of survey being completed the work of construction was executed with commendable expedition and there now exists a system of ferruginous baths at Shanklin identical with those at Homburg, Spa Schwalbach and elsewhere It is true that at present the installation is on a small scale, but the appointments are excellent and such as meet the special requirements of patients in regard both to

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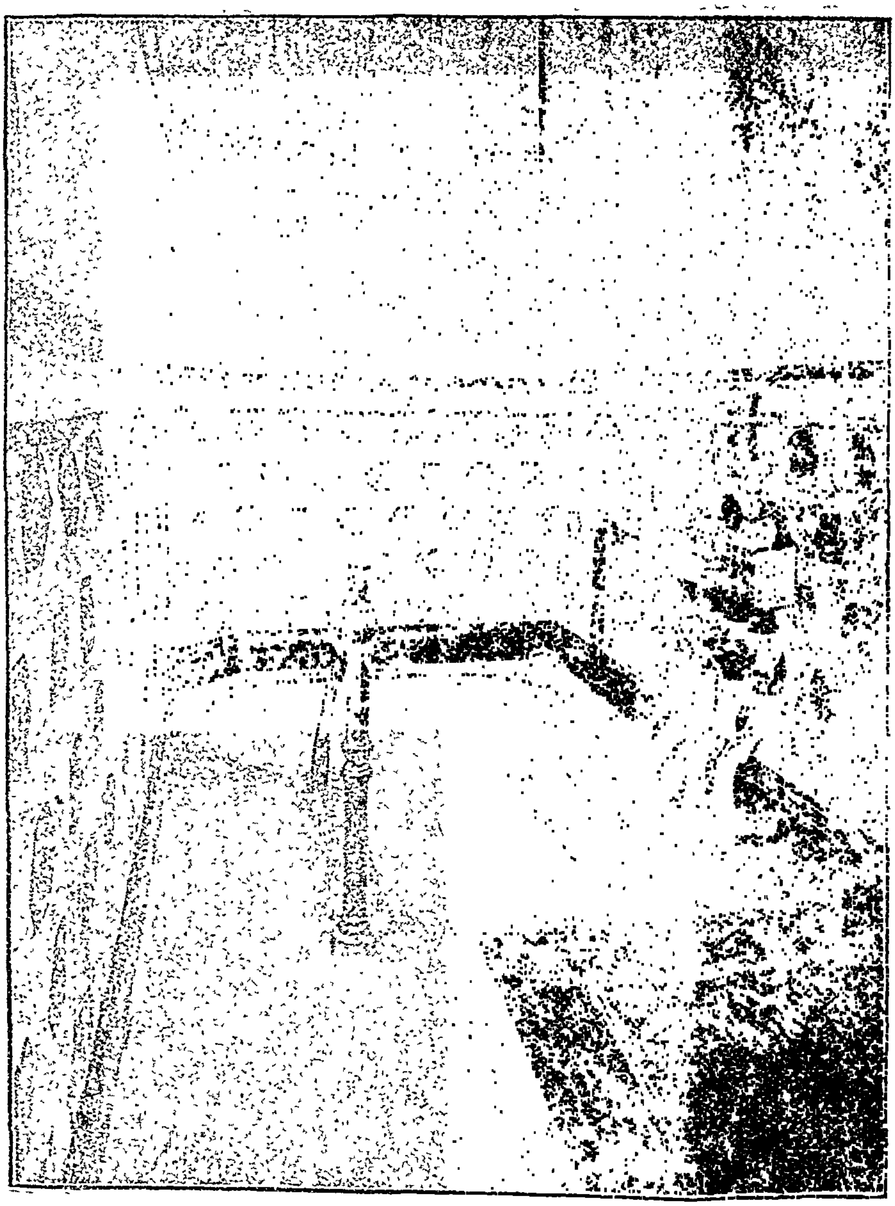
it is stated in the volume dealing with the geology of the Isle of Wight (by Henry William Bristow, F.R.S., F.G.S.: London; Eyre and Spottiswoode) that chalybeate water sisues from these strata. "The spring known as Shanklin Chalybeate Spa was first noticed by Dr. Fraser, physician to Charles II."

It is interesting to compare the analysis of Shanklin Spa water with the analyses of other ferruginous waters both at home and abroad. The Tunbridge Wells chalybeate water, according to published analyses, contains one grain of carbonate of iron per gallon and a total solid contents of eight grains per gallon. Brighton chalybeate water contains eight grains of carbonate of iron per gallon associated, however, with 92 grains of other salts. The gallon, but this is associated with a very large quantity of saline constituents, chiefly chloride of sodium, the total of which amounts to from 600 to 1000 grains per gallon. The Kreuznach springs are similarly composed containing a little over three grains of carbonate of iron per gallon. The Schwalbach waters contain from four to eight and a half grains of carbonate of iron per gallon with from 27 to 90 grains of total mineral ingredients. The Stahlbrunnen at Schwalbach contain as much as 5·85 grains of carbonate of iron with 32 grains of total solid constituents. The waters of Spa in Belgium contain 3·41 grains of carbonate of iron per gallon with a total solid contents of 35 grains per gallon. Many other continental springs could be quoted, but these are sufficient for the purpose as being the most

FIG. 3.



One of the deep baths.

thermal waters of Bath, according to THE LANCET analyses, contain nearly two grains of carbonate of iron per gallon with 140 grains of other salts. Most of the other ferruginous springs at home contain iron in the form of ferric sulphate which is generally associated with excessive quantities of alum which render them very astringent. Such are, for instance, the Sandrock spring in the Isle of Wight, the chalybeate spring at Hastings, and various other springs in Derbyshire, Bedford, Bucks, and elsewhere. As regards continental mineral waters the Homburg Stahlbrunnen contain from 8·55 grains to 4·82 grains of carbonate of iron per important in regard to their application to balneological practice.

It will be seen that Shanklin Spa water compares very favourably with many of the [illegible] waters abroad: indeed, for some pu[illegible] certain advantages. It is not [illegible] is the most important const[illegible] water is on this account more palatable than the strong saline chalybeates abroad. It is also on the same account less "sticky" in the bath. The nature and in some particulars the amount of the mineral ingredients of Shanklin Spa water are was made for the presence of comparatively rare constituents, but with the exception of traces of lithium none were found. It is an advantage that Shanklin Spa water is free from alum and it is not accordingly very astringent. The iron is present entirely in the unoxidised state—the protocarbonate of iron formed in the Blaud pill.

Though at present the installation of ferruginous and other baths at Shanklin Spa is only on a small scale, the fact that an excellent start has been made, and on lines fully in accordance with balneological practice abroad, deserves to be recognised. The enterprise is one worthy of all encouragement, and there is no reason why the experience ultimately gained at the Shanklin baths should not yield evidence that this admittedly valuable method of treatment in hydro-therapeutics may be carried on just as efficiently and with equal satisfaction to the patient in this country as at health resorts abroad. Ferruginous baths are said to be of conspicuous value in debilitated conditions. The advantages of a health resort being easily accessible at which a course of treatment by baths may be pursued and where the action of the sea air is invigorating, are undeniable. As is well known, Shanklin is situated on a bracing coast and in addition to this very important source of benefit to persons who are recruiting health it now presents a system of medicinal baths of which the equipments and appointments are not less satisfactory than are those of foreign watering-places.

CHANGES IN THE MEDICAL SCHOOLS.

St. George's Hospital.—The following changes have taken place in the staff of the hospital and school. The term of office of Mr. Warrington Haward, senior surgeon, having expired Mr. W. H. Bennett becomes senior surgeon. Mr. Marmaduke Sheild has been appointed surgeon and Mr. Herbert Stringfellow Pendlebury assistant surgeon to the hospital. Dr. Fenton has been appointed curator of the museum, vice Dr. Lazarus-Barlow, who has become pathologist to the Westminster Hospital. Dr. Dickson has been appointed medical registrar, vice Dr. Fenton. Dr. Menzies has been appointed senior anæsthetist, vice Dr. Dickson, and Dr. Llewelyn Powell has been appointed junior anæsthetist, vice Dr. Menzies. Dr. Penrose has been appointed joint lecturer (with Dr. Isambard Owen) in the principles and practice of medicine, vice Dr. Ewart, resigned Mr. G. R. Turner has been appointed joint lecturer (with Mr. Clinton Dent) in the principles and practice of surgery, vice Mr. W. H. Bennett, resigned. Dr. Cyril Ogle has been appointed lecturer in materia medica and therapeutics, vice Dr. Penrose. Mr. Francis Jaffrey has been appointed lecturer in anatomy, vice Mr. Turner. Dr. J. Howell Evans has been appointed demonstrator in anatomy. Mr. Clinton Dent has been appointed treasurer of the medical school, vice Mr. Warrington Haward.

King's College, London.—The changes during the past year have been the retirement of Professor I. Burney Yeo, the succession to the chair of Medicine of Professor Tirard, and the appointment of Dr. F. W. Tunnicliffe to the chair of Materia Medica and Pharmacology; also additions to the hospital staff of Mr. Leslie and Mr. Legg and Dr. Hugh Playfair as medical, surgical, and obstetrical registrars and tutors respectively.

London Hospital Medical College.—On the medical staff the death of Dr. Charlewood Turner has led to the appointment of Dr. Percy Kidd in his place as physician; Dr. Robert Hutchison has been appointed assistant physician. On the surgical staff Mr. H. L. Barnard has been appointed as an additional assistant surgeon; Mr. Farmer succeeds Mr. Cunningham as dental surgeon. In the College Mr. A Keith has been appointed joint lecturer on anatomy, still retaining his senior demonstratorship on anatomy. Dr. Robert Hutchison has been appointed lecturer on Chemical Physiology and Foods and Dietetics, and Dr. J. J. R

Middlesex Hospital.—Dr. Sidney Coupland and Sir R. Douglas Powell, Bart., have been appointed consulting physicians; Dr. C. Y. Biss has resigned; Dr. W. Pasteur has been appointed physician; Dr. F. J. Wethered and Dr. H. C. Thomson have been appointed assistant physicians; Mr. W. Hern has been appointed dental surgeon, Mr. W. S. Nowell assistant dental surgeon, Dr. H. P. Noble assistant anæsthetist, Mr. C J. Baker casualty medical officer, Dr. J. T. Wills casualty surgical officer, Dr. W. Pasteur lecturer in medicine, Mr. A. Pearce Gould lecturer in surgery, Dr. W. E. Wynter lecturer in practical medicine, Mr. J. Murray lecturer in practical surgery, Dr. A. M. Kellas lecturer in chemistry, vice Dr. Plimpton, deceased, and Mr. T. H. Kellock surgical tutor.

London (Royal Free Hospital) School of Medicine for Women.—Dr. Brodie has been appointed lecturer on physiology, vice Dr. Starling, resigned; Miss Ellaby, M.D Paris, has been appointed lecturer on ophthalmic surgery, vice Mr. J. G. Mackinlay, deceased; and Dr. Phear has been appointed assistant physician at the Royal Free Hospital, vice Dr. J. Fawcett, resigned.

Owens College, Manchester.—The council of the Owens College has appointed Mr. F. A. Southam to be professor of clinical surgery in place of Mr. W. Whitehead, who has resigned. Mr. G. A. Wright has been appointed professor of systematic surgery in place of the late Mr. Jones. These appointments are subject to confirmation by the Court of Governors at their meeting in October next. Mr. W. Thorburn has also been appointed lecturer on operative surgery and Mr. Joseph Collier has been appointed lecturer on practical surgery.

University College, Liverpool.—Professor Lodge has resigned the chair of Physics on undertaking the Principalship of the University of Birmingham and Dr. E. P. Manby has resigned the post of assistant *lecturer in hygiene and is* replaced by Dr. Mussen. Dr. Willett has given up the post of obstetric assistant. Dr. N. E. Roberts has become lecturer on infectious diseases and vaccination. Dr. Buchanan has been made assistant lecturer in forensic medicine. Dr. J. S. Macdonald has been made assistant lecturer and senior demonstrator in physiology. Dr. Balfour Stewart has been appointed research assistant in bacteriology.

Anderson's College Medical School.—Dr. J. G. Connal has been appointed to the lectureship in Diseases of the Ear, in room of Dr. Erskine Professor Carstairs Douglas has been appointed to the chair of Medical Jurisprudence in room of Professor R. M. Buchan. Dr. Carroll has resigned the lectureship in Public Health, but no new appointment has yet been made.

St. Mungo's College, Glasgow.—Dr. McPhail has been appointed professor of anatomy, vice Mr. Kent.

THE WAR IN SOUTH AFRICA.

THE regular warfare in South Africa came to an end with the flight of Mr. Kruger into Portuguese territory and the occupation of Komati Poort by our troops, as we had long ago surmised would be the case. It now only remains to deal with the dispersed bands of the enemy who will no doubt continue to provide work for some time to come for the army of occupation and for the 12,000 police to be raised in the Transvaal Colony and Orange River Colony under the command of General Baden-Powell. There will nevertheless be a good deal to occupy the serious attention of the newly elected Parliament in connexion with the wars going on elsewhere, as in China and Ashanti, and the promised reorganisation of our military forces and army reform. As to army reform, not only has the nation desired it, but the appointment of Lord Roberts as the new commander-in-chief will ensure it. When the Royal Commission have finished their investigations and made their report on the hospitals in South Africa we shall see how far the medical services are likely to be involved in the general scheme of army reform. For the present the nation is engaged in the turmoil and throes of a general election. There is much, however—of army medical interest at the present moment apart altogether from matters of imperial, domestic, and foreign politics and questions of a purely military nature.

We may deal, first of all, with the speech of Mr. W. Burdett-Coutts to his constituents at the Westminster town-hall on Sept. 29th, a printed report of which we have read. It would be impossible to take up and consider all the points embodied in it; nor is this necessary, for even admitting a good deal of what he has put forward in vindication of his action we may nevertheless pass over much of his address as really irrelevant so far as we are concerned. We are not among those who have made accusations against him about want of patriotism, loyalty to party, and so forth. But assuming, for the sake of argument, that Mr. Burdett-Coutts's statements about the war hospitals were absolutely correct and neither exaggerated nor highly coloured, the question really was as to the causes of the sufferings of the sick and wounded which he described, whether these were unavoidable or not under the circumstances, and whether he had spared no pains to ascertain the true state of affairs before harrowing public feeling by the publication of his painfully realistic descriptions. There is no denying that the publication of his letter in the *Times* had a most painful effect, especially upon the relatives of those fighting in South Africa, and this feeling had an additional and bitter sting and became well-nigh intolerable when accompanied by a belief that the sufferings of the sick and wounded were the result of neglect and might have been prevented, instead of being unavoidable and attributable to the stress and strain of war. We have at present the opinion of Lord Roberts and his staff, who ought to know, on the one side, and that of Mr. Burdett-Coutts on the other; and when the report of the Royal Commission is published we shall, it is to be hoped, learn all the facts. What we have all along contended for is that Mr. Burdett-Coutts was not justified in publishing his letter until he had learned what the military authorities had to urge in explanation of the position and until he had made himself thoroughly acquainted with all the circumstances of the case. It is all very well to appeal now to the tribute which he paid to Lord Roberts's qualities as a soldier and as an eminently humane man. No one doubts them or simply seeks to shield himself from blame behind the authority of Lord Roberts's name, but as Lord Roberts was in supreme command and on the spot he was officially responsible for everything and, what is more, he manfully accepted that position, he courted inquiry, and he gave an emphatic expression of his own views on the matter. No one knew when the war commenced that instead of 50,000 troops 200,000 would be required and would be sent to South Africa, and it is wide of the mark, as far as the medical service is concerned, to make any capital out of the fact that the provision which would suffice for the one force would not suffice for the other. The sudden and deplorable outbreak of enteric fever was not foreseen. It followed the rapid march of the troops to Paardeberg and was probably attributable to their occupation of that most insanitary place and to the subsequent capture of the waterworks at Bloemfontein by the Boers. We see no reason for not adhering to the view which we entertained from the first, that transport was *the* difficulty in this war, which in almost every other respect, also, has been of an exceptionally difficult character. In point of fact we have been assured that no one who has not been in the country and taken part in the present war can realise what the difficulties were. We believe that, even apart from our position and advantages in respect of transport as a sea-power, there is no other nation, despite the shortcomings and mistakes that have been made, which could have accomplished what has been done in South Africa. As regards the alleged improvements that have taken place in the state of the hospitals since the publication of Mr. Burdett-Coutts's letter—which he attributes to the result of his disclosures—we would merely remark that it is not the first time that a *post hoc* has been confused with a *propter hoc*. He omits to say anything about the period of exceptional strain having in the meantime passed away and the extreme difficulties in regard to the transport and distribution of hospital stores and material having been overcome, and apparently regards these as factors of no importance.

The last War Office return issued shows the total casualties since the beginning of the war up to the end of last week, as follows:—

—	Officers.	Non-commissioned officers and men.
Killed in action	287	2,750
Died from wounds	86	825
Prisoners who have died in captivity	3	89
Died from disease	150	5,753
Accidental deaths	3	114
Total deaths in South Africa	529	9,531
Missing and prisoners (excluding those who have been recovered or have died in captivity)	7	812
Sent home as invalids	1,326	30,300
Total, South African Field Force ...	1,862	40,643
	42,505	
Total reduction of the military forces through war in South Africa.—		
Deaths in South Africa	529	9,531
Missing and prisoners	7	812
Invalids sent home who have died	4	193
Invalids sent home who have left the Service as unfit	—	873
	540	11,409
Total	11,949	

THE IMPERIAL YEOMANRY BASE HOSPITAL.

BY L. V. CARGILL, F.R.C.S.,

OPHTHALMIC SURGEON TO THE HOSPITAL.

There are 31 officers and 972 men to-day in hospital, 12 officers and 447 men belonging to the Imperial Yeomanry. Since the hospital started we have treated 200 officers and 3152 men, 1000 of whom have been Yeomanry.

The Hospitals Inquiry Commission visited us on August 30th. They arrived from Cape Town by their special train at 9 A.M. and after inspecting the camp and taking evidence proceeded north *en route* for Pretoria at 2 P.M.

As regards the medical cases in hospital they are still of a mild type and similar in character to those mentioned in the last letter. One of our orderlies who was on night duty in an enteric fever ward unfortunately contracted the disease some few weeks ago, and although the attack was of moderate severity perforation of the bowel ensued and he died from peritonitis. He was the first orderly whom we have lost from enteric fever, although others have had it.

The enteric fever wards are now being emptied and thoroughly cleansed and disinfected in turn. One of the orderlies who has been in bed for some months suffering from acute rheumatism and pericarditis is now convalescent. Dr. Washbourn has gone to Pretoria to visit the Branch Hospital, and during his absence Dr. Andrew Elliott will be senior physician. There has been no further case of measles contracted from the one case which we have had. In one or two cases of patients desquamating and giving a previous history of rash and sore-throat they have been admitted and at once isolated.

The work in the surgical wards has been heavier during the last two or three weeks than for some months past, and six marquees have had to be transferred from the medical to the surgical side to accommodate the patients sent down. Last week, in response to an urgent telegram from Lord Methuen, Mr. Ballance journeyed north to Mafeking to see in consultation Brigadier-General Little, commanding the 3rd Cavalry Brigade, who had been seriously wounded in the right hip by a soft-nosed bullet which had struck a metal cigarette-case that was in the patient's pocket at the time. A severe lacerated wound had resulted, the entry being three inches vertically below the anterior superior iliac spine and the exit a little below the posterior superior spine on the same side, the track being immediately adjacent to the hip-joint. The patient was brought down to Deelfontein in No. 5 Hospital Train, which was at Mafeking at the time, and the rest of the 96 patients, 40 per cent. of whom were wounded, were also detrained here. Brigadier-General Little is now progressing favourably and it is hoped that some movement in the hip-joint will eventually be retained. We have had rather a monopoly of the patients from Mafeking, as this is only the second occasion on which a hospital train has been up there. The first train went up shortly after the siege was raised and it brought down the sick and wounded among the besieged and from the relief column. The wounded in Mafeking at the present time are from the operations round Malmani, Zeernst, and Elands River. Mr. Hall-Edwards has thus been kept unusually busy in localising bullets and shell fragments in the x ray department.

Last week the first amputation occurred in the hospital since its commencement in March last and this speaks volumes for the efficiency of the modern antiseptic treatment of compound fractures and the merciful character of the Mauser bullet, a large number of compound comminuted fractures having been treated here. The case was one of severe compound fracture of both legs by the same bullet and Mr. Ashdowne amputated the right thigh in the lower third on account of spreading osteomyelitis in the bones of the leg which previous operations had failed to stop. The patient is now doing well and it is hoped that the fracture in the left leg will heal.

The first circumscribed traumatic aneurysm in this hospital was operated upon by Mr. Parker a few days ago. The case was one of a man who was shot in the left forearm by a Mauser bullet at a range of 100 yards. The bullet entered the back of the limb one and a half inches below the tip of the olecranon process and emerged on the flexor aspect after fracturing the ulna two inches below the bend of the elbow at the anterior border of the supinator longus. The posterior wound had closed, the anterior one was still open, and on Sept. 5th the patient suddenly lost three or four ounces of blood from it. There was a pulsatile swelling three inches in diameter on the anterior surface of the forearm just below the elbow. The radial pulse was strong; the ulna could not be felt. At the operation after turning out the clots an aperture was found in the ulnar artery about three quarters of an inch from the bifurcation of the brachial. The injured vessel was tied above and below the wound and the patient is now doing well The aneurysmal cavity extended between the bones of the forearm on each side of the interosseous membrane, in which there was a hole one inch in diameter, but by far the largest part of the tumour was situated on the anterior aspect of the membrane.

We have only had a few wounds from shrapnel bullets, but their lack of penetrating power is very marked as compared with small-bore missiles. Mr. Ballance had a very interesting case of a man in whom a shrapnel bullet entered the back at a quarter of an inch to the right of the middle line and on a level with the sixth dorsal spine. By means of the x rays it was localised under the sixth right rib in front, half an inch to the inner side of the mammary line, and from this position it was removed by resecting a portion of the rib, the bullet being partially imbedded in the surface of the lung. A shrapnel bullet has in another case been removed from the upper end of the left femur at the level of the junction of the neck and shaft. It had entered the outer aspect of the hip and penetrated the great trochanter. One shrapnel bullet entered the outer side of the left leg on a level with the tubercle of the tibia, the shell having burst 20 yards from the patient. The bullet had just enough energy left to perforate the head of the tibia horizontally and lodge under the skin over the inner tuberosity, whence it was removed by Mr. Parker.

A most interesting case of abscess of the brain resulting from a Mauser-bullet wound has been operated on in the hospital The man was shot on April 13th near Wepener, the bullet entering the forehead one inch vertically above the inner end of the right eyebrow and after traversing horizontally the right cerebral hemisphere it emerged in the occipital region two inches above and to the right of the external occipital protuberance along a line drawn from this point to the right parietal eminence. He was helped off his horse and taken to the hospital and from the time of receiving his wound had been completely paralysed in the left arm and leg. Three months later he was brought down to this hospital with wounds which had long since healed and was in a very drowsy condition with subnormal temperature and a pulse-rate of 54. The left arm and leg were absolutely paralysed but not anæsthetic; the left side of the face was partially paralysed. The knee-jerks were exaggerated; the urine and fæces were passed into the bed. Two days later the drowsiness had increased and external strabismus with dilatation of the pupil had developed in the right eye. I reported commencing optic neuritis on both sides, more marked on the right. Mr. Ballance then trephined over the lower part of the right Rolandic area and after puncturing the frontal and parietal lobes without success an abscess was tapped in the occipital lobe and from four to six drachms of thick yellow inodorous pus were evacuated. The bony aperture was enlarged posteriorly and a tube was inserted. Unfortunately, the patient died on the next day with a temperature of 104 4° F., never having recovered consciousness from the time of the operation. At the necropsy the abscess drained at the operation was seen to be situated in the centre of the right occipital lobe and the cavity was about one and a half inches in diameter. There were two other smaller abscesses which had been untouched by the operation—one in the upper and one in the lower part of the right parietal lobe near the surface of the brain. In the region of the genu of the right internal capsule a patch of white softening was found. There were no portions of bullet or clothing in the cerebral substance. In an agar tube inoculated at the operation a pure cultivation of the staphylococcus pyogenes aureus grew. Apparently the hemiplegia was due to direct destruction of the fibres of the internal capsule by the passage of the bullet and was not due to the pressure of the abscess.

Deelfontein, Sept. 10th.

SOME HOSPITALS IN SOUTH AFRICA.

(FROM ONE OF OUR CORRESPONDENTS.)

The distances in South Africa are so great and the difficulties just now of travelling are so enormous that it is impossible for any one man to visit all the various military hospitals in a short time, but some brief account of those existing in August may be interesting. No attempt in this communication will be made to describe the excellent work which has been done on the Natal side under the superintendence of that able organiser, Colonel T. J. Gallwey, R.A.M.C. Suffice it to say that after evacuating the sick and wounded through Newcastle and Durban by means of the Princess Christian and No. 1 Ambulance trains, and sending them home to England by troopships every fortnight, Colonel Gallwey proceeded to Pretoria a month ago for a special conference with Surgeon General W. D. Wilson, at which it was decided that in future the sick should be sent down by way of Durban instead of by the tedious route through the Orange River Colony to the Cape. This is now being done and it is an obvious improvement for the patients, for besides being much shorter the trains can travel at night without fear of being "held up" by De Wet.

Altogether 35 000 sick and wounded have passed through Cape Town since the beginning of the war; half of these have been invalided to England and the others have returned to duty in the field. Of this large number the mortality is only a little above 1 per cent., but this death-rate does not include those who died at sea or in hospitals in England after arrival there.

The Director-General of the Army Medical Service in London has despatched to the Cape 13 general hospitals, each equipped for 520 beds but elastic enough to spread to double their size; and without counting convalescent homes and small hospitals under 100 beds the general public have added eight auxiliary hospitals. The number of army medical officers in South Africa has been about 460, and their civilian brethren working under them have numbered a few more. If to these we add the civilians employed in auxiliary hospitals we arrive at a total of at least 1000 medical officers. The army has employed its junior officers—captains and lieutenants—in regimental work, with field hospitals, and with ambulance trains; while the seniors—colonels and majors—have been in command of general hospitals, have acted as registrars and secretaries, and have nominally been in charge of the three divisions into which most large hospitals are divided—surgical, medical, and enteric. In most places this system has worked uncommonly well, and the military officers, occupied with constant returns and army regulations, have been well content to leave the purely professional labours of the hospitals to the young civil surgeons, many of whom have quite recently held important posts as residents in London hospitals. Friction has only occurred on the very limited occasions when an unwise colonel, a generation older than the civilians, has attempted to impress on them the value of antiquated notions of nursing, medicine, hygiene, and surgery. In those cases where the principal medical officer of the hospital is a man who has succeeded in keeping abreast of the times in spite of the great difficulties which surround his department the civilian surgeons have been glad to learn from him not only military routine but the general treatment of disease. It must never be forgotten, too, that much of the success of the auxiliary hospitals has been due to the splendid work of the military commandants furnished to them by the Royal Army Medical Corps.

Cape Town and the Cape Colony.

In July Cape Town was in the midst of the rainy season and was determined not to forget it. Table Mountain was enveloped in mist, the rain fell all day, and the streets were often impassable from thick mud and ponds of water; but now the sun shines on the lovely mountain, mackintoshes and umbrellas have been put away, and the gardens and fields have burst out into a carpet of white arum lilies which grow like weeds. I took an early opportunity of visiting No. 5 General Hospital at Woodstock, which is within a mile of the Cape Town railway-station, because of the attacks lately made upon it. The first thing I was told by the medical officers in charge was that to the best of their knowledge the hospital had never been visited by Mr. Burdett-Coutts. I examined it very thoroughly and whatever its former condition may have been I could find nothing to criticise in the conduct of the hospital. Its site no one will attempt to defend, because it was condemned more than a year ago, but directly the war broke out Sir William Butler decided that even a condemned hospital must be used, as there was obviously no time to construct a new one. In this most practical men will think that he was justified. The obvious faults are that the old wooden huts harbour insects in the summer, as all wooden buildings in all hot countries are known to do, and that the huts are at the edge of the sea, exposed to the discomfort of the south-east wind when it rages and within full view of one of the city drains. The sight of drain-pipes does not make the smell of decomposing seaweed any the more agreeable, but there is no evidence that either medical or surgical cases have suffered in this hospital. Moreover, those to whom Mediterranean fever is well known assured me that they had seen no cases of it at Woodstock. This is interesting, because there are present all the predisposing factors—southern heat, a partially stagnant sea, and a plentiful supply of drainage from the town and from the ships at anchor in the bay. On the day of my visit there were 668 beds full out of a maximum of 750, medically superintended by Colonel Williamson and three other army officers, a quartermaster, and 10 civil surgeons. The new buildings erected during the war are of corrugated zinc and are of course quite clean and without any suspicion of insects. On this point I satisfied myself by examining many patients and some beds. The only criticism which I felt inclined to make was that 14 nursing sisters was an inadequate number for 668 patients, many of whom were in the enteric fever wards. The civilian visitor is also apt to wonder at the crowding of the beds in all hospitals, but it must be remembered that it is war-time and that the chief object is to get as many beds into a room or into a tent as possible while still allowing a little space by the side of each man's bed. The ordinary rules of floor space and cubic area are relaxed in war-time, and I must confess that in spite of overcrowding as judged by the eye I never went into any ward in which the nose detected the well-known human odour. The climate allows liberal roof ventilation and windows to be always open, and in army hospitals there are many convalescents who are only in the wards by night.

At Wynberg there are too important hospitals—No. 1 General Hospital, which has about 700 beds in the old barracks, and No. 13 General Hospital, which supplies 1000 beds in the zinc-and wood huts with which all South Africa is dotted about.

The sick officers are very comfortably housed in the Sanatorium at Claremont, one of the most beautiful suburbs of Cape Town. This is under the control of Major F J. Lambkin who has about 40 patients now, mostly convalescents. In deference to the wishes of the Cape Town authorities, the Imperial Yeomanry Hospitals Committee have now established a temporary tent hospital at Mackenzie's Farm, Maitland, where the Yeomanry depôt is situated. There are now 67 patients there including three officers, under the care of Mr. W. Turner, assistant surgeon to Westminster Hospital, to whom the temporary rank of Captain in the Royal Army Medical Corps has been given.

At Matjesfontein, which stands at a height of 3000 feet on the Karroo plateau, a Mr. Logan, who began life as a railway porter, has an estate of 116,000 acres and a hotel which has been used as a sanatorium for British officers until to-day when it is found too far away from the base of operations and is therefore no longer wanted.

Matjesfontein is a very good illustration of what can be done in the Karroo if water is provided. It is surrounded by uninviting plains of dry scrub and ant-heaps, without any other vestige of life. Mr. Logan told me that when he first settled there he used to have to bribe the engine-drivers with coffee to give him a little drinking water. Now the railway and the energy of one man have made the place a centre of production and trade and it boasts of wells, a church, a bank, and villa residences for those in search of invigorating air.

At Victoria Road, a few miles further along the railway, is a convalescent camp for 1000 soldiers, and there are now 540 there.

We next come to Deelfontein, 4600 feet above sea-level and nearly 500 miles from Cape Town, the spot pitched upon for the Imperial Yeomanry Hospital, which has established the reputation of being the best war hospital in South Africa. It consists of many huts, eked out by hospital marquees, and was originally intended for 520 patients. But the numbers have generally been above that. Once they rose above 1000, and they stand to-day at 640, though the numbers of sick in a military hospital depend rather upon whether the convalescents are retained or evacuated regularly. This hospital has now been open for nearly six months and has had the most complete staff of any hospital during this war, being composed of 19 medical officers, including an ophthalmic surgeon, a dentist, and an x-ray expert, 10 dressers, 40 nurses, 10 servants for sisters and St. John Ambulance orderlies, making a total of 200, besides native servants. Mr. A. D. Fripp and Mr. Raymond Johnson have now returned to London, and Dr. J. W. Washbourn is going to Pretoria to take Dr. F. M. Sandwith's place in the Yeomanry Hospital there. Some idea of the equipment at Deelfontein may be obtained when it is stated that about 3000 tons of stores were sent from London at a cost of over £20,000. Some very valuable x-ray work is being done there and it is almost the only war hospital where bacteriological investigation is being made. Much of the well-earned popularity of this establishment with all classes of patients is due to the cheeriness and tact of the commandant, Lieutenant-Colonel A. T. Sloggett, R.A.M.C.

Thirty miles beyond Deelfontein is De Aar Junction, once the great base of Lord Roberts's army, but now dwindled again to its normal dull proportions. Here there is to-day a stationary hospital containing only 150 men, all convalescents, and all insufficient to occupy the nursing sisters.

Norval's Pont is well known to all students of the war as the site of the bridge crossing Orange River and so separating Cape Colony from the Free State. The bridge, before it was blown up by the Boers in March, consisted of 13 spans of 130 feet each, and cost £76,000. Here the best hospital is the Edinburgh, with 200 beds in a series of huts, but the war is so distant that lately there were only five patients in it. Then there are a stationary hospital, and a rest camp, and a convalescent camp, and an officers' convalescent home which moved up from Kimberley at the end of June and consists of three marquees and several bell-tents. This can accommodate 20 officers and is due to the enterprise of Lady Maud Rolleston and Mrs. Seymour.

Orange River Colony.

At Springfontein there is an important section of No. 3 General Hospital, under the care of Colonel A. W. Duke, R.A.M.C. A convoy of 140 convalescents was brought to this hospital from Pretoria this week. Here the tents have wooden flooring and the marquees are placed side by side so as to increase the size of the ward and to facilitate nursing.

Bloemfontein, now recovered from its notorious epidemic of enteric fever, has only the large No. 9 General Hospital on the line about a mile from the town, for No. 10 General

Hospital, which was composed of various buildings in the town, is now being closed. Here was the Portland Hospital which did very good work until the authorities allowed it to close at the end of July, instead of accepting the desire of the staff to proceed to the front. It was a matter of surprise in Bloemfontein that the new *Leper Asylum*, which had never been inhabited by lepers, was not temporarily used as a hospital during the time of overcrowding, for it would have held at least 100. Probably its distance of two miles from the camp was the chief obstacle.

At Orange River there is a stationary hospital, and at Kroonstad, where Lieutenant-Colonel Wood is principal medical officer of all the hospitals and where lately almost every general of importance has been passing through, there is the excellent No 3 General Hospital containing 800 patients and officered by two majors of the Royal Army Medical Corps and 12 civil surgeons. This hospital is outside the town and close to the railway line for the obvious convenience of arrivals and departures.

The Grand Hotel was turned into a hospital of 35 beds for sick officers and was quite full from the middle of May till July, but it is now being closed as a matter of economy. This hotel is well supplied [illegible] de extremely comfortable, but [illegible] it required a large staff of nurses [illegible] is also here, must be praised. There are now 150 patients, mostly surgical, treated by a staff of civilian surgeons and dressers. The Dutch Reformed Church, helped out with tents, formed an additional hospital of 200 beds during the crowded time, but it was shut early in August. Churches are not ideal hospitals, because ventilation can only be obtained by breaking the top windows, and there is of course no provision of latrines. If the climate is perfect, the men do as well in the open air if there are no tents, but if there is any danger of storms of rain, dust, or wind, I cannot see why churches should not be utilised.

The Transvaal.

No one conversant with Johannesburg needs to be told that the civil hospital there is one of the best in South Africa. It stands in beautiful grounds outside the town and is now chiefly full of army patients. The lay nursing sisters were allowed to rejoin the religious sisters there at the end of July. No. 6 General Hospital was moved up here a month ago from Naauwpoort. Although this must obviously be the great business centre of the future Dominion of South Africa it is just now as melancholy as London on a Sunday. Shops and banks are hardly open, and those civilians who are not allowed to draw rations from the army have great difficulty in procuring the necessaries of life such as candles, matches, soap, paraffin, biscuits, milk, butter, flour, cheese, tinned food, &c

Pretoria is practically the headquarters of the army as well as being the political capital of the new colony and Surgeon-General Wilson early determined to prepare 2000 [illegible] 000 or 1500. The distribu- [illegible] out. In the plain east of the town near the railway running to and from the scene of the recent fighting towards Delagoa Bay are three hospitals side by side, all controlled by Lieutenant-Colonel A. H Keogh, R.A M.C These are No. 2 General Hospital (the best Royal Army Medical Corps hospital which I have seen in this war), the Langman Hospital of 150 beds which came up from Bloemfontein in August, and the Welsh Hospital which arrived about the same time from Springfontein. These three hospitals consist entirely of tents, except for various huts which contain stores and a brick destructor for burning the fæces of enteric fever patients after they have been mixed with sawdust and disinfectants. No. 2 General Hospital is one of the few army hospitals which possesses a disinfector for bedding. It is provided with such modern luxuries as a telephone and electric light for the central avenues of the camp. Near by is a most convenient convalescent camp to which patients are drafted from all the Pretoria hospitals until they can return to duty or until they are sent to the base. The Irish Hospital in the Palace of Justice has already been deservedly praised by all visitors. The building had never been occupied, it is one of the best in South Africa, and it has been adapted so easily into a splendid hospital that it is difficult to understand why the Royal Army Medical Corps declined to accept it when it was offered to them. Sir W. Thomson at once jumped at it when he arrived from Bloemfontein in July. He installed electric lighting, he erected latrines and kitchens behind the buildings, and he has created a hospital which it is hard to beat in any country if one remembers that the building was not constructed for a hospital. There are three buildings in the town, each holding less than 100 patients, in the State Model Schools, all belonging to the Royal Army Medical Corps. It will be remembered that it was in one of these schools that the British officers were imprisoned at the beginning of the war. One of the wards is still decorated by a skeleton and a war map, both so skilfully executed that the Boers varnished the wall to perpetuate them. It was from this prison that the officers contrived to get occasional news from some plucky girls at a school opposite. When Lord Roberts heard of this he sent to thank the young ladies and eventually had tea with them, to their huge delight.

The Burke Hospital for officers has now been closed. It was a Boer hospital originally during the war, and the English matron remained in charge of it all through the campaign. There are in addition a hospital at the Racecourse where the British prisoners were sent when sick, a hospital for natives, and a well kept leper asylum outside the town The most recent hospital of all in Pretoria bids fair to be the best.

On August 18th Lord and Lady Roberts opened the new Yeomanry Hospital on a site which they had themselves chosen as being the best in or near Pretoria. An estate of 130 acres belonging to a rebel English burgher who had enriched himself by plotting against England with the Transvaal Government, and who introduced among the Boers the soft-nosed bullets and other weapons of war, was commandeered for the purpose. His house, which is extremely well built and stands on a hill getting fresh breezes when Pretoria is airless and misty, accommodates 50 patients and has an operating theatre, while two neighbour- [illegible]

house. The credit of creating this hospital in the space of 12 days is due to Dr F M Sa[illegible] O. R. Kilkelly, the military comm[illegible] ceremony of opening the hospital [illegible] and a convoy of 99 sick and wounded arrived in ox-wagons at 10 30 P M from Commando Nek, two days distant. The medical staff of this hospital has been taken exclusively from young civilians who have recently held resident appointments at St Bartholomew's Hospital.

Cape Town, Sept. 6th.

THE MEDICAL SCHOOL DINNERS.

Charing cross Hospital Medical School.—The past and present students of the Charing cross Hospital Medical School held their annual dinner on Oct. 2nd at the Hotel Cecil. The gathering was an exceptionally large one, covers being laid for 230. The chair was occupied by Mr. John Harold who proposed the toast of "The Hospital and its Consulting Staff" and referred to the pleasure that all felt in listening to the third Huxley lecture delivered that afternoon by their honoured guest, Lord Lister. The next item in the programme was a song by Dr F. W. Mott who was uproariously compelled to give an *encore*. Mr. J. H. Morgan, in responding to the toast proposed by the chairman, referred in humorous terms to the fitful appearance of the numbers of the *Charing Cross Hospital Gazette* which, however, he regarded with the greatest attention, not unmixed with apprehension, for he had received severe criticism because he had made promises which had not been fulfilled. He now announced that the out-patient department for mental diseases was to be inaugurated at once under the care of Dr. Percy Smith. Next followed an excellent rendering of a song by Dr. Bathurst. Mr. Cantlie then proposed "The Past and Present Students" and referred to the fact that Huxley had been a free student at Charing-cross Hospital The origin of the free student was the outcome of the action of Mr. Hancock, who was asked to start the school. This surgeon was at Westminster Hospital and told the students there that if they would come to Charing-cross Hospital their medical education would be given them for nothing, with the result that students were not lacking at Charing-cross Hospital. He urged that to secure the blending of the old students with the new the medical school of Charing-cross Hospital should form an association and he would suggest that the first associate should be Lord Lister Mr. Charles Baly then sang "Queen of the Earth," and received a well-earned *encore*. The toast of "The Guest of the Evening" was proposed by Mr. H F. Waterhouse, who eloquently described the debt of gratitude which the medical world owed to the work of Lord Lister. This was responded to by Lord Lister in a charmingly modest speech; his reference to his memories of his old student days and the work of former times being uttered with evident emotion. The speech was worthy of the orator and his concluding compliment expressing his satisfaction at the abundant prosperity of the Charing-cross Medical School was received with loud applause "The Health of the Chairman" was given by Dr. Mitchell Bruce, and after a short reply from Mr. Harold the proceedings of the evening terminated. On Monday evening a conversazione was held in the school and the occasion was made attractive by musical and dramatic entertainments, exhibitions of chemical and electrical apparatus, x-rays, &c., the whole of the departments being thrown open to the visitors, of whom there was a great number. We congratulate the organisers of the conversazione upon its success. On the next occasion we hope the authorities will see that the various corridors are better lighted. In some places it was almost dark, the only source of light being a single naked gas flame. The electric light has been placed in the museum and the installation might be extended with advantage to the other departments of the school.

Westminster Hospital.—The annual dinner of the old students of Westminster Hospital and their friends, which was held at the Café Monico on Oct. 1st, under the chairmanship of Dr. W. H. Allchin, was, owing to the untiring energy of Mr. E. Canny Ryall, L.R.C.P. Lond., M.R.C.S. Eng., a decided success. Covers were laid for some 250 old students and guests, a fact which is significant because, as the chairman pointed out in proposing the toast of "The Westminster Hospital and Medical School," the number present was three times greater than on any previous similar occasion. Dr. Allchin alluded to the present position of Westminster Hospital as part of the newly-constituted University of London, remarking on the increased responsibilities of the school and its widened scope. The weekly Board of Governors was coöperating with the medical staff and during the past year a splendid pathological and clinical laboratory had been fitted up. As a significant and interesting fact he pointed out that in the very first list of the medical examination of London University in 1839 in a list of 20 individuals appears the name of a student of Westminster Hospital, and only three other schools in London were there represented. The Dean, Mr. A. H. Tubby, in responding, said that the progress of the school as shown by the number of entries was most satisfactory. Up to the present time the entries compared favourably with those of last year, which were double those of the previous year. Last year 80 per cent. of the students passed. The toast of "The Old Students," coupled with the names of Mr. W. Gandy and Dr. J. Swain, was proposed by Dr. T. Colcott Fox. "The Present Students" was proposed by Dr. F. de Havilland Hall and responded to by Mr. G. V H. Fairhall and Mr. A. R. Roche, the editor of the "Westminster Hospital Gazetteer," otherwise known as "The Broad Way." Among the other toasts were "The Visitors" and "The Chairman," the speakers being Mr. W. G. Spencer, F.R.C.S. Eng., the Rev. J Garton, Professor Sims Woodhead, and Mr. T. Bond, F.R C.S. Eng. An excellent musical programme added much to the pleasures of a delightful evening.

King's College Hospital.—The annual dinner of the old students of King's College Hospital was held at the Hotel Cecil on Oct 1st. The Hon. Sir John Cockburn, M.D., K.C.M.G., presided, and the number of those present was larger than in any previous gathering of old King's College students. The usual toasts including "King's College" and "King's College Hospital," were drunk and a message from the chairman of the University College Hospital dinner in the same hotel was warmly appreciated and duly reciprocated.—The Principal of King's College replied for the College and hospital and Mr. William Rose most felicitously proposed the health of his old fellow-student and gold medalist who had deserted medicine and become the Agent-General for South Australia. Professor Watson Cheyne and Mr. G. Lenthal Cheatle were warmly greeted on their return from South Africa. The death of Surgeon Captain M. P. Hughes was referred to most feelingly.

St Thomas's Hospital.—The annual old students' dinner was held on Oct. 2nd in the Whitehall Rooms of the Hôtel Métropole. There were 146 old students and guests present and the chair was taken by Dr. O. T. Aveling. After the toast of "The Queen" Sir William Mac Cormac proposed the toast of "St. Thomas's Hospital and Medical School, Past and Present." He alluded to the cordial relations existing between the staff and governors and paid a tribute to the work done by the St. Thomas's contingent at the Cape, which numbered some 50 men. The toast was coupled, firstly, with the name of the treasurer, Mr. J. G. Wainwright, who gave a brief outline of the financial condition of the hospital, and enumerated, amongst other improvements, the rebuilding of the operating theatres, the ophthalmic and casualty departments, and asserted the determination of the governors to spare no expense in keeping the equipment of the hospital at least second to none. The Dean, Dr. H. G. Turney, in an amusing speech, reviewed the chief changes of the year and alluded in sympathetic terms to the death of Rupert Fawssett while on active service in South Africa and to the retirement of Dr. Payne on to the consulting staff. Dr. F. G. Nicholson having also responded on behalf of the old students the health of the chairman was proposed by Dr. Payne who referred to Dr. Aveling's qualities as a practitioner, to his brilliant hospital career, and to his success in the field of sport. Dr. Aveling, in reply, thanked the company for the way in which they had received the toast and said he believed he was the first man to score a goal in the interhospital football matches. The usual vote of thanks to the secretaries was proposed by Dr. Solly and suitably acknowledged. Mr. G. H. Makins, in answer to repeated calls for a speech, described the conditions under which he had met old hospital men at the seat of the war and pointed out that St. Thomas's students were to be found acting as civil surgeons at the base hospitals and up to the firing line.

Middlesex Hospital.—The annual dinner of present and past students of the Middlesex Hospital took place at the Trocadéro Restaurant on Oct. 1st. Mr. William Lang, ophthalmic surgeon to the hospital, occupied the chair and about 130 persons took part in the proceedings. The Royal toasts were proposed by the Chairman. Sir Richard Douglas Powell proposed "The Services." In the course of his speech he referred to the medical departments of the navy and army and read a list of the names of Middlesex Hospital men serving with the forces in South Africa. He also read portions of a most interesting letter which he had received from an officer of the Royal Army Medical Corps serving in South Africa. The writer remarked that "a more cruelly undeserved attack it would have been difficult to conceive" than that which had recently been made upon the work of that department, and he referred in detail to the difficulties which were encountered on the march to Bloemfontein. Sir Richard Douglas Powell believed that the investigation now being conducted would terminate in a triumphant vindication of the Royal Army Medical Corps. The toast was responded to by Dr. Edward Stewart, who had recently returned from service in South Africa and had been in charge of a hospital train. He considered the work rendered by the Royal Army Medical Corps to have been magnificent. The toast of "The Middlesex Hospital and Medical School" was proposed by the Chairman, who referred to the extensive alterations which had been made in the buildings of the medical school, the laboratories and lecture-rooms being admirably fitted with all modern appliances for study and research work. He also drew attention to the opening of the new cancer wing and to the research work which was there being carried on. The toast was responded to by Colonel T. Lambert Mears and Mr. Pearce Gould (in the place of the Dean, Dr. W. Pasteur, who was unavoidably absent). The toast of "Past and Present Students" was proposed by Mr. Henry Morris and replied to by Mr. E. A. Fardon and Mr. F. D Blandy, the Senior Broderip Scholar. The toast of "The Visitors" was proposed by Dr. J. Kingston Fowler and replied to by Professor Clifford Allbutt, who had delivered the annual address in the afternoon, and Mr. Wilhelm Ganz, as for many years past, kindly supplied the musical programme of the evening. "The Health of the Chairman" was proposed by Dr. Sidney Coupland, acting for Dr. W. Cayley. Señor Guetary, Mr.

James A. Bovett, and Mr. Paul Stoeving added to the success of the evening by a selection of songs and violin solos.

THE PLAGUE IN GLASGOW.

THERE is but little fresh news to be chronicled concerning the outbreak of plague in Glasgow. Since our last issue two patients have died in the Belvidere Hospital from the disease—namely, a man whose death was notified on Oct. 2nd, and an infant, aged two weeks, born in the hospital of a mother who herse [illegible] The latest advices from Glasgow sh [illegible] of cases in the hospital is 21; of [illegible]

DISTRIBUTION OF PRIZES AT ST. THOMAS'S HOSPITAL.

THE occasion of the distribution of prizes and certificates to the successful students of St. Thomas's Hospital Medical School on Oct. 2nd was taken advantage of by the many friends of the school and hospital to attend in great numbers. The usual address was given by Sir William MacCormac, the President of the Royal College of Surgeons of England. The treasurer of the hospital, Mr. J. G. Wainwright, presided over the meeting and in a few well-chosen words welcomed back Sir William MacCormac from the scene of war. After the prizes and certificates had been duly given away by Sir William MacCormac he proceeded to deliver his address, and pointed out for the consolation of the unsuccessful students that the real value of trying for a prize was in the effort to succeed. The prize-winning spirit was not altogether an unmixed good because it might be carried too far, and it had this drawback, that it tended rather to specialise the student's work. Examinations were carried to a further degree in China than anywhere else; everyone was examined till he was quite an old man, and it was the only entrance into public life. He thought that men might have perhaps too many examinations. Students were harassed by continual examinations, and examiners in chemistry, physiology, and anatomy were often experts who regarded their particular branch as of the first importance. The most lasting and valuable information a student acquired was that which he taught himself. There was too much spoon-feeding done in the medical schools. Though he (Sir William MacCormac) had not made the best use of his first year of study as a student he would urge that the work in that period should not be neglected. In the fine old times the practitioners of England belonged to the "College" and the "Hall," which were good enough for them and for their patients. But by degrees an opinion had sprung up that those who attached M.D. to their names were very superior persons. It was but an example of the superstitions that cling to medicine that there should be a cabalistic value in the possession of these letters. But superstition or not the want was felt and that want would now be supplied. It was certain that at the present time young professional men were hard to find, the State found the supply insufficient and the competitive examinations were often not competitive, *the number of candidates being less than the vacancies.* The great steamship companies that used to have a waiting list had now difficulty in obtaining men to fill their surgeons' posts. The state of overcrowding in the profession which was prevalent a few years ago no longer existed to anything like the same extent. In 1851 there was a medical man for every 1393 inhabitants, in 1880 there was one for every 1754, and in 1898, in spite of the increased population, it was one for every 1150. It would seem from evidence which they possessed that the annual increase in the number of medical men was not keeping pace with the increase of population in the United Kingdom. The average annual increase of medical men during the past three years had been 450; the average during the five previous years was 845 or nearly double that number. The late Sir James Paget investigated the careers of a thousand medical students and in 16 years he found that 23 were distinguished men, 66 had arrived at a considerable amount of success, 507 were doing well, 128 had died, and 276 had either left the medical profession or were put down as failures. In the opinion of the speaker the present time was most favourable for entering the profession with the assurance of earning a competency.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6079 births and 4110 deaths were registered during the week ending Sept. 29th. The annual rate of mortality in these towns, which had been 19·6, 18·2, and 18·1 per 1000 in the three preceding weeks, rose again last week to 18·5. In London the death-rate was 16·7 per 1000, while it averaged 19·6 in the 32 provincial towns. The lowest death-rates in these towns were 11·1 in Bradford, 11·9 in Halifax, and 14·7 in Croydon, in Portsmouth, and in West Ham; the highest rates were 23·0 in Liverpool, 23·6 in Blackburn, 26·6 in Manchester, and 27·6 in Salford and in Sunderland. The 4110 deaths in these towns included 776 which were referred to the principal zymotic diseases, against numbers decreasing from 1422 to 771 in the four preceding weeks; of these 495 resulted from diarrhœa, 79 from diphtheria, 76 from "fever" (principally enteric), 70 from whooping-cough, 30 from measles, and 26 from scarlet fever. The lowest death-rates from these diseases were recorded in Birkenhead, Halifax, Bradford, and Newcastle; and the highest rates in Wolverhampton, Norwich, Leicester, Preston, and Sunderland. The greatest proportional mortality from scarlet fever occurred in Sunderland; from whooping-cough in Croydon, Swansea, Oldham, Preston, and Sheffield; from "fever" in Portsmouth, Plymouth, and Preston; and from diarrhœa in Wolverhampton, Manchester, Burnley, and Sunderland. The mortality from measles showed no marked excess in any of the 33 towns. The 79 deaths from diphtheria included 40 in London, nine in Leicester, and four in Sheffield. No fatal case of small-pox was registered last week in any of the 33 large towns; and only two cases of small-pox were under treatment in the Metropolitan Asylums Hospitals on Saturday last, Sept. 29th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1938, against numbers increasing from 1702 to 1804 on the four preceding Saturdays; 318 new cases were admitted during the week, against 213, 243, and 269 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 124, 161, and 203 in the three preceding weeks, declined again last week to 187, and were seven below the corrected average. The causes of 40, or 1·0 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Birmingham, Leicester, Bradford, and in 14 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Leeds, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·5, 18·9, and 18·9 per 1000 in the three preceding weeks, was again 18·9 during the week ending Sept. 29th, and was 0·4 per 1000 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 17·1 in Dundee and 17·2 in Leith to 20·2 in Perth and 25·1 in Aberdeen. The 584 deaths in these towns included 49 which were referred to diarrhœa, 12 to whooping-cough, 12 to "fever" (including three deaths from bubonic plague), seven to diphtheria, six to scarlet fever, and five to measles. In all 91 deaths resulted from these principal zymotic diseases, against 83, 98, and 112 in the three preceding weeks. These 91 deaths were equal to an annual rate of 2·9 per 1000, which was 0·6 below the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had been 42, 54, and 62 in the three preceding weeks, declined again last week to 49, of which 21 occurred in Glasgow, 14 in Edinburgh, four in Aberdeen, and four in Leith. The deaths referred to different forms of "fever," which had been seven in each of the two preceding weeks, increased to 12 last week, and included seven (three of which were fatal cases of bubonic plague), in Glasgow. The deaths from whooping-cough, which had declined from 25 to 20 in the four preceding weeks, further fell last week to 12, of which five were registered in Glasgow, three in Dundee, and two in Greenock. The fatal cases of diphtheria, which had increased from three to 11 in the four preceding weeks, declined again to seven last week, and included four in Glasgow. The deaths from scarlet fever, which had been seven and four in the two preceding weeks, rose again last week to six, and were all recorded in Glasgow, where three of the five deaths from measles were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 70 and 101 in the two preceding weeks, declined last week to 100, but showed an excess of 33 over the number in the corresponding period of last year. The causes of 31, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·2 and 24 5 per 1000 in the two preceding weeks, was again 24·5 during the week ending Sept. 29th. During the 13 weeks of the quarter ending on Saturday last the death-rate in the city averaged 22·7 per 1000, the rate during the same period being 17 9 in London and 16 9 in Edinburgh. The 164 deaths belonging to Dublin registered during the week under notice corresponded with the number in the preceding week, and included 25 which were referred to the principal zymotic diseases, against 44 and 31 in the two preceding weeks; of these 18 resulted from diarrhœa, four from "fever," and three from whooping-cough. These 25 deaths were equal to an annual rate of 3·7 per 1000, the zymotic death-rate during the same period being 2·5 in London and 2·9 in Edinburgh. The fatal cases of diarrhœa, which had been 20, 27, and 24 in the three preceding weeks, further declined last week to 18. The deaths referred to different forms of "fever," which had been seven and three in the two preceding weeks, rose again to four last week. The three fatal cases of whooping-cough were equal to the number recorded in the preceding week. The 164 deaths in Dublin last week included 49 of infants under one year of age and 33 of persons aged upwards of 60 years; the deaths of infants exceeded the number in the preceding week, while those of elderly persons showed a slight decline. Four inquest cases and three deaths from violence were registered, and 53, or nearly one-third, of the deaths occurred in public institutions. The causes of 13, or nearly 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon G. Kirker to the *Trafalgar*. Staff Surgeons: P. E. Maitland to the *Sybille* and A. Cropley to the *St. George*. Surgeons: E. H. McSherry to the *Pallas*; and T. T. Jeans to the *Thunderer* for Pembroke Dockyard.

ROYAL ARMY MEDICAL CORPS.

Major J. Hickman has joined at Woolwich.

ARMY MEDICAL RESERVE OF OFFICERS.

To be Surgeon-Majors: Surgeon-Captain George Hollies; Surgeon-Captain George Henry Darwin, 2nd Volunteer Battalion Manchester Regiment.

VOLUNTEER INFANTRY BRIGADE.

Northern Counties: Surgeon-Major G. W. Brumwell, 2nd Volunteer Battalion the Border Regiment, to be Brigade-Surgeon-Lieutenant-Colonel, on appointment as Senior Medical Officer to the Brigade.

TRANSVAAL WAR NOTES.

Lieutenant-Colonel J. J. Falvey, R.A.M.C., Captain Vidler, R.A.M.C., Lieutenant M'Loughlin, R.A.M.C., and Captain O'Connor, M.M.S.O., are on passage home from the Cape in the *Kildonan Castle*. Major Sir J. R. A. Clark, R.A.M.C., and Major Moir, R.A.M.C., are on passage home from the Cape in the *Briton*.

The following officers of the Royal Army Medical Corps have been discharged from hospital and have returned to duty:—Lieutenant A. H. H. Niblett, Lieutenant J. Tandy and Lieutenant Colonel Battersby.

The *Avoca* arrived at Southampton on Oct. 2nd with 18 officers and 259 men invalided and wounded from South Africa.

THE APPOINTMENT OF COMMANDER-IN-CHIEF.

The retirement of Lord Wolseley from the office of Commander-in Chief of the British Army and the appointment of Lord Roberts as his successor are events which should not be allowed to take place without a word of comment on our part. It goes without saying that Lord Wolseley is a thorough soldier. He has had a most distinguished career and his brilliant military services will always, and very deservedly so, occupy a prominent place in the military history of this country. His conduct of the Egyptian campaign of 1882 was marked by great originality of conception and boldness of execution. His lordship, it will be remembered, did not give that amount of credit and support to the medical service on that occasion which the officers of that service thought that they had a right to expect; but that is no reason why his ability and great services in the field and to the nation should not be cordially recognised. There is no need to touch upon Lord Roberts's services because they are well known and speak for themselves. The officers of the medical service have every reason to be satisfied with, and grateful to him for, his handsome recognition of their work in the present war.

THE ASHANTI RISING.

But for the fact that the public mind has been so occupied with events which have been taking place in South Africa and China, the military operations against the Ashantis would no doubt have received far more attention than has been bestowed upon them. The fighting has been severe; the operations have apparently been skilfully planned and conducted, and several of the engagements with the enemy have been of a brilliant kind. Owing to the climate and to the nature of the country and to the fact that the troops have frequently had to advance through dense bush, the campaign has been a very trying one and the progress has been slow. The force on the British side has been mainly a native one, composed of such corps as the Central African Rifles, West African Frontier Force, and others, and it is probably owing to this fact that it has been relatively healthy and that the men have suffered much less from climatic disease than might have been expected. We regret to notice that the death of Dr. Langstaff, serving with the force, has been reported in a letter from the special correspondent of the *Standard*.

THE LATE LIEUTENANT-COLONEL M. R. RYAN, R.A.M.C.

At a recent meeting of the sanitary board at Hong-Kong, Mr. J. Bell, L.R.C.P. Lond., M.R.C.S. Eng., vice-president and acting principal medical officer, the chairman, brought forward a resolution of regret for the loss which they had sustained by the death of one of their members, Lieutenant-Colonel M. R. Ryan, R.A.M.C., who had succumbed to an attack of pneumonia. He was a prominent member of the board, which could ill afford to lose a member, especially when that member was a medical man, and one who had served in one of the best medical schools in the world. He begged to move that the board express its deep regret at the death of Lieutenant-Colonel M. R. Ryan, R.A.M.C. The resolution was declared carried.

Correspondence.

"Audi alteram partem."

"THE NOTIFICATION OF PLAGUE."

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of Sept. 29th, p. 959, on the notification of plague you truly say that it is undoubtedly difficult for a practitioner to diagnose a disease which he has never seen. I would add that the difficulty becomes extreme when you have—as is often the case with poor people who can only afford to pay for one visit—to make your diagnosis on a first, or even a second, examination in a dark room with filthy surroundings. You also wisely advise your readers to go carefully over the Glasgow cases which you have fully published from week to week. It is evident that the early diagnosis in general practice of plague is of national importance, and as we all learn far more from a mistaken than from a correct diagnosis I venture to supplement the report of one of the cases mentioned in Dr. A. K. Chalmers's valuable weekly report and at the same time to bring out two interesting facts from a practitioner's point of view. He refers to this case in this week's report as "Rosina M., unmarried, aged 25, of 23, Florence-street, sickened on August 23rd, and her illness was not recognised till Sept. 10th. She had no regular medical attendance."

I was called in to see this patient for the first time on Sept 10th, and having seen the first cases, the Malloy cases, as well as the other cases at present in Belvidere Hospital, I had no difficulty in diagnosing bubonic plague, for in answer to my question: What is the matter with you? she at once directed my attention to very palpable, painful buboes in each groin. Moreover, she worked beside the other young women who had been to the "wake" in Rose-street and are now in Belvidere Hospital with plague I learned from her mother that during her illness of 18 days she had been seen twice by a medical man. His first visit was when she sickened and was "raving," and his second visit was 14 days later. On calling on him he informed me that on his first visit her temperature was 104° F., but on his second visit it was normal He thought, not unreasonably, that the buboes were most probably gonorrhœal I may add that when I saw her on Sept 10th her temperature was normal, there was no rash or mottling of the skin, nor was there anything apparently the matter with her but the painful buboes in each groin. Now the two points I wish to emphasise are (1) that unless seen early the temperature, which would be a valuable differentiation sign between plague buboes and gonorrhœal buboes, would be *absent; and (2) that in my limited experience in* cases where I suspected gonorrhœa in women I have never seen buboes although I often see them in men. I think that the common sequel of gonorrhœa in women is not a bubo but inflammation and suppuration of the vulvo vaginal or Bartholin's glands. If buboes are a rare sequela of gonorrhœa in women—and an authoritative statement at present on this point might be important—the fact of finding buboes in a woman, even with a history of suspected gonorrhœa, and especially with a rise of temperature, ought at the present time strongly to suggest bubonic plague.

I am, Sirs, yours faithfully,

Glasgow, Sept. 29th, 1900. THOMAS COLVIN.

"INOCULATION AGAINST TYPHOID FEVER."

To the Editors of THE LANCET.

SIRS,—On seeing the leading article on this subject in THE LANCET of Sept. 29th (p 952), I again studied the official report referred to, but must confess that I can see no reason to modify my criticism of it in the *Times* of Sept 24th Paragraph 3 of the report seems quite explicit, and the inoculation was certainly put a stop to at one time. Here is the passage:—

> "..... and it appears to have been understood from the concluding portion of the War Office letter of 24th January, 1893 that the [illegible]
>
> [illegible] on the facts becoming known, however, *orders were issued to stop further inoculations, and the treatment has accordingly been abandoned*

The italics are mine. We have a perfectly clear statement, not only that the "inoculation at the public expense" was prohibited, but that when it became known that Professor Wright, then in India on the Plague Commission, was carrying on "voluntary operations at private cost," these, too, were put a stop to. If this is not "express prohibition" of inoculation against typhoid I do not know what is—at all events it seems to have effectually stopped it for a considerable period. That inoculation was resumed after August, 1899, has nothing to do with the question raised by me. I ask *why it was* that the measure was checked in 1898 I submit that though Government might reasonably have refused to encourage "inoculation at the public expense"—though even this was in my own humble opinion thoroughly bad policy—yet they had no justification for going so far as to stop Dr. Wright's private [illegible] doing so they practically took [illegible] inoculation is *harmful*—that their [illegible] was going about poisoning their [illegible] think so, why did they prohibit the measure?

I am, Sirs, yours faithfully,

Liverpool, Oct. 2nd, 1900. RONALD ROSS, D.P.H.

BERI-BERI.

To the Editors of THE LANCET.

SIRS—Into the Provincial Hospital, Port Elizabeth, to which I was attached for many years, cases have been admitted from ships arrived from the East the diagnosis of which has been disputed They have presented symptoms I think common to two diseases—"malaria," so called, and "beri beri" Being health officer to the port as well as medical officer to the hospital some eight or 10 years ago I sent on shore several members of a crew who had been in an Eastern port. They were stated to have suffered from "fever" more or less for a considerable time; they presented, if I remember rightly, [illegible] fever-stricken patients—anæmia, [illegible] and more or less œdema of the [illegible] miliar to anyone who has lived in the East, Mauritius, or Madagascar. It so happened, I think, that the subject of beri-beri was being written and talked about at that time and it became a disputed point whether the men should be allowed to remain in or be removed to the lazaretto Having on previous occasions admitted men in like condition without ill result following I pressed their being allowed to stay, which was done. No harm came from it, and after good nursing and rest they were allowed to go out to be sent home by steamer on a certificate from me that no harm was to be anticipated. No deaths occurred Had these been the subject of beri-beri the outcome of the affair, I imagine, would have been very different as regards the patients themselves. I had never seen a case of beri-beri, neither had any of the local medical men All we knew of the malady was from books. Since then I learn that "beri beri is an endemic form of 'peripheral neuritis,' pathologically in the same category as diphtheria, alcoholic, and other forms of neuritis."[1] In a late Port Elizabeth paper I learn that cases have occurred in Algoa Bay of a like nature, that the port officer advised their admission into the Provincial Hospital, that the hospital authorities objected, and I believe the men were sent to a lazaretto.

To prevent any further friction in similar cases I should like to be informed in the pages of THE LANCET what is the differential diagnosis between cases of long-standing malaria and the disease called "beri-beri" Some of your readers who have had experience in the East might supply this information with great service to patients and hospital authorities. If there be a well-recognised "bacillus beri-beri," by sending a specimen of blood or local effusion to the nearest bacteriological institute—e g, that of Graham's Town—this question might be decided at once and acted on. And what is the difference between the bacillus of "malaria" fever and that of beri-beri, if there be any? Is beri beri considered infectious? *It appears to be frequently fatal, hence* the necessity of strict care in admitting such cases; but how to prove their nature? From experience I know nothing of beri-beri, but from books only The difference between extreme cases of malaria and beri-beri is difficult to decide and I apprehend that the bacteriological examination of blood and tissues of these cases is the only scientific guide for action. The evidence of experiment and experience is much desired.

I am, Sirs, yours faithfully,

Oct. 2nd, 1900 F. ENSOR, M.R.C.S.

"ANNUAL REPORT FOR 1899 ON BIRTHS, DEATHS, AND MARRIAGES IN IRELAND."

To the Editors of THE LANCET.

SIRS,—In thanking you very heartily for the complimentary remarks you were pleased to make in your review in THE LANCET of Sept 29th, 1900 (p 963), of the Annual Report of the Registrar General for Ireland for 1899 on my meteorological observations I wish to correct a slight error into which you have fallen. You speak of observations taken by me at my country residence in county Wicklow. I have no country residence, and for the observations in question I am indebted to my friends, Mr. R. Cathcart Dobbs, C.E., J.P., of Knockdolian, Greystones, county Wicklow, and Dr. B. H. Steede, the able resident medical superintendent of the National Hospital for Consumption for Ireland, which is situated near Newcastle, county Wicklow. This is now a fully equipped second order meteorological station at which observations of great value are being systematically taken.

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[1] Brit. Med. Jour, Oct. 13th, [illegible]

I am, Sirs, yours faithfully,
JOHN W. MOORE, M.D. Dub., F.R.C.P. Irel.
Dublin, Oct. 1st, 1900.

THE SMOKE NUISANCE.

To the Editors of THE LANCET.

SIRS,—The Coal Smoke Abatement Society is in no sense moribund. The funds at present at its disposal only admit of the employment of two inspectors, who are constantly at work, and whose reports are submitted to the committee every fortnight. These show that the state of London as regards the smoke nuisance is improving but little, and this is due entirely to the negligence of vestries (and more than negligence) in enforcing the Act and the apathy of the London County Council and Parish councils. This negligence and apathy are due to various causes; prominently in the vestries and parish councils the offenders are members or friends of members. Until the law is changed and the responsibility of prosecution is withdrawn from the vestries and reinstated in the hands of the police there is little chance of a real diminution of the evil. Jobbery is rife and bribery is constant. Reports which our inspectors have laid before the County Council, parish councils, and the vestries have been ignored or given the lie to by inspectors employed by those bodies. Members of my committee, myself included, have verified our inspectors' reports, and we know them to be true. We equally know that representations furnished by their inspectors to the County Council, parish councils, and vestries have been false. A meeting of my committee will be held at 14, Buckingham-gate, on Thursday, Oct. 11th, at 5 P.M. I am going to try to call a public meeting at St. James's Hall as soon as the elections are over, when I feel sure that you will give us your valuable aid from the point of view of health.

I am, Sirs, your obedient servant,
Hammersmith, Oct. 2nd, 1900. W. B. RICHMOND.

To the Editors of THE LANCET.

SIRS,—Every inhabitant of London will be thankful to you for drawing attention to the smoke nuisance. At the present moment I am engaged with a great number of other inhabitants in South London in combating the nuisance caused by the smoke from the chimney of the South London Electric Light Corporation. The said chimney emits volumes of black smoke which partly emanates from burning refuse from the streets of the parish of Lambeth. The Electric Light Corporation has on several occasions been fined for the smoke nuisance, but they simply pay the small fine inflicted each time somebody takes the trouble to institute proceedings and the nuisance goes on as before.

The inhabitants of Lambeth, as well as those of Camberwell, have issued memorials to compel the Lambeth parish to take action, but we fear that the fact of the vestry having a contract with the South London Electric Light Corporation for the burning of their street refuse will make them very reluctant to take such action as they are otherwise compelled by Act of Parliament to institute. The smoke contains gases coming from the consumed refuse which are of the most objectionable description and, in my opinion, are necessarily injurious to health. We are very thankful for the assistance we receive from journals of such importance as yours, as only condemnation by public opinion may succeed in compelling the vestry authorities to do their duty.

I remain, Sirs, yours faithfully,
Oct. 2nd, 1900. L. R.

VACCINATION PROSECUTION.—At the Gloucester City police-court on Sept. 28th, six persons were summoned for neglecting to have their children vaccinated. All the cases were eventually dismissed as the vaccination officer was unable to prove service of the notices to vaccinate.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Rebuilding of the Manchester Royal Infirmary.

A REVOLT against the ascendancy of the pavilion plan of hospital building has taken place. Some time ago a special committee was appointed by the trustees of the Manchester Royal Infirmary which has had the proposal to build a new infirmary under consideration, and a special committee of 11 members—seven elected by the board of management and four by the medical board—was then appointed "to deal with the question of ascertaining whether or not a hospital suitable in every way could be built on a plan other than the pavilion system." The medical board expressed the opinion that it was uncertain whether the pavilion system was as absolutely perfect as it had been thought to be and that it might be well to consider whether some other system which required less ground could not be adopted. Opinions on the subject were requested from Lord Lister, Sir William Mac Cormac, Sir Thomas Smith, Sir Samuel Wilks, Professor Macewen, Professor Thomas Annandale, Dr. T. Clifford Allbutt, Dr. J. F. Goodhart, Mr. Frederick Treves, Mr. Howard Marsh, and Mr. Timothy Holmes. Of these, Lord Lister, Sir Thomas Smith, Professor Macewen, and Sir William Mac Cormac thought that the pavilion plan was ideally the best, but that it was quite possible to build a satisfactory infirmary "on other than the pavilion system." Mr. Holmes was opposed to the pavilion plan, and Mr. Marsh considered that it was not only not essential but that it was in some respects inconvenient and open to positive objection. Dr. Clifford Allbutt and Professor Annandale thought that the pavilion form was the best. Dr. Goodhart, Mr. Treves, and Sir Samuel Wilks expressed no opinions. The report of this committee was considered by the board of management on Sept. 24th, and after discussion it was accepted unanimously. Mr. J. Hardie, the chairman of the medical board, wrote: "Our report is really a most important one. I know of none to equal its importance. Not only has no consensus of professional opinion been before obtained, but no such inquiry as we have made has ever been carried out. Hitherto it has been thought that medical opinion was wholly in favour of the pavilion plan exclusively. We have found that that is a complete mistake. The consequence of this is that in future hospital authorities will be less fettered and will give effect to their wishes at lessened cost." It was resolved that the special committee should be instructed to carry out the second part of the resolution adopted by the board of management on Feb. 9th which gives authority to take steps to obtain suitable plans and estimates and to incur any necessary expense in connexion therewith. Everything, therefore, seems to promise plain sailing for the scheme of rebuilding on the present site. But the present site is not the best for the infirmary in every respect, though it is the best for a much-wished-for scheme that might be carried out if the corporation could only purchase the whole of the ground. A noble art gallery and free library could be built on the site if the corporation could afford to buy it, and a hospital might be built elsewhere on a site more suitable to the present condition of the town, and according to plans embodying modern knowledge and wisdom so far as attainable. But the corporation has great schemes on hand that draw heavily on its resources, so the question is whether it can afford to buy the ground. On the other hand, no encroachment on the open space round the infirmary will be allowed and it is very doubtful if the increase of hospital accommodation urgently required can be obtained without extending the present area of the building. So that it seems as if, to quote a leading article in one of the local papers, "the new century will open with matters in about the same position as they were seven years ago."

Various Sewage Difficulties.

In THE LANCET of August 11th, 1900 (p. 464), the condition of the "Black Brook," which diffuses its noxious odours most liberally as it flows through Birch Park, one of the open spaces of Manchester, was mentioned in terms perhaps scarcely strong enough to express truly its pre-eminence as a nuisance. It is satisfactory, therefore, to know that the Reddish Urban District Council have been fined £20 for one case of pollution and £5 for a second, with £5 costs. The Mersey and Irwell Joint Committee made an order as to the purification of the stream so long ago as 1894, but with as little result as if the council had been composed of Chinese mandarins. The council now, however, promise immediate attention to the sewage works and in the meantime they will take temporary steps for the abatement of the nuisance It is intimated that the Gorton Urban District Council are likewise about to be summoned for fouling the brook. At the meeting of the Prestwich Urban District Council on Sept. 12th it was said that they were doing everything possible for dealing with the sewage. But as to a scheme for the Rainsough part of the district they had a grievance against the Local Government Board, and the facts seem really to justify the heading of a paragraph in a local journal—"The Strange Ways of the L G B" The Board suggested certain alterations in the scheme of the council which would add £162 to the cost. To save time the alterations were accepted and an application was made for leave to borrow the extra money, but no reply was received and the work was therefore delayed. The council did not seem to think that that was fair treatment and they considered that if the Board brought district councils into existence it ought to help them to carry out their work. As a member said: "People talked about the state of the War Office, but that was nothing in comparison with the state of the Local Government Board." On this point there is a remarkable unanimity among district councils. The Withington Urban District Council and the Stretford Urban District Council are suffering from somewhat strained relations, for the sewage farm of the former offends the senses of the clients of the latter, and the Local Government Board have written a letter on the subject, to which the clerk and surveyor of the Withington Council have "been instructed to prepare a suitable reply." They are also informed by the Mersey and Irwell Joint Committee that their "effluent after land treatment was very unsatisfactory on July 2nd and 10th." The clerk was instructed "to explain the position of the council," which position the committee no doubt know quite well, "and to state that they were doing all in their power to improve matters" These are wholesome signs of activity, and real work is being done to lessen the pollution of the streams. The consequences of ignorance and neglect in times gone by may press somewhat heavily nowadays, but the noxious and disgusting condition of most of our streams is such a disgrace to the civilisation of the day that the crusade against it must be carried out to a successful termination Since the above was written the Gorton District Council have been fined a nominal sum on promise of constructing additional works within six months to deal with the increased quantity of sewage. Five years ago sewage works were constructed, but since then the population has increased from 16 000 to nearly 30,000, and they are now inadequate. At the meeting of the Heaton Norris District Council on Sept 20th the pollution of this now notorious brook—in this part of its course called Gore Brook—was mentioned as greatly affecting Heaton Norris, and satisfaction was expressed "that so firm a stand had been taken by the Mersey and Irwell Joint Committee."

Oct. 2nd

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Threatened Outbreak of Bubonic Plague.

No case of bubonic plague has occurred in Dublin Some alarm was, however, caused recently by the report that a sailor on board a vessel which had just arrived from Glasgow was suffering from illness. Dr J. M. Day of Cork-street Fever Hospital, who had taken the precaution to make himself familiar with the symptoms of bubonic plague in Glasgow, made an examination of the man and pronounced that the disease was not plague. It seems very fortunate that no cases have occurred in Dublin, for the difficulty about isolation still exists Mr. Ryan, the public health officer of the Glasnevin district, reported to the rural district council on Sept 26th that Beneavin, the house proposed to be used for the reception of plague patients, was unsuitable because it was situated by the side of the public road and within a very short distance of the town and of the congested district of Finglas. The sanitary arrangements were, moreover, stated to be defective and objectionable. It was decided to send a copy of the report to Sir Charles Cameron

The New Veterinary College in Dublin.

A deputation from the new Veterinary College waited on the Pembroke Urban Council on Oct 1st in reference to some opposition to the site of the new buildings. The deputation comprised Sir Christopher Nixon, Sir Thornley Stoker, Professor George Fitzgerald, F.T.C.D, Sir Charles Cameron, C B., Mr. James Talbot Power, D L, and Professor Mettam, principal of the college. Sir C. Nixon urged the council not to oppose the institution and he expressed the regret of the governors of the college that their architect had failed to submit their temporary plans to the council. The authorities were pledged to open the college to students on Oct. 3rd and some alterations in the present buildings were necessary until the permanent offices of the college should be ready. The permanent buildings, he went on to state, would cost about £25 000 and would be of the most up-to-date type. He believed that this college was of the greatest importance to the national and scientific interests of the country, and he hoped that the council would not throw any difficulties in the way of its establishment. After the withdrawal of the deputation the council passed a motion that the plans of the permanent buildings of the college should be sent to the surveyor of the council for a report by him to the Public Health Committee.

Meath Hospital and County Dublin Infirmary.

The vacancy on the surgical staff of the Meath Hospital caused by the lamented death of Sir William Stokes was filled on Sept. 27th by the election of Mr. Richard Lane Joynt, M.D. Dub., F R.C S. Irel.

St. Vincent's Hospital, Dublin.

The introductory address in St. Vincent's Hospital for the present medical session was delivered on Oct. 2nd by Dr. M. McHugh, who dealt with the threatened outbreaks of bubonic plague. Sir John W. Moore, President of the Royal College of Physicians of Ireland, occupied the chair.

The Belfast Workhouse Children

At a meeting of the Belfast Board of Guardians on Sept. 25th a letter was read from the Local Government Board for Ireland relative to what they term a "fraud" practised for an unascertained period on the children of the workhouse by the abstraction of a large portion of their daily food, and the Local Government Board characterise the action of the officers concerned in allowing such a condition of things to exist as most discreditable. They suggest certain plans to check these "disgraceful irregularities" and they urge upon the guardians the necessity of continuing to use every effort to eradicate the abuses which have crept into the management of the workhouse and are gradually being brought to light, and they consider that the vigilant action of the infirmary committee in discovering the particular fraud referred to is a striking proof of the good results to be anticipated from frequent inspections by intelligent visiting committees It would seem that children who were supposed to get eight ounces of bread were only getting four and a half, and the full allowance of milk was also withheld

Irish University Education.

The Council of the Royal University of Ireland Graduates' Association have issued a statement on the eve of the general election in relation to Irish University education. There are now 5000 graduates of the Royal University who should have considerable influence in guiding public opinion on such a subject and they, as well as graduates of the old Queen's University, are requested to support those candidates who endorse the programme on Irish University education which this association recommends (1) The association objects to sectarian universities; (2) it objects to persons professing any particular religious creed having any special advantages or endowments on that account as contrary to justice and all modern ideas; (3) the association recommends that the affairs of Trinity College, of the University of Dublin, and of the Royal University should be investigated. The examination of the affairs of Trinity College should be conducted (the association recommends) from several points of view: (*a*) As to finances. The authorities of Trinity College refuse, it is said, to give any information on this point. In 1873 Mr. Gladstone estimated the income as £78 000 a year and its expenses as £66,000, and he considered Trinity College the most richly endowed college in Christendom. Owing to reduction in rents and other causes its income has very much shrunk and unless it can effect economies or receive further private or Government aid, it will not be able, according to the published statement of the provost, to provide the costly equipment for modern scientific teaching. So closely are the financial secrets of Trinity College guarded that even now the authorities would not vouch for the accuracy of Mr. Gladstone's figures. It is clear that inquiry is urgently needed. (*b*) As to the educational work it does and has done, and especially as to what extent it has benefited the people of Ireland. Information on this matter of a startling nature is found in the Calendar of Dublin University for 1898, where there are on the roll 4534 voters who may be classified as follows:—Divinity graduates, 2145; medical graduates, 624; arts graduates, 1518; law graduates, 211; music graduates, 34; engineering graduates, 2; total, 4534; which shows that Trinity College is resorted to for professional training and not for education for its own sake. The predominance of divinity is manifest and of these divinity graduates it is curious that while there are 832 in Ireland, there are 1150 in other parts of the United Kingdom; but these figures do not represent the importance of the divinity school, for the greater number of students in that faculty do not proceed to a theological degree in Trinity, but are satisfied with what is known as a testimonium in divinity. For a period of 58 years—from 1840 to 1897—3339 testimoniums were granted; in other words, an average of 57 per annum. (*c*) As to whether Trinity College is sectarian or not. (*d*) As to whether its divinity school should be removed. 4. The Royal University should be placed under suitable representative government like the Victoria University, the London University, and the Birmingham University. 5. There should be an endowment for the Royal University and its colleges proportionate to that of Trinity College and the University of Dublin. In Trinity College there were 1047 students in the year 1899, whereas 2608 students entered for the examinations of the Royal University in the previous year. The numbers for the last year (not yet ascertained) will probably show little difference. In point of numbers the Royal University is of about three times the importance of Dublin University. With a coordination of primary, intermediate, and university education, and the more economic and purposeful use of the large funds of the Intermediate Board, the Royal University and its colleges would have an era of great prosperity in prospect. All these matters must be taken into account in estimating proportionate endowment. 6. If Parliamentary representation of universities continues the Royal University should have two representatives. The following tabular statement showing the university degrees and the residences of the graduates on the electoral roll of the University of Dublin is added to the statement published by the Council of the Royal University of Ireland Graduates' Association:—

—	Divinity	Medicine.	Arts.	Law.
Ireland	832	244	739	118
Other parts of the United Kingdom	1150	290	378	47
Colonies and dependencies.	53	29	45	17
Other countries	76	27	60	7
No address	34	34	296	22
Total	2145	624	1518	211

34 students graduated in music and two in civil engineering, making a grand total of 4534.

Medical Candidates for Parliament.

The following members of the medical profession are candidates for Ulster seats in the Imperial Parliament: Dr. J. King Kerr, J.P. (who is a member of the Belfast City Council), for East Antrim; Dr. E. O. Thompson (surgeon to the Tyrone Infirmary, Omagh), for South Tyrone; Dr. Charles O'Neill of Coatbridge Scotland, for South Armagh; and Dr. O'Connell for East Cavan. Mr. J. Smyth Crone, chairman of the Willesden District Council, who is contesting the Harrow division of Middlesex is an old Belfast Queen's College student.

The Battle of the Clubs at Cork.

The Ancient Order of Foresters have accepted the rules of the medical profession in Cork and their former medical officer, Dr. Giusani, has been duly reinstated. When Dr. Giusani resigned some years ago the number of members in the club was 250. Since then they have had in succession two or three of the imported medical men. Things evidently did not prosper as the membership gradually dwindled, and this once prosperous club can now count not quite 100 members on its books. This remarkable disintegration is steadily going on in other clubs in Cork. Many of the more common-sense members resign and those who remain when threatened with extinction indulge in a process of introspection and discover that the medical men of Cork had much to complain of and that their desire to be paid fair remuneration was only in accordance with what the artisans and working-classes in Cork demanded for themselves.

Oct 2nd.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Reforms in the Management of the Elmira Reformatory.

THE enforced resignation of Mr. Brockway, the distinguished superintendent of the Elmira Reformatory, has attracted public attention to this justly famous institution. An authority on the management of penal institutions states that the superintendent was severely criticised for using a cruel method of corporal punishment—viz., the use of the paddle. But this was not a necessary part of his reformatory scheme. It was rather a personal element which could be omitted without affecting the fundamental principles which he developed. Mr. Brockway was the originator of a new plan of dealing with young criminals in which corporal punishment played only a subordinate part. The Brockway plan was based on the theory that crime is a disease which can be cured in the majority of cases, if the offender is properly dealt with, before the malady becomes chronic. Deterrent penalties are fixed with little regard to their effect on individual criminals. Mr. Brockway's new idea of punishment was to work a reform in the criminal. The aim of the treatment was to be remedial rather than deterrent; penalties should be adapted to individual cases. The best way to protect society, according to this new theory, is to cure criminals instead of merely punishing crimes. This is the theory that Mr. Brockway put into practice in the Elmira Reformatory which he directed for 24 years. The most important devices that he adopted in carrying out his idea are the indeterminate sentence and the parole. The length of the period of confinement depends upon the behaviour of the individual. The inmates are graded according to an elaborate system of marks and credits. [illegible] may secure a parole in 14 months, but [illegible] violation of the rules will detain the offender for the maximum term of his sentence. A paroled person is required to report regularly to a designated officer in the city or town where he resides. If he complies with the requirements he is finally discharged when his parole expires, otherwise he is re-committed. These two devices are the really essential features of the Brockway plan.

Improved Quarantine Regulations.

The extension of the quarantine system of the United States to Cuba has proved the importance of international maritime sanitary regulations. The United States Marine Hospital Service now administers the quarantine of the Cuban ports, and as a result it appears that vessels disinfected in Cuba in accordance with the United States quarantine regulations and receiving a certificate to that effect from the medical officer of the Marine Hospital Service, are, upon arrival at the ports of the United States, considered as having been under observation during the time which has elapsed at sea since disinfection, provided no illness of a suspicious nature has occurred on board, and thus their time of detention at the quarantine stations of the United States is much lessened. This shortening of the time of detention at the ports of the United States has been a great help to commerce, while at the same time the protection to the United States is as great as was afforded under the former methods, or even greater.

The Health of Manila.

Major Guy L. Edie, a surgeon in the United States Army and President of the Board of Health of Manila, Philippine Islands, makes a very interesting report.

Besides the several functions belonging to a board of health in supervising all works and conditions affecting public health the board has general supervision of charitable institutions, prisons, and venereal hospitals and the direct control of the vaccine farm, the municipal chemical and bacteriological laboratories (which the board organised), free dispensaries and hospitals for leprosy, small-pox, and bubonic plague. In matters of vital statistics the board claims accuracy as yet only for its record of mortality. The work of vaccination has made its impress upon the mortality from small-pox. For the nine months from October, 1899, to June, 1900, there were seven deaths from small-pox in the city, while in the month of March, 1899, there were 75 deaths from this disease. The work of vaccination was effected with great difficulty, as the authorities did not consider it advisable to make vaccination compulsory. During the year 622,030 points of vaccine virus were furnished to the army and navy of the United States and to native inhabitants of [illegible] of Manila. In the city [illegible] were effected. The total [illegible] months, October, 1899, to [illegible] of which 3507 were of children under five years of age. The population is variously [illegible] a number averaging about 50 per month occurred in the Chinese quarter, without medical attendance and unreported, some of which were probably due to plague. Only one death occurred from plague among Americans, and that was in the case of a quartermaster's employé. The total number of cases of plague reported was 225, the sufferers in only 58 of which cases recovered. The opinion formed by Major Edie from his experience of the last six months is to the effect that little difficulty will be [illegible] the disease in any intelligent [illegible] sanitary conditions.

Restricting Prostitutes to Certain Districts.

The Supreme Court of the United States has decided in the case of the Church Extension Society *versus* the City of New Orleans that it is unlawful for any public prostitute or woman notoriously abandoned to lewdness to occupy, inhabit, live in, or sleep in any house, room, or closet situate without certain prescribed limits of the city, with a proviso that nothing in the ordinance should be so construed as to authorise any lewd woman to occupy any house, room, or closet in any portion of the city. The question presented to the court was whether one who may own or occupy property in or adjacent to the prescribed limits in the city, whether occupied for a residence or for other purposes, can prevent the enforcement of such an ordinance on the ground that by it his rights under the Federal Constitution are invaded. With nothing in the ordinance to deny the ordinary right of the individual to restrain a private nuisance the court does not consider it one of which complaint could be made by such owners or occupants of property as stated, notwithstanding that the pecuniary value of their property might be depreciated thereby. The management of those vocations which feed upon and minister to human weaknesses, appetites, and passions, the court continues, come directly within the scope of what is known as the police power. Obviously, the regulation of houses of ill-fame and legislation in respect to women of loose character may involve one of three possibilities: (1) absolute prohibition; (2) full freedom in respect to place, coupled with rules of conduct; and (3) a restriction of the location of such houses to certain defined limits. Whatever course of conduct the legislature may adopt is, in a general way conclusive upon all courts, State or Federal. It is no part of the judicial function to determine the wisdom or folly of a regulation by the legislative body in respect to matters of a police nature.

Measurements of School Children

The Chicago Board of Education have established a department called "Child-Study and Pedagogic Investigation" The examination is undertaken for the purpose of determining the mental and physical status of the school-children. Examinations were at first limited to the determination in each pupil of the following points, height, height sitting, weight, ergograph work, strength of grip right and left, hearing right and left, and acuity of vision. In addition to this obvious developmental defects have been noted. The number of children examined down to the present time is 5636. The conclusions thus far reached are that there is a physical [illegible] children are lighter and preco- [illegible] the average child, and that medio- [illegible] with mediocrity of physique. A similar result was obtained in the examination of 33,500 school-children in St. Louis in 1892 by Dr. W. T. Porter. The action of the Chicago Board of Education in establishing this department o [illegible] and physical condition of the [illegible] is the first instance in Amer [illegible] appropriating money for research work and it is a fact which redounds greatly to their credit.

Sept. 18th.

Medical News.

UNIVERSITY OF DURHAM.—At the Convocation held on Sept 22nd the following degrees and diplomas were conferred:—

Doctor in Medicine—Joseph Ellis Baker, M.B, B S Durh., Francis [illegible] *of 15 Years' Standing*)—John [illegible] Edin.; William Henry Crosse, [illegible] Ernest Goddard, M R C S, [illegible] R C S., L R C P. Edin., [illegible] C P, F R C.S Edin., [illegible] Henry Lloyd, M R C S, [illegible], L R C.P., Alexander [illegible], Gordon Fitzherbert [illegible] mas Godfrey Parott, [illegible], M R C S, L R C P, [illegible] S, L.S.A.; Matthew [illegible] A, D P H [illegible] r, M D, B S., B Hy. [illegible], M.B, B S, M R C.S, L R C P.

Bachelor in Medicine [illegible] Reginald Alderson, College of Medicine, Newcastle-upon-Tyne [illegible] for Women; Edward [illegible] Wilfred Burn, College [illegible] Cornell Clapham, [illegible] D Vaz, London Sch [illegible] Ryatt, College of [illegible] London Hospital, [illegible] ham, Frederic Wil [illegible] Atkinson Morland [illegible] Peart, College of M [illegible] Perkins and Claud [illegible] St Bartholomew's [illegible] of Medicine for Wo [illegible] Birmingham; Harc [illegible] pital, Harry Carlil [illegible] Sydney Duke Turn [illegible] Hospital, and Rob [illegible] mew's Hospital.

B [illegible]—Reginald Alderson, College of Medicine, [illegible] m, London School of Medicine [illegible] Frank Wilfred Burn, College [illegible] ell Clapham, [illegible] D'Vaz, London [illegible] att, College of [illegible] ason College, [illegible] Henry Martin, [illegible] M R C S, [illegible] School of Med [illegible] Surgeons, Du [illegible] Newcastle- [illegible] Hospital, College of [illegible] nnerather, [illegible] old Robert [illegible] London [illegible] lth, Mason [illegible] L.R.C P, [illegible] D P H, [illegible] L.R C P., St Bartholomew's Hospital.

Diploma in Public Health (*D P H*)—William Hardcastle, M B, B Hy, M R C S, L R C P.

GUY'S HOSPITAL MEDICAL SCHOOL.—The following Entrance Scholarships and Certificates have been awarded: Senior Science Scholarship for University Students (£50): Mr A R Brailey, Downing College, Cambridge, and Mr S W Cole, Trinity College, Cambridge (equal £25 each), and a Certificate to Mr. D M. Hughes, University College, Cardiff. Junior Scholarships in Science: £150 to Mr. R. W Allen, University College, Auckland; £60 to Mr. C M Wenyon, University College, London; and Certificate to Mr. H Thomas, Kingsholme School, and Mr. F H Lennox-Jones, Latymer Upper School. Entrance Scholarships in Arts: £100 to Mr H. O. Brookhouse, Blackheath School; £50 to Mr. W. H. Dencer, Colfe Grammar School; and Certificates to Mr. G. Cockcroft, Rossall School.

Mr. T. D. Layton, Bradfield College, and Mr. G. F. E. Allison, Rossall School.

UNIVERSITY COLLEGE, LONDON.—The following Scholarships and Exhibitions have been awarded. Medical Entrance Scholarships: Bucknill Scholarship, £30 a year for four years and 55 guineas Scholarship (equally divided), H. T. Mant and W. S. Sweet; 55 guineas Scholarship, H. E. Dyson. Medical Exhibitions: 76 guineas each, C. W. Forsyth and A. M. H. Gray.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—The following Entrance Scholarships have been awarded: hip (100 guineas) to Mr. John Heatly Scholarships (each 60 guineas) to Mr. University) and Mr. H. M. Joseph (Cambridge University). Entrance Scholarships have also been awarded to Mr. A. G. Whitaker (40 guineas) and to Mr. Alfred Dinnis (30 guineas).

UNIVERSITY OF CAMBRIDGE.—Dr. L. Humphry has been appointed Assessor to the Regius Professor of Physic for the ensuing year. In his address on resigning office the Vice-Chancellor alluded to the progress made with the plans for the new medical school buildings and to the need for further contributions towards the cost of their erection. The new arrangement with Addenbrooke's Hospital was described as being advantageous alike to that institution and to the university. Rooms for work in clinical pathology, bacteriology, &c., have just been erected by the staff and presented as a gift to the hospital. They will be open for work under the direction of Professor Sims Woodhead during the present term. The open colonnades in front of the hospital, which look south over the grounds, are, by the liberality of Mrs. Peart, to be adapted for open-air treatment.

THE WORSHIPFUL COMPANY OF PLUMBERS.—At the quarterly meeting of the court held at the Guildhall on Sept. 29th Mr. Charles Hudson was sworn into the office of Master, and Mr. Alderman Richard Hind and Alderman Sir John Knill, Bart, were sworn into the offices of Warden and Renter Warden respectively. Dr. F. J. Waldo, medical officer of health of the Temple and St. George's Southwark, and Dr. Reginald Dudfield, medical officer of health of Paddington, were admitted to the freedom and livery of the Company. A copy of a memorial to the Right Honourable A. J. Balfour was laid before the court calling attention to the desirability of the Government dealing with the registration of qualified plumbers in the interest of the public health, and bearing the signatures of Lord Aberdeen, Sir Charles Cameron, medical officer of health of Dublin, the Lord Provost of Aberdeen, Professor W. R. Smith, King's College, London, Professor Matthew Hay, Aberdeen University, and other chief officers of the Congress of the Royal Institute of Public Health held at Aberdeen, and about 600 delegates and members representing sanitary authorities, architects, colleges, hospitals, school boards, and other bodies in various parts of Great Britain and Ireland. It was reported that the following resolutions were passed at the Tenth International Congress of Hygiene and Demography held at Paris:—

1. That all plumbers' work, as much in the supply of drinking water as in the removal of soil or slop water, should be the object of particular attention. The pipes for the distribution of water, as well as the hydraulic apparatus (reservoirs, syphons, &c), and the down pipes for slop water, should be completely protected from frost.

2 That a professional education with a test examination before obtaining a diploma should be demanded of "sanitary plumbers" with a view to spreading among plumbers a knowledge of hygiene and of rational and economic construction in their work.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ARMOUR, DONALD JOHN, B A., M.B. Tor., M.R.C.P. Lond., F.R.C.S. Eng. has been to the Professor of Anatomy, Rush Medical

BARNES, E. G, M.D. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Hartismere District Council.

BURNS, WM. C., M B., Ch B., has been appointed Resident Medical Officer to the Infirmary, Glasgow, vice Inman, resigned.

CHURCH, ANNA L, M.D Irel, has been appointed Medical Superintendent to the Lady Aitchison Hospital, Lahore, Punjaub, vice Miss Beilby, M.D., resigned.

CRABTREE, W., B.Sc. Vict, M.B., Ch.B, has been appointed Medical Officer for the Workhouse of the Stoke-upon-Trent Union, vice C. D. Outred, resigned.

CROSS, FRANCIS RICHARDSON, M.B. Lond., F.R.C.S. Eng., has been appointed Honorary Consulting Ophthalmic Surgeon to the Bristol Royal Infirmary.

DUKE, A. S., L.R.C.P., L.R.C.S. Edin, L.F.P.S. Glasg., has been re-appointed Medical Officer for the Midland Sanitary District of Midhurst.

DURRANT, CHARLES E, L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the General Lying-in Hospital, York-road, London.

GILLIBRAND, WM., L.R.C.P. Irel, M.R.C S., has been appointed a Medical Referee under the Workmen's Compensation Act, 1897, and to act for Bolton in County Court Circuit No. 5.

GIMSON, K. C., M.B., B.C. Camb., has been appointed Certifying Surgeon under the Factory Acts for the Witham District of Essex.

GRANT, DUNDAS, M.A., M.D., F.R.C.S. Eng., has been appointed Surgeon to the Royal Academy of Music, Tenterden-street, Hanover-square, London.

INGRAM, J, L R.C.P., L.R C.S. Edin., L.F.P.S. Glasg, has been appointed Medical Officer of Health for the Warsop Urban Sanitary District, vice H. Hewer, resigned.

JOYNT, R. L, M.D. Dub, F.R.C S. Irel., has been appointed Surgeon to the Meath Hospital, vice Sir William Stokes, deceased.

MARTIN, ERNEST W., M.B, Ch.B., has been appointed Resident Medical Officer to the City of London Hospital for Diseases of the Chest, Victoria-park, E.

MILLIGAN, W. A., M.A, M.B., C.M., F.R.C.S. Edin., has been appointed Anæsthetist to the Great Northern Central Hospital, Holloway-road, N.

NEWBY, THOS., M D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health for the Cleethorpe Sanitary District.

O'DONOGHUE, J., L R.C.P., L.R.C S. Irel., has been appointed Medical Officer for the Howth Dispensary District, Dublin.

OGILVY, ALEXANDER, B.A., M.D., B Ch., B.A.O. Dub., F.R.C.S. Irel., has been appointed Honorary Ophthalmic Surgeon to the Bristol Royal Infirmary, vice F. Richardson Cross, resigned.

PICKFORD, J. S., L R.C P Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Little Lever District Council.

RHYS, OWEN L, M.B., Ch B Edin., has been appointed Assistant House Physician to the Cardiff Infirmary.

ROSS, R. H., L.R C.P., L R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Whitehead Constabulary, Ireland.

SMITH, H. EMSLIE, M.B, C.M., has been appointed Junior House Surgeon to the Great Northern Central Hospital, Holloway-road, N.

SMITH, W. R, M.D Lond., B.S., L.R.C.P., M.R.C.S., F.R.C S. Eng., has been appointed Medical Officer for the Beeston and Wollaton Sanitary District of the Bosford Union, vice J. Orton, deceased.

SYMES, JOHN ODERY, M D. Lond., M.R.C.S, L.R.C.P., D.P.H. Lond, has been appointed Honorary Physician to the Clergy Daughters' School, Bristol, vice E. Markham Skerritt, resigned.

WATERS, J. F. W., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon and Secretary to the West Norfolk and Lynn Hospital, King's Lynn.

WINDLE, B. C. A, D.Sc. Dub., M.D., has been appointed a Representative on the General Council of Medical Education by the Council of the University of Birmingham.

WINDLE, J. D., M.B, Ch.B. Vict., L.R.C.P. Irel., L.R.C.S. Edin., M.R C.S., has been re-appointed Medical Officer of Health by the Southall-Norwood Urban District Council.

WRIGHT, C. F., M.R.C.S., has been re-appointed Medical Officer for the Rishangles Sanitary District, Hartismere Union.

WRIGHT, H. T., L R.C P., L.R.C.S. Edin., L F.P.S. Glasg., has been appointed Medical Officer for the No. 2 Sanitary District of the Parish of Alston-with Garrigill, vice E. W. Short, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRADFORD ROYAL INFIRMARY.—House Physician for 12 months, unmarried. Salary £100 per annum, with board and residence.

CHILDREN'S HOSPITAL, Nottingham, St. Peter's Church Walk, Nottingham.—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum

CITY OF LONDON ASYLUM, near Dartford, Kent.—Second Assistant Medical Officer and Pathologist, unmarried. Salary £150 a year, with board (except liquors), furnished apartments, washing, and attendance. Apply to the Clerk to the Visiting Committee, Guildhall, London, E C.

CORPORATION OF BIRMINGHAM CITY FEVER HOSPITAL, Lodge-road.—Second Assistant Medical Officer. Salary £120 per annum, with board, residence, &c

COUNTY ASYLUM, Chester.—Junior Assistant Medical Officer, unmarried. Salary £130 per annum, rising £10 yearly to £160, with board (no liquors), lodging, and washing.

COUNTY ASYLUM, Lancaster.—Assistant Medical Officer. Commencing salary £125 per annum with the usual allowances.

COUNTY BOROUGH OF CROYDON, CROYDON BOROUGH HOSPITAL.—Resident Medical Officer for the Croydon Borough Hospital for Infectious Diseases, for one year. Salary £120 per annum, rising to £140 at the end of six months, with board and residence.

DERBY COUNTY ASYLUM.—Second Assistant Medical Officer. Salary commencing at £110 per annum, rising to £130, with board, lodging, o Medical Superintendent, County Asylum,

Buxton, Derbyshire.—Assistant House per annum, with furnished apartments, board, and washing

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury-avenue, London.—Resident Medical Officer (not a female), speaking French, unmarried. Salary £80 a year, with full board.

[illegible]

[illegible] HULME DISPENSARY (not Provident), Dale-street, Stretford road, [illegible] tments, [illegible] married. [illegible] Assist- [illegible] n, with board, lodging, and washing

KENT COUNTY OPHTHALMIC HOSPITAL, Maidstone.—Surgeon

LONDON TEMPERANCE HOSPITAL, Hampstead road, N.W.—Resident Medical Officer for one year. Salary 100 guineas per annum, with board, lodging, and washing

MACCLESFIELD [illegible] Salary £70 per a[illegible]

MANCHESTER [illegible] House Surgeon [illegible] Salary £77 10s [illegible] rk, [illegible] surgeon to Out- [illegible] Officer Salary [illegible] Council, Rousay, Orkney

PARISH OF SLEAT.—Medical Officer and Public Vaccinator. Salary £100 per annum. Apply to the Clerk to the Parish Council, [illegible]

[illegible] to nurses

SALFORD HOSPITAL.—Junior House Surgeon. Salary £70 per annum, with board and residence.

SCHOOL BOARD FOR LONDON.—Medical Officer for the Board's Training Ship the *Shaftesbury*, which lies off Grays, Essex. Commencing salary £100 a year, which may be increased by £10 annually to £150 a year, with 1s. for each boy examined prior to his admission to the ship. Apply to the acting Clerk to the Managers, School Board Offices, Victoria Embankment, W.C.

STO[illegible] a year, [illegible] coal and [illegible] Apply [illegible] surgeon [illegible] dence. [illegible] surgeon, [illegible] House Surgeon for three months, followed by six months as House Surgeon

WHITBY UNION.—Public Vaccinators for the Whitby Sub-District and the Urban District respectively. Apply to the Clerk to the Guardians, Whitby.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Physician for two years. Salary £100 a year, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS

BIENEMANN.—On Oct. 1st, at Kettlewell, Farnham Royal, Bucks, Margaret, wife of A. J. Bienemann, M.B., of a daughter.

THORNELY.—On Sept. 29th, at 60, Herne-hill, S.E., the wife of William Thornely, M.B., of a son.

MARRIAGES

[illegible] e parish church, Luton, by the [illegible] ne, M.B., C.M., B.Sc., eldest son [illegible] Gateshead-on-Tyne, with Clara [illegible] Mr. and Mrs. Durler, Whitehill, Luton

[illegible] of Frognal, Hampstead, London.

DEATHS.

DUCKET.—On [illegible] Clark A. D[illegible]

LEETE.—On Se[illegible] M.R.C.S., [illegible] aged 33 years.

WOODFORDE.—On July 17th, at Uralla, New South Wales, Alfred Ernest Woodforde, L.R.C.P., L.R.C.S. Edin., second son of W. T. G. Woodforde, M.D., of Oakbank, Spencer's wood, Reading, in his 43rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

HISTORY OF MEDICAL JOURNALISM IN GREECE.

THE September number of *La Grèce Médicale* contains an interesting article by the editor, Dr. Jean Foustanos of Syra, entitled, Histoire de la Presse Médicale Grecque. Dr. Foustanos says that up to the time of the liberation of Greece, namely in the beginning of the present century, a medical man of education was extremely rare but irregular practitioners abounded. The latter were of two classes—(1) native Greeks who undertook venesection and the management of fractures and dislocations, and (2) the so-called Καλογιατροί ("médecins bons") or Ἰατροὶ τῆς Φραγκιᾶς ("médecins du pays des Francs"), who for the most part came from Italy or the Ionian Islands and wore a fantastic costume which Dr. Foustanos describes, comparing it to that of a Spanish bull fighter. Pouqueville mentions in his history that in one [illegible] in Tripolitza, the chief [illegible] tobacconist from Monti[illegible] course, at this period non-existent, but a very few scientific works were published in Greek, printed at great cost in Italy, and most of them in Venice. Immediately after the liberation of Greece, however, several Greek medical men of education returned to their country from Italy and other parts of Europe. In a few years a certain amount of scientific revival was apparent in Greece; the Medical Society was established in Athens and in 1836 it commenced the publication of the first Greek medical journal, called *Esculape*, after the tutelary deity of the healing art. This journal, unfortunately, had an existence of only three years (1836-1839). Since that period several medical journals have successively appeared but have all been short-lived, the medical men being numerically insufficient to support them. Dr. Foustanos gives in chronological order the following list of medical journals which have up to the present time appeared in Greece. Except in the case of the two last he does not specify the language in which they were published and we therefore reproduce the titles in French as he gives them:—

1836-1839 *Esculape*, Athens, conducted by the Medical Society

1842-1847 *Nouvel Esculape* Athens, conducted by G. Prinaris

1853-1860 *L'Abeille Médicale*, Athens, conducted by A. Gouda

1856. *Esculape* (Second Series), Athens, conducted by A. Anagnostakis, A. Zinnis, and P. Soutzos

1858-1860 *Journal Médical*, Athens, conducted by A. Anagnostakis, and Th. Aphendoulis

1859 *Galien*, Athens

1860 *Le Médecin Populaire*, Athens

1862. *Hippocrate*, Athens, conducted by P. Callivourtzis

1863 *Hippocrate*, Zante

1870 *Esculape*, Athens, conducted by A. Antoniades, G. Karamitzas, S. Manghinas, and A. Georgantas

1871-1873 *Bulletin Pharmaceutique*, Athens

1874. *Almanach, ou Journal Médical et Pharmaceutique*, Athens, conducted by Constantin Delvenis

1874 *Almanach de Santé*, Athens, conducted by A. Diamantopoulos

1879-1897. *Galien*, Athens, conducted by A. Georgantas, N. Maccas, N. Dellaportas, and Skiadaressis, subsequently by J. Bambas, and after him by J. Caravias and several other medical men.

1883-1885 *Journal de la Société d'Hygiène*, Athens, conducted by G. Ch. Vaphas, A. Damberghis, G. Crinos, N. Maccas, B. Patrikios, D. Caterinopoulos, and Ch. Rallis

1884-1885 *Journal Médical Hebdomadaire*, Athens, conducted by A. Callivokas

1884 *Journal Périodique de la Société Pharmaceutique d'Athènes*, Athens.

1885 *Le Progrès de la Médecine des Enfants*, Athens.

1889-1891. *Les Nouveaux Médicaments et les Nouvelles Cures* Athens, conducted by Christovitz

1890-1896. *Journal Médical de l'Armée*, Athens, conducted by Solon Chomatianos, J. Typaldos, and other military medical officers

1895 *Revue Médicale*, Athens, conducted by Rondopoulos

1896. *Hippocrate*, Athens, conducted by Alex. Georgiades

1896 *Progrès Médical*, Syra, conducted by Dr. Jean Foustanos

1898 *La Grèce Médicale* Syra conducted by Dr. Jean Foustanos

Of all the above journals the only ones that survive are the two last named, the *Progrès Médical* (Ἰατρικὴ Πρόοδος), published in Greek, and *La Grèce Médicale*, published in French.

THE DISCRETIONARY POWERS OF CORONERS AS TO HOLDING INQUESTS.

To the Editors of THE LANCET.

SIRS,—I shall be glad to know through the medium of your columns whether it is customary for a coroner to grant a certificate—not, I suppose, of the cause of death, but a certificate which permits the deceased's burial—without any medical evidence having been taken as to the cause of death. The facts on which my query is based are as follows. I was called at 7 A.M. one day to see a woman who had died suddenly the previous night. As I had never seen her during life I told the local policeman to inform the coroner (who lives several miles distant) that I could not grant a certificate. I hear nothing from either policeman or coroner in the way of reply, and when two days afterwards I am in the same district I am told that the woman is to be buried the same day. Hoping you will give me your opinion on this matter for my future guidance,

I am, Sirs, yours faithfully,

Oct. 1st, 1900. NORTHUMBRIA.

⁂ Before giving our opinion upon this case we should like to know whether the woman was buried upon the coroner's order and in what terms it was given. The coroner is to hold an inquiry under the Coroners Act, 1887, when there is reasonable cause to suspect that the deceased "has died a sudden death of which the cause is not known."—ED. L.

"A SINGULAR STORY OF HYPNOTISM."

To the Editors of THE LANCET.

SIRS,—With reference to an extract from a sensational article in the *Daily Mail* on this subject, and which appears in THE LANCET of Sept. 29th (p. 982), I desire to say that it is within the province of any person to enter the out-patient department of any public hospital and to burlesque what he there sees if he feels so inclined. The gentleman who attended at my hospital is a perfect stranger to me, he was courteous and gentlemanly and left expressing an opinion that he had been very interested in what he had seen. He was not there the whole time but had to leave, having an engagement at the office. His remarks, so far as related to Mr. J. May (who is a married man with two children, aged 32 years, and an electrical engineer by trade, and who attends every week at the hospital), were not judicious in their nature and admit of another construction. He apparently took exception to the furnishing of the out-patient department. So long as out-patients have benches to sit down upon and the physicians tables on which to write their prescriptions all is provided which is essential; moreover, the furniture compares very favourably with that found in most larger hospitals. The question of treating disease hypnotically has for many years been under serious consideration. In 1895 at the International Medico-Legal Congress held in New York, of which department I was chairman in the Psychological Section, many papers were read and discussions held on this subject, which was freely ventilated. On my return from the Congress, and after conference with Professor Lombroso of Turin and Dr. Gorodichze of Paris, gentlemen well qualified to form an opinion on its value, I decided to give this treatment a fair trial at my hospital. The success I experienced, especially in cases of static melancholia, folie de doute, neurasthenia, nervous deafness, chorea, and other allied nervous diseases, was of such a nature that I have been induced to continue the same with like results. In nervous cases, in which it is difficult to obtain mental concentration, and consequently direct hypnotism becomes impossible, the suggestion must be made indirectly through a transference medium. This is admitted by the authorities I have previously mentioned. This being one of the varieties of hypnotism, perhaps out of 80 cases which present themselves at the hospital there are only three or four who are so dealt with. The records, however, which I am about to publish will speak for themselves. At the late International Medical Congress at Paris the subject occupied an important position in the discussions, and in THE LANCET of Sept. 29th (p. 974) you give the proceedings before the Congress of Psychology of Paris, in which the department on hypnotism was presided over by Dr. Voisin, physician to the Salpêtrière Hospital of Paris and the leading authority in France on psychology, and you state that after the discussions the members adjourned to witness the cases treated at this hospital and at Dr. Berillon's clinic in the Rue des Arts. I have no doubt in my own mind that amongst the various hypnotic cases shown to the members were cases of transference similar to those alluded to by you. The British Medical Association some years ago formed a committee to investigate the question and many leading specialists in London now send their patients to be so treated by those experienced in its use. The general opinion is that such procedure is legitimate so long as it is carried out by qualified medical practitioners. The hospital, 203, Euston-road, has been visited by physicians, scientists, those interested in the subject, many of whom have witnessed the progress of cases undergoing treatment there. I shall be glad to welcome any person interested in the subject on presentation of his card to the secretary, as the doors are open to all, and any students desirous of witnessing the demonstrations on Thursdays at 6 o'clock will be admitted. There is one remark as to the medium and the question of his being properly hypnotised, I will challenge anyone to wake him by fair means, and shall be prepared to receive any persons you may send for that purpose to the hospital.

I am, Sirs, yours faithfully,

Devonshire-street, W., Oct. 1st, 1900. FORBES WINSLOW.

"MOTOR-CARS FOR MEDICAL MEN."

MR. C. T. W. HIRSCH, M.R.C.S.Eng., L.R.C.P.Lond., Woolwich, has sent us an account of his experiences with a motor-car, from which we extract the following:—"The car I invested in was a Benz Ideal No. 2, with a hood ...... from Messrs. Hewetson's. ...... An instructor was left for a week at the charge of 7s. 6d. a day *plus* his railway fare and meals. I am afraid I did not derive much benefit from him and when I started driving myself I must confess I had a great deal of trouble, the car frequently stopping in the street, due to my not managing the mixture properly. When this was mastered and the regulation of the coils vibrator seen to, the car went splendidly, and in addition to my doing my work in this hilly district I have had some three trips to the South Coast watering places, as well as many daily excursions of from 40 to 60 miles. The machinery on the whole is good. One of the carriage springs broke. ...... A fresh one was supplied but a charge was made for the labour, Messrs. Hewetson supplying a new spring gratuitously. The tyre on one wheel became loose, due to the wire breaking. This was also mended gratuitously, though the agent charged for the time he spent and the expenses incurred in taking the wheel to the maker's. The only other trouble of import was that the bush on the second speed loose pulley became worn, and as a result the pulley was not quite true and occasionally gripped the true pulley, and when this driving on another speed a loud noise, violent vibration, and pulling up of the machine occurred. The wearing of the bush was said to be my own fault, as though I kept the grease-box well filled the hole in the lower part must in some way have been blocked. ...... Messrs. Hewetson ...... tell me that a car has run 35,000 miles without requiring attention. I am afraid *I cannot say the same for mine.* Motor-cars certainly are very useful but liable to get out of order, and I question whether I would buy one again with my present experience. ......"

A POINT UNDER THE WORKMEN'S COMPENSATION ACT.

To the Editors of THE LANCET.

SIRS,—Will you kindly inform me whether it is necessary for a medical man to insure his groom against accidents under the Workmen's Compensation Act? I am, Sirs, yours faithfully,

Oct. 2nd, 1900. SUBSCRIBER.

⁂ Employers are not liable for servants under the Workmen's Compensation Act, 1897, but it is a question whether they will not be liable under the extension of the Act to agricultural labourers; when the duties of the servant are to attend to animals certainly a medical man in the country would be liable, and it is in any case wiser to insure, as this can be done for a few shillings.—ED. L.

AN IMPROVED CYCLE SADDLE.

WE have received from Messrs. T. Dunlop and Co. of 20, Beulah-hill S.E., a specimen of their improved Henson cycle saddle. The Henson saddle, which is of the pneumatic variety, is so constructed that there are two separate pads, with a space between them and a depression in the centre of each pad to receive the ischial tuberosities. This form of saddle is found to be very comfortable and convenient by many riders and for many it is, indeed, one of the best forms of cycle saddles. It, however, requires a little perseverence to become used to it, especially by those who have hitherto ridden a peaked saddle. In order to meet this inconvenience a peak has been added to the Henson saddle which can be removed at the option of the rider. We have tried this saddle and have found it to possess the advantages claimed for it.

THE RIGHT TO SUE FOR FEES.

To the Editors of THE LANCET.

SIRS,—I hold the M.R.C.S. Eng. and the L.R.C.P. Lond. qualifications and want to know if I can sue a patient for professional attendance and medicines. I think I can as I know a brother medico who holds the Edinburgh qualifications who is constantly putting people in the county court, but I have been *told* by an L.S.A. that it is necessary to have that qualification in order to sue for medicines supplied. I should therefore be much obliged for an authoritative statement from you on the subject. I am, Sirs, yours faithfully,

Oct. 1st, 1900. SUBSCRIBER.

⁂ It is not necessary to hold the L.S.A. If our correspondent was qualified and registered before 1887 he is entitled by Section 31 of the Medical Act of 1858 to practise according to his qualifications and to demand and recover in any court of law ...... reasonable charges for professional aid, advice, and visits and the cost of any medicines .... rendered or supplied by him to his patient. If registered after 1887 he may practise medicine, surgery, and midwifery and recover in course of law expenses for medicaments (Medical Act, 1886, Section 6). An exception is made under both these Acts as to Fellows or Members of a College of Physicians.—ED. L.

THE MOUNTING OF MUSEUM SPECIMENS.

To the Editors of THE LANCET.

SIRS,—Will any of your readers kindly inform me of any literature giving a full description of the modern methods followed in the preservation and mounting of museum specimens.

I am, Sirs, yours faithfully,

Oct. 2nd, 1900. F. A. W.

PERIPHERAL NEURITIS.

To the Editors of THE LANCET.

SIRS,—Will any of your contributors oblige me by stating where and under what title I may order the latest literature on the subject of peripheral neuritis? Thanking you in advance,

I am, Sirs, yours faithfully,

Oct. 3rd, 1900. MEDICUS.

ERRATUM.—In our last week's issue in the list of books received from Messrs. J. & A. Churchill "The Theory and Practice of Medicine", should read "The Theory and Practice of *Hygiene*."

METEOROLOGICAL READINGS

(Taken daily at 8 30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct 4th, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rain-fall	Solar Radia in Vacuo	Maximum Temp Shade	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8 30 A.M.
Sept. 28	29·63	S W.	0 33	112	63	53	55	58	Overcast
" 29	29 89	S W	0·03	107	69	51	52	53	Fine
" 30	29 85	S W		109	66	52	57	61	Cloudy
Oct 1	29·88	N W	0 15	101	67	48	50	51	Fine
" 2	29 84	SSW	..	100	65	51	54	55	Cloudy
" 3	29·85	N W	.	96	60	49	49	51	Cloudy
" 4	29 87	S E	.	90	62	47	51	54	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN

Throat (2 P.M.)

(9 30 A.M and

2 30 P.M.)

London Throat (2 P.M.).

SOCIETIES

MONDAY (8th).—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting 8.30 P.M. Ordinary Meeting Address Mr J H Morgan (President) The Romance of Surgery

TUESDAY (9th).—SOCIETY FOR THE STUDY OF INEBRIETY (Medical Society's Rooms, 11, Chandos-street, Cavendish square, W.)—3 30 P.M. Council Meeting 4 P.M. Surgeon Major Poole: Inebriety,

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LECTURES, ADDRESSES, DEMONSTRATIONS, &c

MONDAY (8th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.)—4 P.M. Dr J Galloway Consultation. (Skin.)

TUESDAY (9th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.)—4 P.M. Dr J Taylor: Consultation (Medical.)

WEDNESDAY (10th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC vers —Clinical

ND POLYCLINIC Consultation (Surgical.)

THE H .W.C.)—4 P.M. Dr P

CHARING Medical Cases

FRIDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—2-3.30 P.M. Dr H. Campbell: Class. Clinical Examination of the Nervous System. Demonstration IV. 4 P.M. Mr T Collins Consultation (Eye.)

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS

note that only those subscriptions he Proprietors of THE LANCET W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid; and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.	
One Year	£1 12 6
Six Months	0 16 3
Three Months	0 8 2

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR CHARLES GOOD, THE LANCET Office, 423, Strand, London, W.C.

During the week marked copies of the following newspapers have been received: *Cambrian, Derbyshire Times, Stockport Advertiser, Portsmouth Times, Birkenhead News, Gloucester Journal, Birmingham Daily Post, Gloucester Herald, Daily Nation (Dublin), Manchester Evening Chronicle, Sheffield Independent, Leeds Mercury, Citizen, Scotsman, Times of India Pioneer Mail, Liverpool Daily Post, Architect Builder Bristol Mercury, South Wales Daily News, Yorkshire Post, Lowestoft Standard, Ceylon Standard, Health, Madras Standard, Perth Courier, Manchester Guardian, Engineer and Iron Trades Advertiser, Christian, Aberystwyth Observer, Farm and Home Sanitary Record, League Journal, Bath Herald, Hastings News, Reading Mercury, Abingdon Herald, Hertfordshire Mercury, City Press, Westminster Gazette, Local Government Chronicle, Mining Journal, Ilford Guardian, Local Government Journal, Surrey Advertiser, Essex Weekly News, Flintshire Observer, Horse Guards Gazette, The Sun, Weekly Irish Times, Woodbridge Reporter, Grocer's Journal, Caterham Free Press, Seaford Journal, Bayswater Chronicle, Surbiton Times, Thirsk News, Cornish Times, Peterborough Standard, Weekly Free Press and Aberdeen Herald, Coventry Times, Braintree Advertiser, Dorking Advertiser, Glamorgan Free Press, West London Observer, Eastern Daily Press, &c., &c.*

suddenly the previous night As I had never seen her during life I told the local policeman to inform the coroner (who lives several miles distant) that I could not grant a certificate. I hear nothing from either policeman or coroner in the way of reply, and when two days afterwards I am in the same district I am told that the woman is to be buried the same day. Hoping you will give me your opinion on this matter for my future guidance, I am, Sirs, yours faithfully,

Oct. 1st, 1900. NORTHUMBRIA.

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"A SINGULAR STORY OF HYPNOTISM."

To the Editors of THE LANCET.

SIRS,—With reference to an extract from a sensational article in the *Daily Mail* on this subject, and which appears in THE LANCET of Sept 29th (p. 932), I desire to say that it is within the province of any person to enter the out-patient department of any public hospital and to burlesque what he there sees if he feels so inclined. The gentleman who attended at my hospital is a perfect stranger to me, he was courteous and gentlemanly and left expressing an opinion that he had been very interested in what he had seen. He was not there the whole time but had to leave, having an engagement at the office. His remarks, so far as related to Mr. J. May (who is a married man with two children, aged 32 years, and an electrical engineer by trade, and who attends every week at the hospital), were not judicious in their nature and admit of another construction. He apparently took exception to the furnishing of the out-patient department. So long as out-patients have benches to sit down upon and the physicians tables on which to write their prescriptions all is provided which is essential; moreover, the furniture compares very favourably with that found in most larger hospitals. The question of treating disease hypnotically has for many years been under serious consideration. In 1895 at the International Medico Legal Congress held in New York, of which department I was chairman in the Psychological Section, many papers were read and discussions held on this subject, which was freely ventilated. On my return from the Congress, and after conference with Professor Lombroso of Turin and Dr. Gorodichze of Paris, gentlemen well qualified to form an opinion on its value, I decided to give this treatment a fair trial at my hospital. The success I experienced, especially in cases of static melancholia, folie de doute, neurasthenia, nervous deafness, chorea, and other allied nervous diseases, was of such a nature that I have been induced to continue the same with like results. In nervous cases, in which it is difficult to obtain mental concentration, and consequently direct hypnotism becomes impossible, the suggestion must be made indirectly through a transference medium. This is admitted by the authorities I have previously mentioned. This being one of the varieties of hypnotism, perhaps out of 80 cases which present themselves at the hospital there are only three or four who are so dealt with. The records, however, which I am about to publish will speak for themselves. At the late International Medical Congress at Paris the subject occupied an important position in the discussions, and in THE LANCET of Sept. 29th (p 974) you give the proceedings before the Congress of Psychology of Paris, in which the department on hypnotism was presided over by Dr. Voisin, physician to the Salpêtrière Hospital of Paris and the leading authority in France on psychology, and you state that after the discussions the members adjourned to witness the cases treated at this hospital and at Dr. Berillon's clinic in the Rue des Arts. I have no doubt in my own mind that amongst the various hypnotic cases shown to the members were cases of transference similar to those alluded to by you. The British Medical Association some years ago formed a committee to investigate the question and many leading specialists in London now send their patients to be so treated by those experienced in its use. The general opinion is that such procedure is legitimate *so long* as it is carried out by qualified medical practitioners The hospital, 203, Euston road, has been visited by physicians, scientists, those interested in the subject, many of whom have witnessed the progress of cases undergoing treatment there I shall be glad to welcome any person interested in the subject on presentation of his card to the secretary, as the doors are open to all, and any students desirous of witnessing the demonstrations on Thursdays at 6 o'clock will be admitted. There is one remark as to the medium and the question of his being properly hypnotised, I will challenge anyone to wake him by fair means, and shall be prepared to receive any persons you may send for that purpose to the hospital.

I am, Sirs, yours faithfully,

Devonshire street, W., Oct. 1st, 1900. FORBES WINSLOW.

"MOTOR-CARS FOR MEDICAL MEN."

MR O. T. W. HIRSCH, M.R.C S.Eng, L R.C.P.Lond, Woolwich, has sent us an account of his experiences with a motor-car, from which we extract the following.—"The car I invested in was a Benz Ideal No. 2, with a hood ...... from Messrs Hewetson's. . ... An instructor was left for a week at the charge of 7*s* 6*d*. a day *plus* his railway fare and meals. I am afraid I did not derive much benefit from him and when I started driving myself I must confess I had a great deal of trouble, the car frequently stopping in the street, due to my not managing the mixture properly When this was mastered and the regulation of the coils vibrator seen to, the car went splendidly, and in addition to my doing my work in this hilly district I have had some three trips to the South Coast watering places, as well as many daily excursions of from 40 to 60 miles. The machinery on the whole is good. One of the carriage springs broke. ...... A fresh one was supplied but a charge was made for the labour, Messrs. Hewetson supplying a new spring gratuitously. The tyre on one wheel became loose, due to the wire breaking. This was also mended gratuitously, though the agent charged for the time he spent and the expenses incurred in taking the wheel to the maker's. The only other trouble of import was that the bush on the second speed loose pulley became worn, and as a result the pulley was not quite true and occasionally gripped the true pulley, and when this driving on another speed a loud noise, violent vibration, and pulling up of the machine occurred. The wearing of the bush was said to be my own fault, as though I kept the grease-box well filled the hole in the lower part must in some way have been blocked. ...... Messrs. Hewetson ...... tell me that a car has run 35,000 miles without requiring attention. I am afraid I cannot say the same for mine. Motor-cars certainly are very useful but liable to get out of order, and I question whether I would buy one again with my present experience. ......"

A POINT UNDER THE WORKMEN'S COMPENSATION ACT.

To the Editors of THE LANCET.

SIRS,—Will you kindly inform me whether it is necessary for a medical man to insure his groom against accidents under the Workmen's Compensation Act? I am, Sirs, yours faithfully,

Oct. 2nd, 1900. SUBSCRIBER.

*** Employers are not liable for servants under the Workmen's Compensation Act, 1897, but it is a question whether they will not be liable under the extension of the Act to agricultural labourers; when the duties of the servant are to attend to animals certainly a medical man in the country would be liable, and it is in any case wiser to insure, as this can be done for a few shillings.—ED. L.

AN IMPROVED CYCLE SADDLE.

WE have received from Messrs. T. Dunlop and Co. of 20, Beulah-hill S.E, a specimen of their improved Henson cycle saddle. The Henson saddle, which is of the pneumatic variety, is so constructed that there are two separate pads, with a space between them and a depression in the centre of each pad to receive the ischial tuberosities. This form of saddle is found to be very comfortable and convenient by many riders and for many it is, indeed, one of the best forms of cycle saddles. It, however, requires a little perseverence to become used to it, especially by those who have hitherto ridden a peaked saddle. In order to meet this inconvenience a peak has been added to the Henson saddle which can be removed at the option of the rider. We have tried this saddle and have found it to possess the advantages claimed for it.

THE RIGHT TO SUE FOR FEES.

To the Editors of THE LANCET.

SIRS,—I hold the M.R.C.S. Eng. and the L.R.C.P. Lond. qualifications and want to know if I can sue a patient for professional attendance and medicines. I think I can as I know a brother medico who holds the Edinburgh qualifications who is constantly putting people in the county court, but I have been told by an L.S.A. that it is necessary to have that qualification in order to sue for medicines supplied. I should therefore be much obliged for an authoritative statement from you on the subject. I am, Sirs, yours faithfully,

Oct. 1st, 1900. SUBSCRIBER.

*** It is not necessary to hold the L.S A. If our correspondent was qualified and registered before 1887 he is entitled by Section 31 of the Medical Act of 1858 to practise according to his qualifications and to demand and recover in any court of law ...... reasonable charges for professional aid, advice, and visits and the cost of any medicines .... rendered or supplied by him to his patient. If registered after 1887 he may practise medicine, surgery, and midwifery and recover in course of law expenses for medicaments (Medical Act, 1886, Section 6). An exception is made under both these Acts as to Fellows or Members of a College of Physicians.—ED. L.

THE MOUNTING OF MUSEUM SPECIMENS.

To the Editors of THE LANCET

SIRS,—Will any of your readers kindly inform me of any literature giving a full description of the modern methods followed in the preservation and mounting of museum specimens.

I am, Sirs, yours faithfully,

Oct. 2nd, 1900. F. A. W.

PERIPHERAL NEURITIS.

To the Editors of THE LANCET.

SIRS,—Will any of your contributors oblige me by stating where and under what title I may order the latest literature on the subject of peripheral neuritis? Thanking you in advance,

I am, Sirs, yours faithfully,

Oct. 3rd, 1900. MEDICUS.

ERRATUM.—In our last week's issue in the list of books received from Messrs. J. & A. Churchill "The Theory and Practice of Medicine" should read "The Theory and Practice of *Hygiene*."

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct 4th, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain-fall	Solar Radia in Vacuo.	Maximum Temp Shade	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Sept. 28	29·63	S W	0 36	112	63	63	55	58	Overcast
" 29	29 89	S W	0·03	107	69	51	52	63	Fine
" 30	29 85	S W		109	65	62	57	61	Cloudy
Oct. 1	29 88	N W	0 16	101	67	48	50	51	Fine
" 2	29 84	SSW	..	100	65	51	54	55	Cloudy
" 3	29 85	N W	..	96	60	49	49	51	Cloudy
" 4	29 87	S E	..	90	62	47	51	61	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

MO LS

Orthopaedic (4 P M), on (2 30 P M.), London

(2 30 P M), Cancer (2 P M) Metropolitan (2 30 P M), London Throat (2 P M and 6 P.M), Royal Ear (3 P M), Samaritan (9 30 A M and 2.30 P M)

WEDNESDAY (10th) —St. Bartholomew's (1 30 P M), University College (2 P M), Royal Free (2 P.M), Middlesex (1 30 P M) Charing-cross

London Throat (2 P M).

At the Royal Eye Hospital (2 P.M), the Royal London Ophthalmic (10 A M), the Royal Westminster Ophthalmic (1 30 P M), and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES.

MONDAY (8th) —MEDICAL SOCIETY OF LONDON —8 P M General Meeting 8 30 P M Ordinary Meeting Address: Mr J H Morgan (Pr

TUESDAY (9t. (Medical Society's W) — 3 30 P M C uebriety, a Crime or a Disease.

THURSDAY (11th) —BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W) —8 P M Specimens will be shown by Dr Lewers, Dr R. T Smith Dr H Snow, and Mr B Jessett. Paper —Dr H Smith: Treatment in Gynæcology

FRIDAY (12th) —CLINICAL SOCIETY OF LONDON (20, Hanover square, W) —8 30 P M Address by the President. Papers —Sir Dyce Duckworth and Mr H. Marsh A Case of Acute Actinomycosis —Mr C Mansell Moullin: Three Cases of Gastrotomy for Hæmatemesis.—Dr N Dalton The Sequel to a Case of Hydatid of the Liver, showing also the Result of Abdominal Section in Ascites

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

MONDAY (8th).—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies street, W C) —4 P M Dr J Galloway Consultation (Skin.)

TUESDAY (9th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W C) —4 P M. Dr J Taylor: Consultation (Medical.)

WEDNESDAY (10th).—MEDICAL GRADUATES COLLEGE AND POLYCLINIC Sir W. Gowers —Clinical

COLLEGE AND POLYCLINIC Hutchinson Consultation

THE H W C) —4 P M
Dr I
CHARI Medical
Case

FRIDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —2-3 30 P M Dr H Campbell: Class. Clinical Examination of the Nervous System Demonstration IV. 4 P M Mr T Collins: Consultation. (Eye)

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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An Introductory Address

Delivered at the Commencement of the Winter Session of the Faculty of Medicine of the University College of South Wales and Monmouthshire on Oct. 10th, 1900,

BY SIR JOHN WILLIAMS, BART., M.D., F.R.C.P. LOND, &c.,

CONSULTING PHYSICIAN TO THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN, WATERLOO ROAD; CONSULTING OBSTETRIC PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, ETC.

GENTLEMEN,—When the Dean of the Faculty of Medicine honoured me with an invitation to open the session of this college I accepted it with pleasure He informed me that it would be my duty to deliver a short address to the students, and more especially to those of them who are devoted to the study of medicine. These students I heartily congratulate upon their selection of a profession. There are some *worse professions, but there are few better, and to him who* loves the work there are none better. Whatever the social rank, whatever the dignity, whatever the rewards of the profession, it possesses unquestionably one good thing, and that is hard work. From the day upon which you enter upon the special study of medicine to the day when you will lay aside the stethoscope and the thermometer your life will be full of hard and interesting work. You will have work, some with payment, some without payment; some with abundant gratitude, some with none. You will receive much that you will not deserve, both of praise and blame, but the distribution of the two, however unwisely or unjustly each be awarded, will be, perhaps, on the whole, not far from being a fair measure of your due.

That the treatment of the profession and the estimate of its work by the public are often unjust can hardly be questioned, and who can wonder at it when we bear in mind the usual education imparted in our schools and universities? By education is generally meant the study of books and of ancient literature, while nature and its laws, life with the forces which act upon it and the circumstances in which it develops and those in which it fades are disregarded. The elementary facts upon which science is built are considered as scarcely worthy of attention. They are treated as if they had but little concern with life and none with learning and scholarship. The result is that ignorance prevails [illegible] hich govern our life and actions. [illegible] in the upper as well as in the lower classes of society, and ignorance and superstition in respect of medicine, of the power of drugs, and of the skill of medical men are as prevalent among the educated as they are among the uneducated classes "Christian Science," with its claim to cure all diseases by ignoring them, flourishes most among the upper classes. Here it appears in gorgeous colours accompanied with the sound of trumpets, while at the other end of society it is found presenting a humble but obstinate front in the coroner's court or before the police magistrate in the persons of its loyal devotees known as the "Peculiar People." Besides these immaterial means of curing diseases such as inflammation, paralysis, toothache, tuberculosis, and cancer, there are a countless number of undiscovered drugs, known only to their proprietors and the officers of the Patent Office, which for good reasons are not made known to the public, each of which, according to the proprietors of, and believers in, these panaceas, has performed marvels in preventing and curing diseases, known and unknown, fatal and not fatal—indeed, it matters not of what nature, for all diseases, it is said, are cured by these undiscovered drugs. The astonishing fact is that any disease remains to afflict the human frame.

You ask me where I obtain these extraordinary facts. I reply: Look at any newspaper, daily or weekly, English or Welsh, religious or secular (among the latter, however, there are some notable exceptions) and you will find all that I have stated. You [illegible] sible cures and s [illegible] which everyone possessed of the most elementary knowledge of the laws of health and of the processes which take place in the living body knows to be entirely devoid of foundation. Nevertheless, these statements are published broadcast, day by day and week by week, in newspapers which profess to teach and to lead the public and to form public opinion. These newspapers are the property of men who hold more or less influential positions and are respected in the country. They are edited, some by clergymen, some by ministers, and some by laymen. The statements which I have referred to are sanctioned, by silence, in speech, or in writing, by all concerned in the publication of these journals. They occasionally contain testimonials to the wonderful virtues of the advertised drug, and these emanate from all manner of men, some of whom are probably, like the historical camel, evolved in a garret, while others hold positions and make professions which would lead one to expect that they would not be guilty of attaching their names to, or be a party to publishing, anything for the truth of which they could not vouch. Now and again a bard in a frenzy of inspiration pours forth in rhythmic or alliterative measure the wondrous works of quackery and the miracles of ignorance When I find the religious newspapers of the Principality besmeared with such advertisements as I have referred to, some of them not only false but foul and wicked, I cannot help feeling the blush of shame as I bear in mind under whose ægis they are published The faithful, finding them in their weekly guide, accept them without question and act upon them as truths tested by the standard, sanctioned by their party oracles and sealed with their approval. How long will this continue? So long as the practice will pay the manufacturer and purveyor? Is it not possible to cause the purveyor at least to realise the character of the material to which he forms the conduit from the manufacturer to the purchaser? If this be not possible then the remedy must and will be found in the education which, if not now, will by-and-by be given in our schools. Let the elements of science, the laws of growth and decay, and the laws regulating the functions of the living body be taught in our schools and our young men and young women will themselves be able to estimate this mephitic rubbish at its proper value.

Meanwhile, however, and notwithstanding what I have [illegible] upon the choice of a pro- [illegible] l an ennobling one. The [illegible] in which you will be placed [illegible] to foster in you, if not the graces and polish of society, yet those qualities which are usually admired—sometimes laughed at—but never laughed at either by rich or poor when they are the victims of suffering and disease—and these afflictions come to poor and rich alike To poverty and pain, suffering and sorrow, disease and death you will pay your daily visits Your work will be on the dark side of life—not seductive, is it?—but this will enlarge and widen your sympathies (not of the frothy sentimental variety), whet your wit, increase your resources, and humanise you through and through. Yes, gloomy as the prospect appears, you are to be congratulated, provided you are made of the stuff of which good doctors are made.

Now, what are the qualities which are necessary for the exercise of a profession whose work is such as I have indicated? They are many, but I shall be able to refer to two or three of them only. Some of them are gained only after a long training and large experience—"knowledge comes but wisdom lingers"—while others should be possessed from birth or acquired in early life. Of the latter the first is health—a sane mind in a healthy body. To the boy destined for the medical profession good health is essential—in the first place to enable him to bear the physical and mental strain made upon him by the training through which he will have to pass in order to qualify, and in the second place by the physical demands and mental anxiety arising from practice Success in medicine, as in some other professions, means survivorship, and survivorship usually means a good physique A man with feeble health may be a great preacher, a great lawyer (though I can hardly imagine him to be a great pleader), a great writer, or a great scientist, but he cannot be a great medical practitioner, for disease and suffering recognise no office time or any day of eight hours. The medical man must be ever ready and ever active and must know no fatigue. But I hear you say, "Health is inherited, a sound constitution cannot be acquired." This is true in a great degree, and a lad of feeble health would do wisely to eschew the profession of medicine. It is, however, also true, that good health may be destroyed, that bad health may be made good, and that a feeble constitution may be strengthened, especially during the period of childhood, boyhood, and early manhood.

Some years ago elementary schools were not so numerous in the country, or perhaps so efficient in some respects, as they are now. I cannot vouch for the accuracy of the latter part of the statement, for I am speaking of that happy time, for schoolmasters as well as for boys, which preceded the period of periodical inspections and payment by results. For the reason which I have mentioned children had to walk to school from one to three miles in the morning and home again in the evening, carrying with them their midday meal. To accomplish this distance a boy took from an hour and a half to two hours in the morning. He reached the schoolroom at 9 o'clock and was supposed to work until 12 o'clock. Then followed a relaxation from work lasting two hours, a few minutes of which was occupied in partaking of a very simple meal, but a meal which was consumed with a relish and an enjoyment which many a luxurious epicure would give all but his dinner to possess. This meal, frugal as it was, was ample for the child's requirements. Then came the great pleasure of the day, hockey, football, or hare and hounds (cricket was unknown in country schools in those days), than which no exercises, games, or gymnastics are better calculated to develop all the organs of the body in a healthy manner. Thoroughly refreshed but untouched by fatigue the boy entered school again at 2 o'clock and remained until 4 o'clock. Then came the journey home, which occupied in winter at least two or three hours and in summer from three to four, with all its delightful incidents, unbeclouded by the thought of a home task—a new imposition condemned by every healthy-minded boy. The boy never took the straight path (boys never do) or the shortest route. His curiosity, his inclination, his spontaneous energy, call it what you will, led him to deviate to the right and to the left from the normal course. He, moreover, required amusement and play after his exhausting labours in the schoolroom. There were various objects of interest which had to be visited on the way home. In a pool a mile up the stream on the left was the old trout, which had to be tickled or presented with various cunningly-devised invitations to land, to which his wariness never condescended to reply. On the right was the track of a hare. This had to be carefully inspected, while the discovery of a gin was a source of intense enjoyment and the division of its string afforded a doubly exquisite pleasure, for it ensured "puss" a free run and baulked the cunning and skilful poacher in his nefarious designs. Then the nest of an old crow upon a high and solitary tree should not be forgotten. It was some distance off, it is true, but it demanded a daily visit in the spring of the year, and the strongest and bravest boys climbed up in turn to inspect and count the eggs and in the end generally to rob the nest. This would sometimes lead to a falling out—an event which is said to happen not rarely among thieves, but in this instance the honest bird did not come by its own. The encounter took some time to come to an issue. Unfortunately the morning told the story of the evening and this led to the application of the appropriate but unpleasant remedy. This old remedy has now gone out of fashion. Some of you may have known such delightful school-days, while others may have not, but may from early days have been subjected to the dull continuous grind which is productive of a precocious and showy but feeble mind, coupled with a body one would not accept as a gift. Such a boyhood as that which I have described braces mind and body, strengthens weak frames, and makes healthy youths. I confess that I look back upon this period in my life, not only as one of the pleasantest and brightest, but also as one of the best spent, for its effects have been my mainstay during the rest of my career. As so much may be done during boyhood and early youth to establish health and to lay in a store of strength which will serve your turn through life, I would urge you to seize opportunities for physical exercise, for I imagine that during your sojourn here these opportunities will be abundant. When you shall have left Cardiff and have gone for your further training to London or elsewhere you will find such opportunities scanty by reason of the fuller employment of your time as well as the distance of your lodging from the green fields.

The training of a lad for the profession of medicine cannot be begun too early, and particular attention should be paid in his case to that part of education which should, in a greater or less degree, be the possession of every youth whatever his position in life when he leaves school—the training of his senses. All boys should be trained to use their eyes, their ears, and their hands—for it may be said of many, "They have eyes but they see not, and ears they have but they hear not"—and to acquire manual dexterity. Every lad should be taught early to use his eyes, to see and recognise the various objects, living and dead, which nature so bountifully supplies in earth, air, and water. To a medical man this training is of special importance, for the faculty of observing is one of his chief aids. Without it he is helpless, he is not fit to visit or to treat the sick. The cultivation of this sense cannot be begun too early. I will illustrate its value, not from a professional visit to the sick-room, but from an entirely different phase of life.

A party were once upon a coursing expedition, but their wanderings in search of the hare had proved fruitless. Like incompetent craftsmen who blame their tools they blamed the land and the farmer, for they had come to the conclusion that there was no game on the land and that the farmer was a poacher. Disappointed and despairing of sport they were on the point of giving up the search when a man approached who was known to one of their number as an accomplished poacher. He said to the new-comer, "Dafydd, swllt am scwarnog." "Yn wir?" queried Dafydd; "cewch, yn wir," was the reply. Satisfied as to the ability and willingness of the would-be sportsmen to pay the shilling Dafydd walked quietly around and in a few minutes the cheery cry of "See-ho" fell on delighted ears. The hare was coursed and caught, thanks to the dogs and the cultured Dafydd. "Swllt am un arall," and in a short time the same pleasant cry was heard again. This illustrates well enough the difference between the trained and the untrained physician when visiting the sick-room. The sportsmen with the untrained eyes had walked over the land the whole day and had seen nothing, while the poacher, whose delight in the daytime and on shining nights had been the study of "puss" and her habits, whose eyes had been trained from boyhood to discover her on her form and to watch her on her quiet or hurried rambles or gambolling with her mate in the light of the queen of night, readily and surely discovered her hiding-place. The experienced and cultured physician, in like manner, when he visits the sick-room sees at a glance those visible signs which reveal the past and lift the veil which hides the future, while the untrained man sees nothing and learns nothing—to him the past remains a blank and the future hidden.

Again, every child should be taught to use his ears and his hands. Singing is in some degree taught in most schools; drawing, with some amount of handicraft, might also be taught with great advantage. Children are taught to play on the violin, harp, or piano from early years. A small fiddle is obtained for the little fingers which cannot stretch over the stops of the finger-board of the full-sized instrument. It is only by beginning his training at an early age that one becomes an accomplished performer on one of these instruments. A touch, a stretch, a strength of finger, and a certainty are thus acquired which cannot be gained in later life. The ear also is trained to distinguish and appreciate sounds in their tone, pitch, volume, and character. By training the hands a manual dexterity with a delicate sense of touch capable of appreciating slight vibrations and slight differences of resistance and elasticity are acquired, all of which are of the greatest value to the practitioner in the diagnosis and treatment of disease. A trained hand can often by palpating the chest alone discover the seat and sometimes the nature of disease, while its use in the diagnosis of disease in other cavities is constantly called into requisition. A trained ear, again, is of no less importance in the detection and appreciation of the various sounds which are produced in the different organs of the body both in health and disease, and it renders possible a diagnosis of the nature, seat, and extent of diseases which would not be possible without its aid. Training of the eyes and hands is as essential to a medical man as it is to an artist, and training of the ears and hands is as necessary to him as it is to a violinist or a pianist The education in elementary schools should be a training and not a cramming, such as it is apt to become when estimated by so-called results. It should be a training calculated to help a lad to live a better, a happier, and a more intelligent life in whatever station he be placed. It should be the same for all. No difference should be made between the education of the son of the labourer, or the son of the farmer, of the parson, or of the medical man.

To the delightful pursuits I have mentioned [illegible] added, when the lad has passed to a higher [illegible] others of a different character. Books will the[illegible] chief, although perhaps not his only, study. It becomes a question whether in these schools a difference should be made in the education of youths destined for different callings in life—whether that of one should be on ancient lines and that of another on modern lines, that of one classical and that of another scientific, or that of one literary and that of another commercial. It is still held by some that the best preparation for all professions is a classical education, but the more general opinion is that a difference should be made and that other subjects should be taught in addition to Greek and Latin. In many of our schools there is an ancient side and a modern side, and boys destined for certain pursuits are placed in the former while others who intend to follow other vocations are placed in the latter. For all, however, for whatever calling they are destined, a certain general training is given. The subject, however, which is of interest and of importance to you is what is the best, or at least the best attainable, general training, the best attainable culture, for a boy who prepares for the study of medicine. The answer to this, made long ago and partially acted upon to this day, is a classical training. This answer, however, should be reconsidered in the altered state of [illegible] lad's time is devoted [illegible] ages and to making [illegible] was for centuries the [illegible] and it was also the language of theology and science. At a later period the discovery [illegible] in Lati[illegible] Church [illegible] comparatively recent times. In these two languages, after the revival of learning in Western Europe, was enshrined practically all learning. Greek and Latin became known as [illegible] learned languages. I have not a word to say against classical scholarship, but there is much to be said upon the question whether a boy preparing for the medical profession should devote several years to acquire a knowledge of the two languages. The training for the three professions of theology, law, and medicine is in many respects much alike. There is a special training for each, but before this is entered upon a course of general training has to be passed to fit every candidate for admission to either of the three—for the pursuit of his special studies. For the three professions this general training is, and always has been, much the sam[illegible] The preparatory tr[illegible] of Greek and Latin [illegible] pursued in the higher [illegible]ty. When the university course is finished the aspiring cleric, in the best arranged schemes, enters a school of divinity to study his special department of learning for two years before he obtains a licence to practise his profession. In the case of the clergyman the whole course of his education, from the time he enters a higher school, is a preparation, a special preparation—as special a preparation for the study of his special subject as the study of science is for the special study of medicine. In the case of the law the preparatory studies are the same as those for theology, a knowledge of Latin being essential to a learned lawyer.

What is the value of a knowledge of Greek and Latin to a professor of the art of medicine? I will tell you in the words of a distinguished writer and scholar who has recently passed away: "As to doctors, can we gravely admit that they ought to understand the language in which their prescriptions are written, and that they find it instructive to read Galen and Hippocrates in Greek? To men of science it is pointed out that their ever increasing technical terminology is systematically formed from Greek and Latin words. This is true: and it is also true that a man of science might obtain a perfect grasp of this terminology by means of a list of words that he would learn in a day and the use of a dictionary that he might acquire in a week." Although useless to the medical man in his profession, however, yet it may be necessary to know Greek and Latin in [illegible] these two languages. I will let the same writer reply again: "*The fact* is that the study of Latin (for Greek, except in respect of scientific terminology, has much less to *do* with the *question*, and would hardly have been placed on a par with Latin here but for the hasty and random way *in which* the stock arguments on the question are continually repeated) cannot tell us what the English language is; it can *only help us* to understand *how* it has come to be what it is. In order to learn to speak English with accuracy and precision we have but one rule to follow—to pay strict attention to usage." But it is said, "If we *do not* teach a boy Latin or Greek we cut him off from the highest literary enjoyment, and we prevent him from developing his taste by studying the best models. It would avail little to call in question (had I space and inclination *to do so*) the surpassing excellence of ancient literature. For my purpose I must regard this point as decided by an overwhelming majority of persons of culture. But it will not be denied that in the English, French, and German languages there is a sufficiency of good literature to fill the leisure of a person engaged in any active calling, a sufficiency of work calculated to give a high kind of enjoyment and to cultivate very adequately the literary taste. And if such a person was ever visited by a painful hankering after the time-honoured volumes that were sealed to him, he might console himself by taking note how often his contemporaries who had enjoyed a complete classical education were in the habit of taking down these masterpieces from their shelves. For I cannot help thinking that classical literature, in spite of its enormous prestige, has very little attraction for the mass of even cultivated persons at the present day. I wish statistics could be obtained of the amount of Greek and Latin read in any year except for professional purposes, even by those who have gone through a complete classical curriculum. From the information that I have been able privately to obtain I incline to think that such statistics, when compared with the fervent admiration with which we all speak of the classics upon every opportunity, would be rather startling." The fact seems to be that, with comparatively rare exceptions—and those are not in the professions—a classical education is pursued not for the culture which it gives but in order to acquire the instruments for special pursuits in after life, such as theology, law, philology, history, archæology, the profession of teaching, &c. Those who prepare for such pursuits specialise from the first, for they devote themselves from the beginning of their education to gain command of the instruments with which they work in after life, while those devoted to science are made to learn that which is of little or no use to them in their after-pursuits. For the latter and to a lad destined for the medical profession matters at present are still worse, for what command does he acquire over the Greek and Latin languages? Greek is not now compulsory, while the knowledge of Latin demanded of the medical student is so small that it does not enable him to read the easiest Latin book except with difficulty and with the aid of a dictionary. The time—a part of six or seven years—devoted to gain such an accomplishment appears to be wasted. What, then, should a boy destined for medicine learn before he begins his special studies at the age of 17 or 18 years? I should say that in addition to those subjects which are generally taught in schools he should have a thorough course of the English language and literature. This will do more to train his intellectual faculties, to give him a command of language, a vocabulary, a taste for good literature, and a culture far larger and better than he can obtain by acquiring an elementary knowledge of Latin, which will be of no use to him, is too scrappy to be a source of intellectual enjoyment, and which will in a short time be forgotten. French and German should also be learned, and I believe the power of reading both languages with ease could be acquired in the time now devoted to learning Greek and Latin. A knowledge of these two modern languages is essential to a practitioner who is desirous of being among the leaders of his profession, for the work done in the laboratories and hospitals of France and of Germany is of such a high order that no one who is ignorant of it can be considered abreast of medical knowledge.

There are, however, some among you who are fortunate enough to have another accomplishment—a knowledge of the

Welsh language. You should study it with the same care and minuteness as you study English, or as you would study Greek and Latin were you devoted to classical pursuits. In the time which you now devote to Latin and Greek you would acquire a thorough knowledge of this ancient tongue. I am not in a position to compare or contrast the value of Celtic with that of classical studies—your professor of the Welsh language might do that for you—but there are certain distinct advantages to you in the study of Welsh over the study of the dead languages. You already possess a more or less large vocabulary of the language; you can speak it; you know its idioms; your ear has been trained to its accentuation, the inflexions of its vowels, and the mutations of its initial consonants. A knowledge of its grammar can be gained without much difficulty. Prose composition will prove a pleasant and improving pastime, and if verse-writing be of any value in education you may indulge in it with at least the feeling that you know the material in which you are working and that you are not arranging words of whose meaning you have no full appreciation in a form of which you have still less. The alliterative *pedwar mesur ar hugain*, together with the numerous rhyming measures in the language, will give you an ample field for the exercise of your vocabulary and for the display of your skill in polishing sentences. Translations from English into Welsh, and from Welsh into English, and from French and German into English and Welsh will further add to your linguistic skill and give you accuracy in the use of words. The Welsh language, moreover, will introduce you to a valuable and interesting literature, unknown to, and unappreciated by, our neighbours between Offa's Dyke and the German Ocean, while it is the subject of study to scholars in Western Europe. As a means of culture the language and literature of Wales have not been duly appreciated in England, or, indeed, in the Principality itself. Some years ago a request was made to the Senate of the University of London that Welsh as well as French and German should be recognised as a voluntary subject in the matriculation examination. Together with others I wrote to some members of the Senate stating the reasons why I thought that that body should accede to the request. Among those reasons were: (1) that a number of the candidates for the matriculation examination were Welsh lads many of whom habitually spoke Welsh while some did not speak English until they were 13 or 14 years of age; (2) that the whole of the examination was conducted in a language foreign to these lads; and (3) that consequently they laboured under a great disadvantage when compared with English candidates especially and even when compared with French and German candidates, for although English was a foreign language to French and German boys each could select his own language as a voluntary subject. One of the members who appeared to take some interest in the subject replied by asking, "Where are examiners to be found?" The foundation of the Welsh University has removed this inequality, and the Welsh boy may now study his native tongue with the feeling that his knowledge of Welsh language and literature will receive due recognition in the schools of the university.

The course of instruction which I have indicated will, under the circumstances in which you are placed, and especially by reason of the limit of time which you can devote to general subjects, do far more for you than a fragmentary knowledge of Greek and Latin. It will develop your intellectual faculties, it will furnish you with a large store of linguistic and other knowledge, and it will introduce you to the best literature and the highest culture. It will, moreover, place you in the best position to begin and continue your professional studies, it will enable you to follow the progress of medicine in after life, and it will furnish you with an inexhaustible store of intellectual enjoyment from which you will be able to draw at will in the leisure hours of your active life. While, however, you pursue these general studies a part of your time should be devoted to acquire an elementary knowledge of the natural sciences so that when you go to college you may be prepared to enter upon those studies which bear directly upon your profession. You should possess an elementary knowledge of the principles of physics, chemistry, and biology, have a grasp of the general character of science, and be disciplined more or less in the methods of all sciences, so that in your first year at college you may be able to take full advantage of the means of study there afforded to you. There you will pursue the study of anatomy, physiology, and chemistry which will fit you for your further studies in the wards of the hospital. Facts will be pointed out to you and you will have to find and see them for yourselves; their relations and classifications will be indicated to you and you will have to verify them; your minds will be trained in scientific methods. This will occupy the first three years of the curriculum, and then, if you have been diligent, you will pass on to the supreme stage—the study of medicine. In the wards of the hospital you will have to study disease in its relations its causes, its onset, its course, its terminations, its prevention, and its treatment. You will not only be required to see and to realise what is pointed out to you but you will also be required to learn how to see and discover for yourselves, to observe symptoms, to discover signs, to classify them and reason upon them—work in which not only your trained intellect but also your trained senses will be called into full exercise. If you shall have availed yourselves of the opportunities of learning offered you during the three years you will have passed in college you will find your knowledge of disease and your skill in detecting its seat and nature grow apace. Most of your time will be spent in the out-patient rooms or in the wards, performing your duties as clerks or dressers or attending the physicians and surgeons on their daily visits. You should, however, not be satisfied with discharging the merely obligatory portion of your hospital duties. It is said that the best way to know a man is to live with him. It is equally true that the best way to know disease is to live with it, to reside in hospital; and it should therefore be the aim of each one of you to hold a resident post as house physician, house surgeon, resident obstetric officer, either one or all. Such a post will give you in a few months an amount and a kind of experience that private practice will not furnish. It will give you opportunities to watch the progress of disease from hour to hour, to observe closely its features, follow its fatal footsteps, or hail the amelioration of its severity under the treatment administered and the restoration of the patient. Moreover, you will be working under the eye of your master physician or surgeon; you will be required to "get up your case" fully and thoroughly and to record its progress from day to day. This will implant in you careful and methodical habits which are invaluable in the practice of medicine.

There are a few more words I should like to say. You should cultivate independence of character and freedom of thought. The two generally go together and both will be essential to you in the practice of your profession—both for your own comfort and for the good of your patients. The curriculum which you will pass through will tend to foster these qualities and your experience in hospital and in practice will tend to strengthen them. Tradition has no authority in medicine. I have already referred to the ignorance of science and its methods which prevails generally. Ignorance is rarely modest or doubting; it is dogmatic and credulous. You will find it often a source of great annoyance to yourselves and of infinite mischief to your patients. For your own happiness you should cultivate that absolute indifference to the chatterings of incompetence which is based upon a thorough knowledge of your profession, a complete grasp of your cases, and a rigid adherence, undeflected by outside considerations and influences, to the evidences of your senses and the dictates of your reason.

From the day on which you enter the hospital until your course is finished, the circumstances in which you will be placed and the influences under which you will work will arouse in you the feeling of humanity and foster its growth and development. It is scarcely possible for you to walk the hospital without becoming infected with the contagion of sympathy, but the sympathy is not of that variety which evaporates in sentimental speeches on platforms and finds its reward in publicity. It is of more lasting stuff. It is not the sort which shows itself in cries of impotence in the presence of difficulties and flees from the presence of suffering. The sympathy which will be yours is at its best in the presence of suffering and danger. These serve but to strengthen it. It is not a sympathy for fine days and holidays, processions, and public meetings; its work is amidst the storms of life; there is no place for it amidst the frivolities. It seems as if asleep or dead when there is no work for it; it is aroused only by the call of distress, to which its response is never wanting, and when aroused it is always to some purpose. I cannot illustrate this better than with the old story of the man who had fallen among thieves. There he lay by the roadside, stripped, robbed, beaten, wounded, bleeding, unable to cry for help, and left half dead. By chance a wealthy and a holy man came down that way and when he saw the sufferer he passed by on the other side; and likewise another who came and looked upon him and passed by on the other side. Lastly, a man with an ass came where he was, and when he saw him he had compassion on him and went to him and bound up his wounds, pouring in oil and wine (the antiseptics and healing drugs of the period), and set him on his own beast and took him to an inn (the nursing home of the day) and took care of him. I verily believe that this good man must have been a doctor. I know of no finer example of that sympathy of which I speak and which you should not fail to cultivate.

An Address

ON

SOME PROBLEMS OF TROPICAL MEDICINE.

Delivered at the London School of Tropical Medicine on Oct. 3rd, 1900,

BY SIR WILLIAM MACGREGOR, K.C.M.G., C.B., M.D. ABERD., D.Sc., LL.D., &c.

GENTLEMEN,—When in compliance with the request of Dr. Patrick Manson I consented to deliver to-day the opening address to the students of this School of Tropical Medicine, I felt that I was committing myself to a task really beyond my powers. This feeling was deepened on glancing over the formidable syllabus of lectures and demonstrations to be given by the teaching staff. The ground to be covered is so vast, the subjects to be dealt with are so very important, the extensive and diversified knowledge required both in teacher and student is so deep and so wide, as to make one's own ignorance painfully apparent to oneself. I therefore find comfort in the fact that I am here to-night because I am an administrator, not because I am a doctor of medicine.

I understand that the objects of this school are to convey to its students a special acquaintance with the diseases that are of most frequent occurrence in tropical regions and to train them for the investigation of such maladies on systematic and scientific lines There is excellent reason for believing that Her Majesty's Secretary of State for the Colonies took very seriously to heart the deplorable mortality among public officers and others in our more unhealthy tropical possessions. The calling into being of this school is but one of the many means devised or fostered by the Right Honourable Joseph Chamberlain for curtailing the death-roll of our fellow-citizens in those insalubrious over-sea territories of the empire. This school is but one link in the chain, and the chain is already a long one and it promises to be continuous.

THE TRAINING OF COLONIAL MEDICAL OFFICERS.

The leading idea of the school, therefore, is the appropriate training of colonial medical officers. It is, however, to be hoped that others may take advantage of it and that it may add another ring to the ever-widening stem of the already gigantic tree of medical knowledge. It is certain that there are a great many people in this country at the present moment suffering from what are usually called "tropical diseases," and that these sufferers are not, and cannot be, attended by medical men who have had tropical experience Very many of these patients must come under treatment by the ordinary medical practitioner. Cases could be adduced in which some of the most distinguished men in the medical profession in this country have been completely at sea as to the exact nature of certain tropical diseases and their sequelæ. The teaching supplied by such a school as this should be a useful addition to medical men practising in this country, especially if cases of tropical diseases in sufficient numbers can be made available to them for clinical study. The list of students who have passed through the courses since Oct 1st, 1899, does not show, however, that the school is patronised by the British medical practitioner. Taking into account the already immense and still growing traffic and the rapid and steadily accelerated communication between this country and the tropics, and bearing also in mind the intolerance of any form of quarantine in the United Kingdom, the probabilities are that the special study o[illegible] be more and more forced u[illegible] this country, either by the systematic study of such maladies at the ordinary schools of medicine or at specific institutions such as this. If this branch of medicine is neglected, then the sufferer from the tropics will be a certain loser, but not always the only one.

At the present moment, however, many of us are very specially interested in this school in relation to the medical services of our more unhealthy tropical colonies. It is probably the case that not a few of those who have so far passed through this institution were already familiar with many tropical diseases, knew them by experience, and understood how to treat them. To students of that category the clinical studies of these maladies here is not nearly so important as is the training to be had to fit them to investigate tropical diseases on the spot, on the most advanced systems known to medical science and with a full knowledge of what has already been done in these matters in this country and elsewhere Any average medical officer who has sufficient training in making investigations of this kind will soon master the practical details of all tropical diseases in his district, provided that he is given time, the necessary instruments, and proper accommodation. The best and most proper place for making such researches is undoubtedly the tropics themselves. It must be patent to every person who thinks at all on the subject that the training of medical officers to carry out investigations of this kind is of the utmost importance to each colony, to the empire, and to humanity at large. We all know, or ought to know, what has been done in this field by such men as my late highly esteemed friend Dr. Bancroft of Brisbane; by the distinguished Dr. Patrick Manson, the inspiring genius of this school; by the father of Strachan's disease, the present chief medical officer of Lagos; and by many others who have practised medicine in the tropics. These men had no specialised opportunities given them; they had not the advantage of any systematic training such as is offered now at this school. We are therefore justified in expecting a great deal from the younger men who now come forward here to learn at once the most suitable and the most advanced methods of conducting original investigations in the great and rich tropical field

STATE ENCOURAGEMENT OF MEDICAL RESEARCH.

But I can tell you that this training and preparation will not yield all that we are justified in expecting from it without the cooperation of the Secretary of State for the Colonies and of colonial administrators. The trained medical officer must have time and opportunity granted to him That the Colonial Secretary will in every possible way encourage and suitably recognise the researches of medical officers may safely be taken as granted. It is, however, at times a very difficult matter for an administrator so to arrange service affairs as to be able to grant to medical officers the time so necessary to carry on scientific investigations of this kind without their being submitted to grave or destructive interruptions. Colonial administrators and others in high authority have not always in the past lent to the head of the medical department the support required by him. They have not always given to their chief medical officer the confidence that Alexander the Great extended to his I was myself very fortunate in the first new country in which I served in having as chiefs such enlightened men as Lord Stanmore and Sir William des Vœux Whatever was really required for the new medical service in Fiji was granted. As one result of that there is no doubt that at the present moment the chief medical officer of that colony, Mr. Glanvill Corney, is thoroughly familiar with the practical aspect of every disease met with in that country. Many other colonies have been less fortunate, but if that is so now Mr Chamberlain, who not only thoroughly understands the value of medical work but also takes the deepest interest in it and has done more than any other person ever did before to popularise scientific medicine, is just the man to see that medical matters are put right wherever they are wrong. They are, in my humble opinion, wrong where original work cannot be done. My own personal experience has been that the most unhealthy colonies are, or were, those in which medical research was most neglected; that, however, is apparently being remedied everywhere. In Lagos, for example, no fewer than 10 full equipments for medical officers of the scientific type have been provided by the Secretary of State for the Colonies. An excellent laboratory has been built and an analytical chemist has been appointed. This has been done there without any reference to any school of tropical medicine, and would have been carried out precisely the same had there been no such institution and no medical commission in existence. We look, however, to this school now, as a means of better enabling our medical officers to take advantage of the opportunities that will henceforth be given to them in Lagos, and no doubt similarly in other colonies, for you may depend upon it that colonial administrators will know their duty sufficiently well to follow with zeal the course that has been taken by Mr. Chamberlain. Moreover, there is at the present time in this and other countries a volume and force of public opinion behind sanitary and medical work that has, perhaps, been dormant from the days of Moses and Machaon till now. It was only the other day that the celebrated Grassi lectured on malaria before the Queen of one of the Great Powers of Europe. Such an event is redolent of the times.

It is not my intention to occupy your time in speaking of the details of your training for the investigation of disease, beyond emphasising their very great importance. I would rather in a familiar way give those of you who have not yet practised in the tropics some idea of the extremely interesting and very important work that awaits you there.

OLD DISEASES AND NEW RACES.

You will still, for example, have many opportunities, especially in new countries, of acquiring valuable information respecting the original or natural location of disease, the landmarks of which are fast diappearing before modern civilisation. You will see how old diseases are being communicated to new people and you will be able to watch the strange results that are thus produced. You will doubtless be in a position to add much to the existing knowledge of tropical diseases already more or less studied, and you will in all probability be able to establish the existence of maladies at present unknown and unrecognised; you will thus reduce the sum of human suffering. Can any man desire greater glory than this? As different forms of disease were localised originally, and still remain more or less so, it follows that the experience of tropical medical officers differs largely according to country. Their opportunities are therefore diversified in an unusual degree. Perhaps I may personally have had exceptionally good opportunities of assisting—as a French writer observed some time ago—at the dissemination of disease among new races.

TYPHOID FEVER.

The late Sir Thomas Watson was very anxious to know whether typhoid fever was known in Polynesia. From inquiries made there in 1875 it appeared certain that this disease did not occur in the islands. In 1875, however, a case was observed in a gentleman recently arrived from Australia. It assumed the virulent form that is accompanied by petechial spots, and the patient died. Soon after this a case occurred in a European in the mountains of Viti Levu. The disease, it appeared, had been contracted in the locality where the first case was treated. Sporadic cases were met with at intervals, but they were, formerly at least, few in number. Perhaps their scarcity was largely due to the fact that houses were supplied by rain-water collected from the roof and stored in metal tanks. There was, however, a form of continued fever in Fiji that very accurately simulated typhoid fever up to the ninth day, when it suddenly culminated and the patient got well in a very few days Typhoid fever was also unknown in British New Guinea. In that country the continued fever that in Fiji so closely resembled typhoid fever was not met with. Typhoid fever is also absent in West Africa. It would appear to be a by-product of civilisation, which is perhaps also true of cancer, diphtheritis, and some other diseases. Fiji, by the mere fact of becoming occupied by a considerable number of Europeans, was a centre for the distribution of other diseases to her neighbours; but she sometimes received their maladies in return, as will be seen from what follows. The disease of yaws has been from time immemorial endemic in Polynesia If a Fijian child escapes yaws terrible results are expected to the future health of a being so abnormally constituted. Yaws represented our measles, scarlet fever, chicken-pox, diphtheritis, and whooping-cough in one.

YAWS.

The probability is that no medical officer will be long in the tropics before he is brought into contact with yaws. This disease, like most others in the torrid zone, is of course parasitic. I first met with it in the Seychelles Islands in African slave-children liberated there by our cruisers and indentured as plantation labourers. It is curious that this disease is much more mild in the African and the Papuan races than it is in the Polynesian race. It may be that it is newer to the latter. In the African it is sometimes so ill-marked that only a medical practitioner of some experience can recognise it at first sight. It is not very contagious to Europeans, but when caught it is loathsome and troublesome. I have never looked on yaws as a disease that could be cured under from three to six months.

I was once invited by my superiors to take up the extermination of this disease in New Guinea, but being then the only medical man in a colony larger than Great Britain, and having absolutely no means of dealing with an endemic contagious malady, I was obliged to say, in somewhat different words, that I might as well try to arrest an earthquake. In Polynesia, if not in New Guinea, there is not only the endemic nature of the disease to contend against but also the very strong native prejudice of "the conscientious objector" in its favour—a prejudice difficult to deal with, though the disease is not made an object of worship there as is the case with small-pox in West Africa.

Though yaws was indigenous to Fiji, tinea imbricata was not known in that colony till introduced by plantation labourers. Many Line Islanders were brought to Fiji as plantation hands, and among them tinea imbricata is endemic, whilst yaws was unknown to them. The Fijian gave yaws to the Line Islander, and the latter gave his loathsome tinea to the Fijian. The Solomon Island recruit also brought tinea imbricata to Fiji with him, and he in turn left the colony, in a great many cases, with venereal disease in some form or other.

VENEREAL DISEASE.

Venereal disease was not known to the Pacific Islanders, or to the Papuans, till it was taken to them by Europeans Certain social habits of these peoples facilitated the rapid spread of these maladies, and they flourished with the usual luxuriance of a crop on new soil. It was very extraordinary how the Pacific Islander was affected by soft chancre. Very frequently the sore developed into a great spongy mass that bled profusely if touched. In not a few cases the ulceration caused death by penetrating the abdominal wall. These specific sores were also remarkably contagious. On the other hand, syphilis, being more slow in its processes, did not immediately effect the ravages that might have been expected. Gonorrhœa was all but incurable in native women. At first many of them were brought to Fiji as plantation hands. It was extremely rare that one returned home with a child. The trader had some small share in spreading these diseases, but it was insignificant compared to what was done by the labour traffic. Yet in the face of all this some good Churchmen, and at least one bishop, who visited the recruiting islands expressed themselves as favourable to the labour traffic. These good men did not see behind the calico—"Come storpiato è Maometto."

MEASLES.

Fiji was also the centre for the distribution of measles in 1874, a disease introduced there by one of Her Majesty's ships of war. The epidemic that followed destroyed between a third and a fourth of the whole population, affording a striking example of the exuberance of a new disease among a new people. In this respect, however, measles was not more surprising in Fiji than was the usually insignificant disease of itch in British New Guinea. This latter malady, which was introduced in some old clothes, sped like a tidal wave along the coast, and in a few weeks thousands of people were covered from head to foot by the most exaggerated form of the disease. It probably spread much faster from the fact that one shirt might be worn by several people in one day. When matters were beginning to assume a somewhat serious aspect, the disease, having spent itself, [illegible] declined to the level it will prob[illegible]mmunity where clothes are common [illegible] the human face.

DYSENTERY.

There are few scourges that require the same thorough [illegible] study which dysentery calls for. This disease, [illegible]tagious forms, was unknown in [illegible] a score of years ago. In recent years it has caused many deaths there. It began in Fiji with the advent of a European population and led to con[illegible], even before annexation, [illegible]asles, and frequently after[illegible]orm. From the first intro[illegible]as regarded as contagious. [illegible] established and the houses [illegible] rain-water stored in metal tanks dysentery among them became much rarer, but on large plantations and in native villages it took on at times a very malignant form. Instances occurred in which even 50 and 75 per cent. of the Polynesian labourers on an estate died from this disease, which was new to them. Excessively high mortality from the same cause occurred also on some of the Queensland plantations among the Polynesians employed there. I was once received at a certain plantation by an interesting-looking boy of about 14 years of age, who was evidently not of the usual class of recruits. On being asked who he was, he said he was So-and-So from New Britain. To the question, "How many are there of you?" he replied, "Plenty all die, only me." I found that there had been 115 of them and that he was the sole survivor. This was the work of dysentery. The treatment in each epidemic was at first like groping in the dark. In a very deadly outbreak that occurred amongst some three score of recruits landed out of a vessel in which they had been battened down for 30 hours during a hurricane, an examination of the contents of the intestines of those who had been dead but an hour or two showed that these consisted of a mass of what were then called vibrios. In consequence of this observation a mixture of corrosive sublimate was given to the two score survivors, all in hospital. The remedy acted like a charm [illegible] But this remedy failed [illegible] elsewhere in the [illegible] acted with extra[illegible] be of any use. [illegible] It appeared that dysentery is made up of entirely different diseases or of one disease that presents widely diverse stages It offers a splendid field to the humanitarian and to the enthusiastic scientist who we trust may be sent out from this school. Were I to judge from my own personal experience I should say that dysentery causes more deaths than any other disease in tropical countries. No other malady is so universally distributed and of such constant occurrence.

Laveran says, "Le paludisme est certainement la plus répandue des maladies endémiques," and Dr. Patrick Manson says of malaria, "It is the great disease of the tropics." My experience is different. I have served in two countries where there was no malaria; never in one where people did not die from dysentery. Last year of 39 cases of dysentery treated in Lagos Hospital 10 died, say one in four; of 128 cases of malarial fever, four died, one in 32. Dysentery is the chief agent in the rapid depopulation of the Pacific. It swells the death rate in West Africa, but not so much amongst Europeans as amongst natives. But there one does not see the wholesale depopulation from this disease that is sometimes so clearly observed on a Pacific island from the return [illegible] dysentery. [illegible] house fly as an active agent in its spread in plantation hospitals and took precautions accordingly. The communicability of this disease has always to be taken into account in the tropics, more particularly in places like West Africa, [illegible] of houses often flows into the [illegible]ouses have been built and out [illegible] their water. [illegible]ut an effective and practical means of dealing with contagious dysentery will be the greatest benefactor of the races that live in the tropics. He may claim to be the saviour of the Pacific Islander, the most loveable man of men now living. It is a study that I most earnestly commend to your attention and on which I trust you will all turn the searchlight of science. Dysentery is a destructive giant, compared to which strong drink is a mere phantom.

MALARIA.

To the tropical European, though perhaps not to the tropical native, the most important study is probably that of malarial fever, the investigation of which has already furnished us with some of the finest examples of human intelligence, perseverance, and observation, and unveiled to us some of the most wonderful of the workings of nature. To myself this chain of marvels, full of poetry and religion, nowhere better seen than in the splendid illustrations of Major Ross, I.M.S., and Dr. Fielding Ould, always recall the words of the second greatest Teuton of the century:—

> [illegible]

The prediction that malarial fever would be found to be due to a parasite having its cycle in man and the mosquito, is fit to be compared with Goodrick's theory of the cycle of Algol, with Leverrier's and Adams's assigned position of Neptune, and with Murchison's prediction of gold in Australia To my own mind it recalls the early teaching of the germ theory of antiseptics by the immortal Lister. It may not improbably lead to an equally great revolution in medicine The position assigned by foreign writers to our British scientists in this, the greatest of recent discoveries, is, and must remain, most honourable to them and to our nation. The name of Dr. Manson, one of the brilliant lights of this institution, will always be connected with the fertile hypothesis that has led to the astounding revelations of that prince of observers, the great Ross, of Grassi, Celli, Bignami, Bastianelli, Koch, and others.

The whole subject of malarial fever is of more importance to the Italians and to ourselves than to any other nation. The Italians have, they say, 11,000,000 of their people exposed to it, which, according to Celli, furnishes them with 2,000,000 cases a year, with an average mortality of 15,000. It is true that it is almost unknown in Great Britain itself, but Laveran states: "Morehead estimait qu'aux Indes les fièvres palustres comptaient pour 40 sur 100 dans la mortalité générale." This is probably not proved. Dr. Manson at the Royal Colonial Institute showed what a serious matter malaria is on the West Coast of Africa This is enough to demonstrate of what vast national importance it is to the British Empire.

There seems to be some tendency at the present time to seek the origin of malarial fever in coloured tropical children. Surely it must be acknowledged to be an old domesticated disease in the United Kingdom and on the continent of Europe, for which aboriginal children could not at any time have been held responsible. You all remember how in the beginning of this century the anopheles completely routed one of the most powerful British armies ever sent to the continent of Europe Then, again, our history supplies few more pathetically ridiculous pictures than the kingly founder of the Royal Society dodging his medical advisers to take his Peruvian bark on the sly. Of course, Dr. Schwalbe would say at once that the king contracted his fever abroad. As the two chief attacks occurred 19 and 20 years after His Majesty "came to his own," the probabilities are strong that he owed them to the genuine domestic English anopheles.

In these modern investigations into malaria the Italians have nobly done their share; so have the Germans, through the illustrious Koch. We owe, further, a very great debt to Laveran. I have often been asked by non-medical friends, who has done this great work? whether it is all British? It appears to me to be more or less like this: Manson was the surveyor, Laveran made the road, Ross built the bridges and laid the rails, and Grassi, Bastianelli, Bignami, and Celli provided the rolling-stock. Grassi says: "Preciso perciò che la scoperta che gli anofeli inoculano la malaria umana è uscita dal mio cervello, seguendo una via da me ideata. Naturalmente anche la mia scoperta, come moltissime altre, non sta isolata, ed io non ho mai esitato a dichiarare che sono pervenuto ad essa giovandomi della ipotesi dei mosquitos svolta tra gli altri da Laveran, Manson, &c." Angelo Celli writes: "Sotto i consigli del Manson, cioè del celebre parassitologo che aveva gia descritta la vita della filaria nel corpo delle zanzare, il case the sufferer had lived as Europeans live. In West Africa there are, however, very marked cases of destructive lupus.

Tetanus.

An equally remarkable experience was met with as regards tetanus. In the disturbances that took place in Fiji in 1876 and 1877, when the mountain chiefs refused to recognise the authority of the Queen and Lord Stanmore had to reduce them to obedience by force of arms and without any army, we treated about 150 wounded men suffering from all kinds of injury. Although the nursing and dressing must have been very imperfect, and operations were performed under difficulty, there was not a single case of tetanus. On the other hand, an officer who had received very serious injuries from the explosion of a charge of dynamite in the interior of British New Guinea died from true traumatic tetanus. He was camped at the upper end of the alluvial country on a piece of ground cleared by us close to the foot of the hills, some 60 miles from the sea Four or five days later, after a journey down the river, during which we camped each night on its alluvial bank, he was got on board the steamer and a few days thereafter showed the unmistakeable symptoms of tetanus. He was taken straight to the Cooktown Hospital and died there from this disease. No case of tetanus in man or animal had ever been heard of before in British New Guinea. It is not clear that the case of Commodore Goodenough, who was reported to have died from tetanus from an arrow wound received at Vanikoro, is parallel to this one. It is quite possible that the detachable bone point used by Papuans and some Micronesians on the tips of their arrows may in his case have been left in the wound and have caused septic poisoning. These bone points, prepared by scraping down a piece of human bone, would contain septic matter, yet I have not known these to produce tetanus in New Guinea. It may here be mentioned that erysipelas was unknown in those countries.

Tinea Imbricata.

The steady stealthy progress made by new invading disease was well seen in British New Guinea in the case of tinea imbricata. It was a domesticated disease in the west, on the Fly River for example, where it is known by the same name that is applied to tobacco. It was also domesticated in the east end, where it is called by a word that in a certain district means "to curl" or "fold up" The central district was still free from it as recently as 10 or 12 years ago, but it is slowly and surely gaining on that region, and during the last three or four years cases have been appearing even at Port Moresby. In a few years it will be endemic over the entire coast, a great eastern wave from the Line and Solomon Islands meeting a wave equally great and irresistible coming from the west. There, as in Fiji, the best treatment was found to be fumigation with sulphur, but it is not possible to apply the remedy universally in New Guinea so as to extinguish the disease.

Other Tropical Diseases.

I can only mention by name several other tropical diseases which I have met with that are of special interest and that require investigation. There can be no doubt that ankylostomiasis is indigenous in the Pacific. In 1876 it was found in Fijian mountaineers and in recruits from the Solomon Islands. Perhaps some of you may be able some day to explain its wide distribution and its exact significance. Cerebro-spinal meningitis was not a native disease but it appeared amongst Indian coolies in Fiji. How it came there was a mystery. Beri-beri was not, I believe, a Fijian malady, but it has been introduced by plantation labourers from Japan. In New Guinea it is indigenous but not common.

In New Guinea there is a curious multiple tumour often met with as large as a walnut. It occurs most frequently about the elbows or the parts of the body that touch the ground when one is asleep on it. This has not been investigated It is probably parasitic. In the Pacific there is a strange post-mortem appearance that is extremely common and that I trust some of you may throw light on. In the hilum of the kidney there is very often half a teaspoonful of brown or purulent fluid. It is found in the greater number of bodies even if dead only an hour or two Its cause or origin, so far as I know, has not been made out.

Rabies and "Dingoes."

As an example of the kind of medical legislation as to which you will have to give advice I may first cite from my own experience with rabies. As you all know, there is a species of dog, the so-called "dingo," native to Australia and New Guinea Where that animal came from is not clear. My distinguished friend Professor Giglioli of Florence gives good reasons for regarding the Australian aborigines as degenerated Aryans. If they are so they probably brought their dogs with them, and this at a time when rabies did not exist in Aryan communities. We shall not consider here whether the barking of dogs is a modern accomplishment or whether the dingo gradually forgot the art. The dingo and the dog cross readily and the first cross between them barks. Doubtless, therefore, the dingo would be readily susceptible to rabies There is a wild dingo on the top of the Owen Stanley range in British New Guinea, and a complete specimen was secured and deposited by me in the Queensland Museum, but the result of its examination is not yet known to me. The domestic dingo is very common in New Guinea as a pet, as a hunter, and as a table delicacy. All the dingoes of a village meet several times a day to howl and they never separate without a fight. They are provided with long, thin, sharp teeth, which they use in season and out of season, but by preference when out of sight. It closely resembles, or is identical with, the Australian dingo. I have never seen a native dingo in the Pacific Islands. The point that most concerns us here is that the Australian and New Guinea dingoes were free from rabies. The Australian colonies have protected themselves from rabies by instituting a term of quarantine on imported dogs. It was seen that rabies introduced into a country like New Guinea with swarms of ill-tempered biting dingoes, among a bare-footed, bare-legged population, and with a wild dingo in the mountains and numberless pigs everywhere, would be a very serious matter not only for that country but also for the whole of Australasia. The matter, therefore, was dealt with on the broadest platform. A representation was made to the great colonies that had charged themselves with part of the burden of maintaining British New Guinea, urging that the Secretary of State for the Colonies should try to induce France, Germany, and Holland to introduce laws similar to those of British New Guinea to prevent the introduction of rabies into their possessions in those seas. The then Prime Minister of Queensland, Sir Samuel Griffith, saw at once the importance of the measure and warmly supported it; it was, I believe, also approved by the Government of New South Wales. The then head of the Government of Victoria thought the proposal more or less ridiculous and was of opinion that France and Germany would give no attention to such a trifle. Lord Knutsford and Lord Salisbury, however, obtained at once the cordial coöperation of the three foreign Governments There is, therefore, good reason for hoping that now the whole of Australasia is, with reasonable care, secured for all time against the terrible disease of hydrophobia.

The "Jigger."

The question of the introduction of the "jigger" is one that has recently occupied the attention of the Indian Government. To such matters even as the control and distribution of this flea you require to devote time and study. Guided by our experience in Lagos we could only report to the Colonial Secretary that the "jigger" does not cause any noticeable inconvenience on official expeditions, and that it appears in private life to claim very little attention. But a medical officer advising his Government in India would require to know a great deal about the insect before he could venture to recommend any legislative steps regarding it or could suggest that no action whatever should be taken.

Leprosy.

It is probably now generally conceded that the disease of leprosy is communicable and that the isolation of lepers should be carried out in the interests of the community. No aboriginal people whom I have known have ever entertained the slightest doubt as to the contagious nature of the disease. The natives of West Africa isolate the lepers. In the South Seas they kept them apart and often buried them alive when they reached an advanced stage of the disease. More than 20 years ago I read in a German author that leprosy was extinguished in Scotland "durch die Entmannung der Manner" I have not been able to find the authority for that statement, the author of which has been dead for many years. Leprosy was at one time apparently not uncommon in Scotland. In the "L'Histoire Universelle" of M. Rambaud it is stated that Scotland's most celebrated king died from this dread disease. The whole subject of leprosy now requires to be studied exhaustively in the light of the new pathology. No doubt some of you are aware that the native Fijian treatment was to bake the sufferer from leprosy near a slow fire It [illegible] were cured in that way. [illegible] hether a fuller knowledge [illegible] ation of such a cure.

QUARANTINE.

I would call your attention for a moment to a medico-legal subject of great importance to many colonies and to which I trust some passing attention may be given in the courses of this school. I allude to quarantine against the introduction of infectious or contagious disease. In all international conferences on quarantine matters British delegates take their stand against the imposition of quarantine. Their system is the isolation of affected or suspected individuals, the disinfection of vessels, and sometimes of cargo. This procedure can be carried out successfully only in a country where there are [illegible] sanitary services. [illegible] where patients an[illegible] it needs a staff [illegible] to exercise surve[illegible] been exposed to possible contagion, and it requires the means of dealing with any of these wherever he may be found. Here in the United Kingdom cleansing and disinfecting can be carried out with scientific accuracy and completeness and at small cost. In this country, then, in the face of the drainage, the [illegible] to suspected persons, and the [illegible] e as well as with infected perso[illegible] nay not at any time become necessary. But it is widely different in most colonies. Here the outer line of defence, imposing quarantine on infected or suspected vessels or persons, becomes a necessity. You will find that it will tax your powers to the utmost to advise your Governments how best to combine the public safety with the minimum of disturbance to trade, for that in practice is the problem to solve. At Lagos we have tried to combine the two systems by providing the medical department with the powers necessary to protect us from outside by imposing quarantine on arrivals and to exercise surveillance ashore over persons exposed to a possible infection but who cannot, or need not, b[illegible]. Ashore, the medical officers may [illegible] and isolate, an infected individual; [illegible] a village, or a district in quarant[illegible] strength of the staff available, the inadequacy of accommodation, the evil sanitary condition of a[illegible] a great and populous area, make [illegible] that we should depend entirely, or [illegible] line of defence against epidemic disease. You are perhaps aware that in Australia a system [illegible] been in force for several years. Th[illegible] the Australian continent is very [illegible] action, [illegible] er and inner ri[illegible] isease. The wh[illegible] erious study at your hands.

WATER AS A CARRIER OF INFECTION.

Let me impress upon you the extreme desirableness of becoming experts in the examination of water. Nothing is of greater importance in the tropics. Although the new doctrine of malarial fever shows that water is only an indirect agent in the production of that disease it still remains an essential factor in its continuation and spread. It retains all its former importance in respect of other diseases In West Africa the medical officer should be able to say whether a given well is safe or not on account, for example, of guinea-worm. Water is popularly credited with the origin of the "craw-craw" disease in Europeans. It doubtless has much to do with the spread of dysentery, typhoid fever where that exists, cholera, and several other maladies. Altogether it is one of those subjects to which you cannot give too much attention. Personally I have always contended that the quality of the water used by a community may have as much, or nearly as much, influence on them as has the quality of the food which they eat or of the air which they breathe A medical officer is constantly liable to be asked by his Government to report fully on the water-supply of some place or of some community.

CONCLUDING REMARKS.

I cannot conclude these somewhat dry and disjointed remarks without offering my hearty congratulations to you who are to become students at this school. In my opinion your lot is the most enviable of any body of men in this great country. You have already travelled over the ordinary road of medical education and have become acquainted with the more frequented parts of the limitless field in which you are to labour. You have become ordinary members of the greatest, the most beneficent, and therefore the noblest of all professions. It can be said with greater truth to-day than it could 3000 years ago: Ἰητρος γὰρ ἀνὴρ πολλῶν ἀντάξιος ἀνδρων. Here you are now to be taken into some of the by-paths of medical study. There you will be brought face to face with some of the most interesting problems of science, questions which are of vast importance to the life and health of the individual and which will exert a reflex action that will be felt in many of the transactions of public, of national, and even of international life. I trust and hope that you will leave this school well fitted by your knowledge of your profession to do your part in the exercise of your calling, and that you will have securely planted in your mind that high sense of duty that is the life and soul of religion, of patriotism, and of every efficient public service, and that enables the medical man to devote by instinct, and unselfishly, all his mind and all his strength to the prevention and cure of every disease that affects humanity.

Presidential Address

ON

THE ROMANCE OF SURGERY.

Delivered at the Inaugural Meeting of the 128th Session of the Medical Society of London on Oct. 8th, 1900,

BY JOHN H. MORGAN, M.A. OXON., F.R.C.S. ENG.,

SURGEON TO CHARING CROSS HOSPITAL AND CONSULTING SURGEON TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

GENTLEMEN,—When it was announced to me that by the kind suffrages of the Fellows of this ancient society I had been elected to the important and honourable position of your president it was not without considerable apprehension that I accepted the position which was offered. For it could not but be felt that to follow in the footsteps of so many distinguished men as have occupied this chair would be a task of no small difficulty. I was, however, reassured by a knowledge of the fact that the loyalty of the Fellows of the Medical Society is so thorough and so well proven, that throughout my year of office I could rest secure of the support and assistance of one and all in my efforts to make this society a focus for earnest work amongst all classes of the profession. I have read with interest and profit the addresses which have been delivered from this chair for the last several years, and so many and so instructive are they that to choose a fresh topic was by no means an easy matter. Following the example of [illegible] h me on a holiday excursion. [illegible] me in journeys over Europe [illegible] or from Warsaw to Cadiz: Or I might have transported you with me to the barrens of Newfoundland or the woods of Nova Scotia, and although I could not have interested you with a disquisition on the flora that we found together I might have treated you to some observations on the fauna of those wild countries, particularly those which lend themselves to pursuit with the rod, the rifle, or the gun and have told you many things which are not to be found in works on medicine or surgery as means of diagnosing the age of a hoof mark or the direction of your camp Indeed, it has often occurred to me that there are the materials for a most instructive lecture on the cultivation of the powers of observation which is entailed by many forms of sport and the powers of inductive reasoning thereby engendered. We have only to read Baden Powell's hints on scouting to see how many things we neglect to observe in our daily life, whilst their application has been delightfully pointed out by a member of our own profession in the varied experiences of Sherlock Holmes.

But we have returned from our holidays, refreshed and case the sufferer had lived as Europeans live. In West Africa there are, however, very marked cases of destructive lupus.

Tetanus.

An equally remarkable experience was met with as regards tetanus. In the disturbances that took place in Fiji in 1876 and 1877, when the mountain chiefs refused to recognise the authority of the Queen and Lord Stanmore had to reduce them to obedience by force of arms and without any army, we treated about 150 wounded men suffering from all kinds of injury. Although the nursing and dressing must have been very imperfect, and operations were performed under difficulty, there was not a single case of tetanus. On the other hand, an officer who had received very serious injuries from the explosion of a charge of dynamite in the interior of British New Guinea died from true traumatic tetanus. He was camped at the upper end of the alluvial country on a piece of ground cleared by us close to the foot of the hills, some 60 miles from the sea Four or five days later, after a journey down the river, during which we camped each night on its alluvial bank, he was got on board the steamer and a few days thereafter showed the unmistakeable symptoms of tetanus. He was taken straight to the Cooktown Hospital and died there from this disease. No case of tetanus in man or animal had ever been heard of before in British New Guinea. It is not clear that the case of Commodore Goodenough, who was reported to have died from tetanus from an arrow wound received at Vanikoro, is parallel to this one. It is quite possible that the detachable bone point used by Papuans and some Micronesians on the tips of their arrows may in his case have been left in the wound and have caused septic poisoning. These bone points, prepared by scraping down a piece of human bone, would contain septic matter, yet I have not known these to produce tetanus in New Guinea. It may here be mentioned that erysipelas was unknown in those countries.

Tinea Imbricata.

The steady stealthy progress made by new invading disease was well seen in British New Guinea in the case of tinea imbricata. It was a domesticated disease in the west, on the Fly River for example, where it is known by the same name that is applied to tobacco. It was also domesticated in the east end, where it is called by a word that in a certain district means "to curl" or "fold up." The central district was still free from it as recently as 10 or 12 years ago, but it is slowly and surely gaining on that region, and during the last three or four years cases have been appearing even at Port Moresby. In a few years it will be endemic over the entire coast, a great eastern wave from the Line and Solomon Islands meeting a wave equally great and irresistible coming from the west. There, as in Fiji, the best treatment was found to be fumigation with sulphur, but it is not possible to apply the remedy universally in New Guinea so as to extinguish the disease.

Other Tropical Diseases.

I can only mention by name several other tropical diseases which I have met with that are of special interest and that require investigation. There can be no doubt that ankylostomiasis is indigenous in the Pacific In 1876 it was found in Fijian mountaineers and in recruits from the Solomon Islands Perhaps some of you may be able some day to explain its wide distribution and its exact significance. Cerebro-spinal meningitis was not a native disease but it appeared amongst Indian coolies in Fiji. How it came there was a mystery. Beri-beri was not, I believe, a Fijian malady, but it has been introduced by plantation labourers from Japan. In New Guinea it is indigenous but not common.

In New Guinea there is a curious multiple tumour often met with as large as a walnut. It occurs most frequently about the elbows or the parts of the body that touch the ground when one is asleep on it. This has not been investigated. It is probably parasitic. In the Pacific there is a strange post-mortem appearance that is extremely common and that I trust some of you may throw light on. In the hilum of the kidney there is very often half a teaspoonful of brown or purulent fluid. It is found in the greater number of bodies even if dead only an hour or two. Its cause or origin, so far as I know, has not been made out.

Rabies and "Dingoes."

As an example of the kind of medical legislation as to which you will have to give advice I may first cite from my own experience with rabies. As you all know, there is a species of dog, the so-called "dingo," native to Australia and New Guinea. Where that animal came from is not clear. My distinguished friend Professor Giglioli of Florence gives good reasons for regarding the Australian aborigines as degenerated Aryans. If they are so they probably brought their dogs with them, and this at a time when rabies did not exist in Aryan communities. We shall not consider here whether the barking of dogs is a modern accomplishment or whether the dingo gradually forgot the art The dingo and the dog cross readily and the first cross between them barks. Doubtless, therefore, the dingo would be readily susceptible to rabies. There is a wild dingo on the top of the Owen Stanley range in British New Guinea and a complete specimen was secured and [illegible] in the Queensland Museum, but the result [illegible] is not yet known to me. The domestic dingo is very common in New Guinea as a pet, as a hunter, and as a table delicacy. All the dingoes of a village meet several times a day to howl and they never separate without a fight. They are provided with long, thin, sharp teeth, which they use in season and out of season, but by preference when out of sight. It closely resembles, or is identical with, the Australian dingo. I have never seen a native dingo in the Pacific Islands. The point that most concerns us here is that the Australian and New Guinea dingoes were free from rabies. The Australian colonies have protected themselves from rabies by instituting a term of quarantine on imported dogs. It was seen that rabies introduced into a country like New Guinea with swarms of ill-tempered biting dingoes, among a bare-footed, bare-legged population, and with a wild dingo in the mountains and numberless pigs everywhere, would be a very serious matter not only for that country but also for the whole of Australasia. The matter, therefore, was dealt with on the broadest platform. A representation was made to the great colonies that had charged themselves with part of the burden of maintaining British New Guinea, urging that the Secretary of State for the Colonies should try to induce France, Germany, and Holland to introduce laws similar to those of British New Guinea to prevent the introduction of rabies into their possessions in those seas. The then Prime Minister of Queensland, Sir Samuel Griffith, saw at once the importance of the measure and warmly supported it; it was, I believe, also approved by the Government of New South Wales. The then head of the Government of Victoria thought the proposal more or less ridiculous and was of opinion that France and Germany would give no attention to such a trifle. Lord Knutsford and Lord Salisbury, however, obtained at once the cordial coöperation of the three foreign Governments. There is, therefore, good reason for hoping that now the whole of Australasia is, with reasonable care, secured for all time against the terrible disease of hydrophobia.

The "Jigger."

The question of the introduction of the "jigger" is one that has recently occupied the attention of the Indian Government. To such matters even as the control and distribution of this flea you require to devote time and study. Guided by our experience in Lagos we could only report to the Colonial Secretary that the "jigger" does not cause any noticeable inconvenience on official expeditions, and that it appears in private life to claim very little attention. But a medical officer advising his Government in India would require to know a great deal about the insect before he could venture to recommend any legislative steps regarding it or could suggest that no action whatever should be taken.

Leprosy.

It is probably now generally conceded that the disease of leprosy is communicable and that the isolation of lepers should be carried out in the interests of the community. No aboriginal people whom I have known have ever entertained the slightest doubt as to the contagious nature of the disease. The natives of West Africa isolate the lepers In the South Seas they kept them apart and often buried them alive when they reached an advanced stage of the disease. More than 20 years ago I read in a German author that leprosy was extinguished in Scotland "durch die Entmannung der Männer." I have not been able to find the authority for that statement, the author of which has been dead for many years. Leprosy was at one time apparently not uncommon in Scotland. In the "L'Histoire Universelle" of M. Rambaud it is stated that Scotland's most celebrated king died from this dread disease. The whole subject of leprosy now requires to be studied exhaustively in the light of the new pathology. No doubt some of you are aware that the native Fijian treatment was to bake the sufferer from leprosy near a slow fire It was confidently affirmed that cases were cured in that way. It will be very interesting to see whether a fuller knowledge of the disease will offer any explanation of such a cure.

QUARANTINE.

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WATER AS A CARRIER OF INFECTION.

Let me impress upon you the extreme desirableness of becoming experts in the examination of water. Nothing is of greater importance in the tropics. Although the new doctrine of malarial fever shows that water is only an indirect agent in the production of that disease it still remains an essential factor in its continuation and spread. It retains all its former importance in respect of other diseases. In West Africa the medical officer should be able to say whether a given well is safe or not on account, for example, of guinea-worm. Water is popularly credited with the origin of the "craw craw" disease in Europeans It doubtless has much to do with the spread of dysentery, typhoid fever where that exists, cholera, and several other maladies. Altogether it is one of those subjects to which you cannot give too much attention. Personally I have always contended that the quality of the water used by a community may have as much, or nearly as much, influence on them as has the quality of the food which they eat or of the air which they breathe. A medical officer is constantly liable to be asked by his Government to report fully on the water-supply of some place or of some community.

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GENTLEMEN,—When it was announced to me that by the kind suffrages of the Fellows of this ancient society I had been elected to the important and honourable position of your president it was not without considerable apprehension that I accepted the position which was offered. For it could not but be felt that to follow in the footsteps of so many distinguished men as have occupied this chair would be a task of no small difficulty. I was, *however, reassured by a knowledge of the* fact that the loyalty of the Fellows of the Medical Society is so thorough and so well proven, that throughout my year of office I could rest secure of the support and assistance of one and all in my efforts to make this society a focus for earnest work amongst all classes of the profession. I have read with interest and profit the addresses which have been delivered from this chair for the last several years, and so many and so instructive are they that to choose a fresh topic was by *no means an easy* matter. Following the example of [illegible] I might have taken you with me on a holiday excursion. [illegible] me in journeys over Europe [illegible] or from Warsaw to Cadiz. Or I might have transported you with me to the barrens of Newfoundland *or the woods* of Nova Scotia, and although I could not have interested you with a disquisition on the flora that we found together I might have treated you to some observations on the fauna of those wild countries, particularly those which lend themselves to pursuit with the rod, the rifle, *or the* gun and have told you many things which are not to be found in works on medicine or surgery as means of diagnosing the age of a hoof-mark or the direction of your camp Indeed, it has often occurred to me that there are the materials for a most instructive lecture on the cultivation *of the powers of* observation which is entailed by many forms of sport and the powers of inductive reasoning thereby engendered. We have only to read Baden Powell's hints on scouting to see how many things we neglect to observe in our daily life, whilst their application has been delightfully *pointed out by a member of our own* profession in the varied experiences of Sherlock Holmes.

But we have returned from our holidays, refreshed and invigorated, as I hope, and ready to apply ourselves to fresh work and possibly to seek new enterprises in the pursuit of our art; and I will ask you to pardon me while I take a brief survey of the present condition of surgery as contrasted with that of a quarter of a century ago and then look forward in the direction of still further progress and advance. For it is little more than five-and-twenty years ago that that great change had been accepted which has altered the whole course of surgical history. Lister had been steadily working to find means to combat those many fell obstacles which obstructed the satisfactory work of the surgeon, and his labours were only just becoming universally recognised and acknowledged. I well remember the first important case in which I endeavoured to apply the principles which Lister was then inculcating in Edinburgh. I was then assistant house surgeon and a case of wound of the knee-joint was admitted under the care of Mr. T. P. Pick. The patient was a young man, aged 19 years, and a circular saw had caused a wound four inches long, dividing the patella longitudinally and incising the outer condyle of the femur to the depth of half an inch and to the extent of three-quarters of an inch. The wound was well syringed out with carbolic acid lotion, the joint also, the wound was closed with sutures of carbolised catgut, covered with protective, dressed with gauze and carbolic oil, and put up on a MacIntyre's splint. Suppuration ensued to a modified extent and the patient recovered, after many months, with an ankylosed knee. This occurred in 1873 and was at the time considered a great triumph, since the recognised course of such cases had previously been amputation and probably pyæmia. Our methods of that date seem crude as compared with those of the present day, when the principles thus followed have been perfected to the system now universally recognised and pursued as the routine method of treatment in such cases. I quote, by way of contrast, the case of a man who was under my care early in the present year who had driven a chisel through his knee-joint into the condyle of his femur. He was treated with what we now recognise as ordinary methods and recovered in a few weeks with complete and perfect movement of his joint.

My hospital duties at that period prevented me from going to study at Edinburgh, but as soon as Lister came to London I was a frequent visitor to his wards. It was my fortune to see the first two cases in which he operated for union of a fractured patella, an operation which has always impressed me as demonstrating more strongly than any other the value of antiseptic methods. As a consequence, out of the last 21 cases of fractured patella that have been admitted to my wards 19 have been successively operated on without a single drawback; the remaining two were not suitable for operation on account of other defects. This alone gives a fair contrast between the surgery of to-day and that of 30 years ago, but the contrast is still more strongly marked when we reflect that there is now no single organ or part of the body which the surgeon is afraid to touch. The brain and spinal cord are freely dealt with for the removal of tumours or other sources of interference with their functions. The lungs are opened for the removal of tumours and for the evacuation of pus that lies in their centre and even the pericardium is tapped and drained and the heart itself is sutured.

In the abdomen there is no single viscus or part which is free from the attacks of the surgeon; even the liver, which has long been regarded with awe, has been dealt with for the removal of tumours and has been sutured in order to render it less mobile. As to the amount of intestine which can be removed without any obvious detriment, it would appear to be no longer a matter of inches, but even of feet or possibly yards, whilst from a few recently recorded operations it seems possible that the stomach itself can be altogether dispensed with. I shall not, however, detain you with recalling facts with which you are all familiar, the more so since they have been put before us in a most eloquent and comprehensive form by Mr. Pearce Gould in the address which he delivered before the society in 1895. In that oration he pointed out the changes that had taken place in operative surgery during the past 30 years and the vastly extended area which had been opened to the surgeon, and he paid a justly merited tribute to him to whose patient labours this evolution in surgery is mainly due, Joseph Lister, who has made this society the medium for many of his most important communications, and who only within the past week in the Huxley address, delivered at the school to which I am attached, has shown that age does not wither or time change the depth of his insight into the problems that first occupied his thoughts 30 or 40 years ago, or have they dimmed one whit his deep interest in the further development of the art which he has done so much to glorify. How many of us can remember, like our orator of this year, to have seen maggots in the pus that surrounded a compound fracture? and when we contrast the experience of our student days with our practice in the present, are we not justified in saying that we have witnessed and partaken in the romance of surgery?

But just as romance belongs as much to the past as to the future, so we must not be content to rest upon our oars and fancy that we have reached finality. Indeed, the more one reflects, the more one sees how much there is still left for us to aim at, and it is in the hope that I may indicate some of the paths which we must seek to follow that I base the remainder of the remarks which I have to address to you. If we come to analyse this recent progress of surgery I think that it will be acknowledged that the advance has been much more marked in the direction of technique and that the progress of diagnosis has hardly advanced at an equal pace, and that it is in this direction that we must more specially direct our efforts. So great, indeed, is the confidence in the value of operation that it is no infrequent experience to find cases sent to the hospital with the simple indication "for operation" or "for abdominal section." But as in war the prudence and wisdom of a general are as often shown in declining as in seeking an engagement; so the skill of a surgeon is as frequently exhibited by refusing as by consenting to operate. It may be truly said that by the impunity with which we open the abdomen we have learnt much to account for symptoms which were otherwise inexplicable; but just as Hunter regarded an amputation as a confession of failure, so I look forward to the day when exploratory operation will rarely be advised and when diagnosis will be formed by a careful consideration of symptoms, and reliance placed on that tactile sense which, as Mr. Treves has pointed out, runs risk of being left uncultivated by the modern surgeon. It may, nay, it must, occasionally happen that when all points have been carefully considered there is no other course to follow. It lately occurred to me to be asked by my colleague to see with him a woman who gave no sign of any neurotic tendency. She had for a considerable time been under the care of Dr. J. Mitchell Bruce, a warrant that every point which could lead to a diagnosis had been most carefully considered. She was 32 years of age and of fairly healthy appearance. The hair was prematurely grey. She had enjoyed fairly good health till October, 1898, but from that time till the corresponding month in 1899 she was troubled with persistent vomiting, occasional slight hæmatemesis, and tenderness in the epigastrium. She was given every possible treatment—diet, change of air, &c.—but the vomiting persisted and the woman became more and more thin and emaciated. Naturally, the conclusion was forced upon us that some ulceration existed. I opened the abdomen and searched all the organs. The stomach and pylorus, the posterior surface of the stomach, the kidneys, the liver and gall-bladder, and the cæcum all appeared normal and healthy. There were no adhesions anywhere. The wound was closed and except for two slight attacks of vomiting she never had a bad symptom, and she wrote in July last, to say that she was working on a farm, had had no more gastric symptoms, and was getting fat. Here without ocular demonstration it was impossible to assert that no lesion existed, but why the symptoms abated must still remain a mystery.

How largely we have profited in the direction of diagnosis by the experience gained from operative measures cannot be better illustrated than by the case of the gall-bladder. Courvoisier has laid it down that when the gall-bladder is distended and there is coincident jaundice gall-stones are not the cause but more probably cancer of the pancreas, growths in the common bile-duct, or external compression of that duct. The gall-bladder does not become distended, though it may possibly just be felt, or stones in it may be perceived when a calculus is blocking the common duct and giving rise to jaundice, because the previous presence of calculi leads to thickening of the peritoneal covering of the gall-bladder which resists pressure and therefore prevents distension; also because the passage of the calculus along the cystic duct excites inflammation in and around the walls of the duct, which is followed by cicatricial changes that resist pressure and prevent distension. On the other hand, a single calculus impacted in the neck of the gall bladder or in the cystic duct may be followed by great distension, due to secretion from the lining membrane, but, under these circumstances, jaundice is absent. Exploratory operations in the subjects of cancer hasten the end and bring reproach upon surgery. If the gall-bladder is incised hæmorrhage may occur and a continuous oozing may follow, and operation for the relief of distension of the gall-bladder by continuous drainage in cases of cancer of the head of the pancreas with jaundice are not advisable. These conclusions have been arrived at through the extensive operative experience of Mr. Mayo Robson. Dr. Osler, again, points out the importance of recurrent rigors in cases where no suppurative foci exist. Thus the practical experience of the surgeon and the careful consideration of facts by the physician combine to formulate a series of data by which the phenomena of disease may be recognised and by which the necessity for exploratory operations is gradually diminishing.

The call for early recognition is nowhere more urgent than in the case of malignant tumours of whatever nature or in whatever tissue, a fact which is forcibly pointed out in the most recent edition of Mr. Butlin's interesting work on the Surgery of Malignant Disease. Are we right in trusting to the knife as our only means of eradicating this fell scourge? May it not be hoped that in some way electricity may destroy the elements of tumour growth or that some form of antitoxin may be found which will counteract the parasite that gives rise to the tumour?

Looking to other fields of surgery we may note that tumours, both innocent and malignant, have been removed from the liver, and Dr. Keen of Philadelphia gives a table of 76 cases in which operation has been performed, whilst the interesting lectures of Mr. Mayo Robson record the vast field of successful surgery which has been afforded by the gall-bladder and its ducts. As to the methods and appliances which have been adopted for removing portions of intestine they can be counted by the hundred and it is in itself a study for the surgeon to keep abreast with them and to estimate their respective values. So, too, it is with all the other parts of the abdomen that increased experience induces novel methods, many of them improvements and advances on what had gone before. The operative surgery of the stomach presents in a remarkable way the great progress which has been made in this direction. In 1880 Mikulicz first sutured the stomach for a perforation. In July, 1900, Dr. Finney of Baltimore collected 268 cases amongst which were 139 recoveries and 129 deaths (a mortality of 48 per cent.). Subphrenic abscess occurred in 20 per cent. and the cause of death in the majority was sepsis. But the point of importance in this particular direction is the difference of mortality depending upon the period at which operation was performed. This has been strikingly demonstrated by Mr. L. A. Bidwell in a paper published in the *American Journal of the Medical Sciences*, in which he shows that the earlier the operation in cases of perforation the greater the chances of success; whilst Tinker of Baltimore estimates the recoveries in cases submitted to early operation at 83 78 per cent Mr. Mayo Robson collected 188 cases of gastric ulcer, treated surgically, of which 157 recovered and 31 died, thus giving a mortality of 16 4 per cent., and also pleads in favour of more early surgical treatment in cases of an intractable character. Indeed, the stomach would appear to have been of recent years the most prolific area for surgery Not only are wonderful operations performed but marvellous names are invented. Gastrectasia or dilatation of the stomach is treated by gastroplication or gastro-enterostomy. Gastroptosis or moving downwards of the stomach, as evidenced by a change in position of the lesser curvature, has been dealt with by Mr. Treves who in the case of a young woman, aged 22 years, found the omentum adherent to a mass of tuberculous glands in the mesentery, preventing him from raising the stomach. He removed the glands and then could restore the stomach and liver, both of which were markedly displaced, and secured the liver with three stout silk ligatures. An American writer on this subject concludes in these words: "To resume the facts brought out by these operations for gastroptosis it is evident that improvement is not difficult to bring about, whether one secures the liver only, sutures the stomach itself or the mesocolon to the abdominal wall, or shortens the gastro-hepatic omentum, or finally removes a segment of the abdominal wall. The condition is usually a complex one and probably a simple gastrorrhaphy will not be sufficient, but should be assisted by right nephrorrhaphy or hepatorrhaphy." What would our ancestors have said to this? But then, the Americans are a go-ahead people.

The surgery of the brain has advanced greatly since Horsley, in 1886, published his directions for operating, and Ferrier and Hughlings Jackson showed how to locate pressure. By this means abscess, whether following otitis media or due to other causes, can be successfully located and satisfactorily drained; indeed, this is an almost daily performance and Mr. Ballance regards a small opening in the cranium as responsible for some of the failures. As to brain tumours Mr. Butlin in his recent edition says: "It is interesting to observe that surgeons of large experience in brain-surgery of all kinds—for example, von Bergmann—appear to grow less hopeful of the future of the surgery of tumours of the brain"; but Mr. Ballance writes to me that one great success seems to justify perseverance. Tuberculous brain tumour is, in his opinion, a contra-indication to operation, "but encapsuled brain tumours give the best results and they seem most frequent beneath the tentorium. The infiltration varieties cannot be wholly removed, but the operation relieves headache, vomiting, and blindness from optic neuritis." The successes of spinal surgery are more numerous. Caries and tumour here seem to offer a fair return to the surgeon for his operative efforts.

In another direction I think that we may look for a further development of the procedure which has been carried out with such success by Mr. Ballance in the treatment of chronic purulent otorrhœa by the epithelial grafting of the raw bone cavity. I see no reason why a similar procedure should not be followed in cases of extensive necrosis of other bones, or even in some cases of joint disease, as supplementary to the ordinary operation of erasion. In the case of another intractable defect which has hitherto baffled all efforts of surgeons to deal satisfactorily with it some such treatment might be carried out, and for the remedy of ectopia vesicæ the suggestion has recently been made to transplant a portion of the bladder of a sheep to the lower lateral abdominal fasciæ of the patient After a period of seven or eight days, as proved by experiments on animals, the union of the two tissues is sufficiently strong to allow a plastic operation whereby a skin flap, with the bladder attached, may be swung over upon the extruded bladder and the edges of the attached piece of bladder sutured to the defective parts.

The experience of modern warfare renders it probable that bullets may require to be removed from the substance or even the cavity of the heart. The occasions may be rare, but they must none the less be met by prompt and adequate measures. Not that the surgery of the heart is a new subject, for so long ago as 1648 Rivolan suggested trephining the sternum in cases of pericardial effusion, and a summary of 80 cases of paracentesis for serous and purulent effusion has been published by Dr. Samuel West, and Jamain collected 121 cases of wound of the heart in which there were 16 recoveries. Stabbing wounds are less dangerous than bullet or cutting wounds John Bell is said by Foy of Dublin to have been the first to remove a foreign body from the pericardium and to cleanse and to drain it. In 1898 Podrey did a pericardotomy for a bullet wound of the heart, the pericardium was evacuated, washed out with boric acid lotion, and a fibrino purulent deposit was stripped from the heart. A wound one centimetre long was found in the right ventricle. A needle was introduced to feel for the ball and passed right through the heart, which was palpated and the ball felt for but not found. The wound of the heart was not sutured. The patient recovered, and several cases are on record in which wounds have been successfully sutured, one notably by Pagenstecher of a wound of the left ventricle three and a half centimetres long which was treated by four sutures and the patient recovered

The best means of treatment of chronic enlargement of the prostate, whether by suprapubic, perineal, or urethral prostatectomy, or by orchidectomy, or by vasotomy, or vasectomy, is a subject that I should much like to hear discussed at this society

The further development and application of the x rays to surgery and medicine is a study which I should like to see appropriated by members of the profession. I believe that it is still in its infancy and that there is a great future before it. But in order that we may obtain the full advantages of its resources it appears to me that the study must be pursued by men having a thorough medical training and must not be allowed by them to fall into the hands of mechanicians lest its progress as a scientific aid to diagnosis be checked I heartily commend it as a new form of specialty to those who have time and opportunity to pursue this entrancing study.

It will be objected that no man can be expected to have the whole gamut of surgery in his mind, or rather at his fingers' ends, and that thus the tendency to specialism, which is daily becoming more and more marked, must continue to increase till—like the ancient Egyptians, as Sir William MacCormac reminds us—there are as many branches of medicine as there are organs of the human body. Whether this is to be brought about, as Mr. Butlin has suggested in his Cavendish Lecture, by a community of workers, "a direct and organised scheme for research and the application of pathology to our art," or by the patient labour of individuals remains a question for the future.

If there ever was a subject on which surgeons once deluded themselves into the happy fancy that they had reached a climax of success it was the treatment of simple fractures. But the spell is broken, the veil of self-satisfaction is lifted, and we are told that our lines are false, our measurements are incorrect, and that our methods tend only to incorrect axes and, consequently, to the starting of joint lesions and the confirmation of defects, for which our treatment is alone responsible. Such allegations are somewhat startling, and one wonders if the bones of Hamilton, of Pott, and of Astley Cooper lie quiet in their graves, or if their ghosts are wandering uneasily in Cavendish-square. But in face of this accusation it behoves us to look into the matter and to consider how far and in what cases should the fragments of a fractured bone be brought into apposition by wire and screws; and whether the disturbance of the tissues, which is involved in their application may not often cause more harm than if the fracture were treated by more ancient methods?

In the foregoing remarks I hope that I shall be pardoned for confining myself to that branch of work to which my past years have been devoted. But I am well aware that, although not so strikingly evident, the advance of medicine has been steady and constant. It is in the nature of things that disease once asserted may be beyond reach of cure. But the art of the physician in the prevention of disease, in its early detection, and in guiding it to a successful issue has progressed with strides almost equal to those of which the surgeon so justly boasts, and the two branches of our art are every day more closely united by the fact that the physician by his early diagnosis appreciates the moment when he may seek the assistance of a surgical ally, and the two are brought together in the combat against many ills which neither alone might have sufficiently appreciated, and in their union is a strength which every year makes more victorious. May this combination grow ever stronger and may their united efforts ever tend to ease the sufferer and to relieve the afflicted! For such is the end and object of our art.

NOTES ON THIRTY-ONE CASES OF DIPHTHERIA TREATED WITH ANTITOXIN.[1]

BY JOHN MACKENZIE, L.R.C.P., L.R.C.S. EDIN., L.M., L.F.P.S. GLASG.

To describe in detail each of the 31 cases of diphtheria of which I have made notes in this paper would make it too long, hence, for the sake of brevity, I have grouped them according to their clinical features and anatomical relations. They extend over a period of five years and consist of the most serious cases which occurred in my practice. With the exception of three cases of acute laryngitis simulating croup in which serum was used as a test they all presented so typical and characteristic an appearance as to render a clinical diagnosis of diphtheria almost a certainty. There are practitioners who view with considerable misgiving a diagnosis of diphtheria unconfirmed by a bacteriologist. The clinical diagnosis, they aver, "is so liable to err, for a dirty, greyish membrane is produced by other causes than Klebs-Löffler bacillus, by streptococci, by caustics, and it not infrequently follows excision of the tonsils if the throat is not kept very clean. An exudation *per se* proves nothing; the specific organism must be discovered."

It cannot be disputed that many cases of sore-throat with an exudation are now recognised to be benign and non-diphtheritic, just as we know that cases of sore-throat free from exudation contain the Klebs-Löffler bacilli; even then the path of the bacteriologist is not without its difficulties and dangers. Should erroneous conclusions be accepted and acted on, what then? Your precious time is lost and a serious mistake is committed; nor is it altogether becoming of the physician to defer absolutely to the bacteriologist. Does not the bedside present a field of observation and reflection with objects of interest equal to the laboratory? One cannot help thinking after reading their works that our great physicians have as deep—perhaps deeper—an insight into nature's ways as our great bacteriologists. Is not what we term "disease" nature's physiological laws organised on a different plane? However, it is not meant to discuss in this paper the bacteriology of diphtheria.

GROUP I.—THREE CASES OF LARYNGEAL DIPHTHERIA (I.E., THE LESION BEGAN IN THE LARYNX AND ULTIMATELY EXTENDED TO THE PHARYNX).

CASE 1.—A female infant, aged three years, had been ill several days before I saw her on March 30th, 1895. The temperature then was 102° F. and the pulse was 130. The child had a hoarse, rough cough, prolonged inspiration, and much laryngeal stenosis, and her aspect betrayed great anxiety. She was restless and irritable with occasional fits of dyspnœa. An examination of the throat revealed nothing beyond acutely congested pharynx and tonsils, but the symptoms of a typical fatal croup were unmistakeable. Emetics, poulticing, medicated vapours, and swabbing the throat with antiseptics were vigorously prosecuted but with no relief. Antitoxin was then in its infancy and few believed in it. Early on the next morning I telegraphed to Messrs. Burroughs and Wellcome for two doses of 1500 units each of anti-diphtheritic serum which arrived at 6 P.M. the same day. When I went to inject it at 7 P.M. the little sufferer was livid, her voice was reduced to a whisper, and her condition was distressing beyond description. I told the parents that [illegible] the child would die from asphyxia in the [illegible] That a fatal issue was fast approaching I had no doubt whatever; but the reason for my giving so gloomy a prognosis was that the parents on seeing my syringe and needles demurred to the injection. They were willing for me to give the antitoxin by the mouth but not by injection. However, after much parleying I carried my point and gave an [illegible] anti-diphtheritic serum between [illegible] morning her general condition [illegible] temperature, which was at the [illegible] was now down to 100°. The c[illegible] the dyspnœa was much less. At the middle of the third day of my attendance the patient had a serious attack of dyspnœa followed by collapse which greatly alarmed the parents. It was then proposed to give a second injection but this they refused point-blank on the plea that there was no use in inflicting more punishment on her as she was sure to die. By this time small patches of white or greyish-white membrane were developing on the tonsils and the margin of the soft palate. In an hour or so she rallied and was removed to the Nottingham General Hospital where tracheotomy was performed soon after admission, but, according to my information, no serum was injected. She made an excellent recovery.

CASE 2.—A female infant, aged three years, when first seen by me on June 5th, 1899, had a hoarse, rough, croupy cough, which was said to have been very troublesome for the last three or four days. The temperature was 100° F., the pulse was 130, and the respirations were 30. Laryngeal stenosis and dyspnœa were at times extreme. At 3 P.M. on the same day 1500 units of Messrs. Burroughs and Wellcome's anti-diphtheritic serum, which I had had in my house for over a month, were injected between the scapulæ. On the next morning small white patches were observed on the tonsils and the patient's condition was distinctly worse. The dyspnœa was particularly distressing, the chest heaving and the epigastrium retracted at every inspiration. The little sufferer was continually thrusting her hands down her throat, with gazing eyes now fixed on one and then on another as if imploring for help. The dyspnœa, which had been extreme before, was now no longer paroxysmal but continuous. Such a scene is painful to all, especially to the physician who is called in to render aid to a sufferer of tender years whose helplessness deeply appeals to his feelings. Callous, indeed, must be the nature which could ever forget such a sight, and equally ungrateful must be the man who will ever cease to be thankful that science—*pace* the anti-vivisectionist—has placed within his reach so [illegible] antitoxin for relieving such agony. [illegible] for another dose of serum which [illegible] the second day. The child was then *in extremis*. The injection was this time given in the subcutaneous tissue of the abdominal wall. When the patient was seen three hours afterwards the condition was improved. The cyanosis was gone, the dyspnœa was less, and the cough was much softer. Next morning the child was playing with her toys. The white patches on the tonsils and the fauces made no advance and completely disappeared in 24 hours, as also did the stenosis. This was by far the most [illegible] ver knew to recover.

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[1] A paper read before the Nottingham Medico-Chirurgical Society on March 7th, 1900.

[illegible] on July 17th, 1899. A female [illegible] been ill for several days previously to being seen. Her cough was then hoarse, rough, and croupy, but the dyspnœa and laryngeal stenosis were not very pronounced. An examination of the throat revealed two or three small white patches on the tonsil which could not possibly be continuous with the laryngeal membrane. At 9 P.M. when the injection was given, similar patches were observed on the opposite tonsil. The temperature was then 105° F. and the pulse was 140. Respiration was irregular and inspiration was prolonged. The urine was highly albuminous. 1500 units of anti-diphtheritic serum were injected into the subcutaneous tissue of the abdominal wall. Next morning the general condition of the patient was much improved. On the 19th, the third day, the progress had continued. The membrane had completely disappeared from the tonsils and respiration was free, indeed almost normal. The child made an excellent recovery.

Group II.—Six Cases of Pharyngeal Diphtheria gradually extending to the Larynx.

Case 4 (May 15th, 1895) was that of a female child, aged seven years; Case 5 (August 3rd, 1896) was that of a male child, aged four years; Case 6 (August 8th, 1896) was that of a male child, aged six years; Case 7 (Sept. 27th, 1896) was that of a female child, aged five years; Case 8 (Dec. 11th, 1897) was that of a man, aged 30 years; and Case 9 (July 13th, 1899) was that of a male infant, aged 17 months.

Clinically this group is a good example of the type of diphtheria beginning with a d[illegible] the lateral sides of the phar[illegible] soft palate, and the posterior [illegible] not checked, gradually inv[illegible] The symptoms are essentially asthenia, moderate temperature (from 99° to 100° F.), quick pulse, much constitutional depression, and albuminous urine. I noticed that if the membrane was yellowish or greyish yellow, indicating age, it disappeared under the influence of antitoxin by sloughing, leaving necrosed tissue under. If, on the other hand, it was recent, and whitish grey in colour, it simply melted away. No separation was seen at the periphery but a gradual thinning in all its parts, and when the exudation had cleared away the mucous membrane, though acutely inflamed, presented no raw granulating surface filling up necrosed hollows. Cases 4, 5, 6, and 7 showed marked improvement next morning after the injection and made good recoveries. Case 8, which was that of a publican, is placed in this group because the condition of his throat was anatomically and clinically identical with that of the others, but more especially as the case so forcibly illustrates the evils of delay. The onset of diphtheria to the professional mind is sufficiently insidious; to the laity it is synonymous with laryngeal stenosis and dyspnœa. Medical aid is never sought till these symptoms alarm the friends, which often means in a case of pharyngeal origin a week or two of illness. The patient died suddenly from syncope two hours after I saw him and four hours before serum could be obtained. In Case 9 the patient had been suffering from measles complicated with broncho pneumonia for two weeks before any throat mischief set in. The onset of diphtheria was early noticed and serum was used with little or no delay. The membrane which covered the tonsils and pillars of the fauces and to a lesser extent the epiglottis perceptibly diminished, but the little sufferer succumbed to his pneumonic lesion.

Group III.—Three Cases of Laryngeal Diphtheria confined to the Larynx and Glottis and difficult to Diagnose from Membranous Croup and Acute Catarrhal Laryngitis.

Case 10 (May 6th, 1895) was that of a male child, aged two years; Case 11 (Sept. 27th, 1895) was that of a female child, aged six years; and Case 12 (July 11th, 1899) was that of a female infant, aged five months.

This group presented very much the same symptoms as the others—a febrile condition, a temperature ranging from 100° to 102° F., a hoarse, rough, croupy cough, much laryngeal stenosis, dyspnœa, and enlargement of the glands of the neck. In one case (Case 12) the swelling extended to the parotids. 1500 units of antitoxin were given on the evening of the first day. The improvement on the next morning was pronounced in Case 10 and Case 11. The harsh rough cough was moist and soft and the anxious look and laboured respiration gave place to easy breathing and cheerful, happy expression. In Case 12 (the infant) the condition was worse. The stenosis and dyspnœa were very distressing, the glandular enlargement was increased, the tonsils were very much swollen, and there was dysphagia with paralysis of the soft palate. A second injection was given eight hours after the first but there was still no improvement and the patient died 24 hours after the second injection. This was the youngest patient I ever saw suffering from diphtheria, for young infants have a natural immunity against certain infectious diseases—e g., scarlet fever and diphtheria. I have often observed in the course of my work as public vaccinator that insusceptibility to the action of lymph is much more common amongst young infants from one to two months old than children aged four months and upwards. May not the young infant, even if it be five months old, present analogous insusceptibility to the action of serum? Certainly in this case, though used very early in the complaint, it entirely failed.

Group IV.—Nine Cases of Pharyngeal Diphtheria confined to the Pharynx, Soft Palate, and Posterior Nares.

Case 13 (August 19th, 1895) was that of a male child, aged five years; Case 14 (Sept. 26th, 1896) was that of a female child, aged six years; Case 15 (Nov. 9th, 1896) was that of a male child, aged five years; Case 16 (Oct. 29th, 1898) was that of a man, aged 30 years; Case 17 (Jan. 28th, 1899) was that of a male child, aged five years; Case 18 (May 6th, 1899) was that of a male child, aged four years; Case 19 (May 11th, 1899) was that of a girl, aged 15 years; Case 20 (May 16th, 1899) was that of a woman, aged 30 years; and Case 21 (Feb. 24th, 1900) was that of a female child, aged five years.

The nine patients in this group were fully a week ill before I saw them. One in particular, who was excessively ill, was notified as suffering from diphtheria on Oct 29th and had the first injection of serum on Nov. 5th, seven days after notification. The cases were of a low depressing type with a filthy yellowish membrane covering the sides of the pharynx, the tonsils, the uvula, the fauces, and the posterior nares. The temperature was never above 100° F., the pulse was of low tension (from 110 to 130), the tongue was coated and dry, the appetite was lost, and the patients were pale and [illegible] cases the exhaustion was so great that [illegible] to be removed [illegible] them. [illegible] given on the first day of seeing them, aided by antiseptic washing of their throats and stimulating diet. In every case the first injection produced marked improvement within a few hours. As the cases were of long standing it was considered advisable to repeat the injection next morning. They made excellent recoveries.

Group V.—Six Cases of Post-scarlatinal Diphtheria (Clinical Distinctions from Ordinary Diphtheria).

Case 22 (Nov. 9th, 1898) was that of a female child, aged five years; Case 23 (Nov. 10th, 1898) was that of a male child, aged seven years; Case 24 (Nov. 18th, 1898) was that of a female child, aged seven years; Case 25 (Nov. 22nd, 1898) was that of a male child, aged eight years; Case 26 (Jan. 28th, 1899) was that of a male child, aged three years; and Case 27 (July 15th, 1899) was that of a man, aged 30 years.

In post-scarlatinal cases the exudation generally begins about the middle of the second week of illness and is very extensive, covering the sides and posterior wall of the pharynx, the tonsils, the uvula, the palate, and the nasal passages. The involvement of the nasal passages is more common in post scarlatinal diphtheria than in ordinary cases. The same remark, I think, also applies to the Eustachian tube of a voluminous fibroid, in three cases for fibroid with salpingitis, in two cases for cancer, in one case for fibroid with dermoid cyst, in one for fibroid and ovarian tumour, in one for a dermoid cyst with salpingitis, and in one case for fibrous tumour of the uterus in which ovariotomy had been previously performed for a suppurating ovarian cyst.

Dr. Doyen's technique of abdominal hysterectomy is so simple and so largely responsible for the almost startlingly small mortality (from 2 to 4 per cent.) that it is strange that it has not yet been generally adopted in English practice, with or without its latest modifications as shown at the International Congress of Gynæcology at Amsterdam in August, 1899. The English surgeons and gynæcologists whom I have seen operate or who have discussed the matter do not appear generally to have adopted any one technique—some preferring what is known as the American method, or some personal modification of it, while a few appear still to use the serre-nœud. Physicians and surgeons, however, all the world over are agreed in one thing—viz., the desire to find out what is best for their patients—that is, in this matter the operation that is at once the simplest and that gives the best results. Uterine disease of one form and another is so frequent that if we include affections of the annexa it is undoubtedly the most common condition that forces us to open the abdomen. The general adoption, therefore, of the excellent technique that Dr. Doyen has devised, and which is largely practised on the continent, cannot fail to be of benefit. It has the two great advantages of being certainly the simplest method of removing the uterus, whether in a simple or a complicated case, and therefore of being capable of completion, even by a surgeon unfamiliar with it, in half an hour or less.

Perhaps the chief value of the operation to many minds will lie in the fact that injury to the ureter or bladder is practically impossible (I have not seen either wounded in from 30 to 40 cases), and the peritoneum being completely closed the risk of infection is reduced to a minimum.

CASE 1.—Laparotomy for uterine fibroid with double salpingitis was performed on a patient, aged 49 years, on March 29th, 1899. The fibroid was of about the size of a fœtal head, and the salpingitis on the left side was of considerable volume. The patient, who had come from Alexandria, Egypt, for the operation, remained 26 days in the clinique and made an excellent recovery.

CASE 2.—Abdominal hysterectomy for fibroid was performed on a patient, aged 38 years, in April, 1899. The fibroid was of the size of an adult head. The only complication was due to abundant vascular adhesions of the omentum to the tumour and an uneventful recovery was made.

CASE 3.—Abdominal hysterectomy for fibroid was performed on a patient, aged 35 years, on April 25th, 1899. The cervix was displaced high up by the tumour which occupied chiefly the left cul-de-sac. Its removal was easy though the broad ligaments were short and were both clamped and cut in order to facilitate the elevation of the tumour and uterus and the opening of the posterior vaginal cul-de-sac. The patient remained 22 days in the clinique, leaving well.

CASE 4.—Abdominal hysterectomy for large fibroid was performed on May 9th, 1899. The case was uncomplicated except that the closure of the peritoneum by suture over the vaginal opening caused some difficulty.

CASE 5.—This case was one of simple uncomplicated abdominal hysterectomy for large fibroid and was performed on a patient, aged 47 years, on May 16th, 1899.

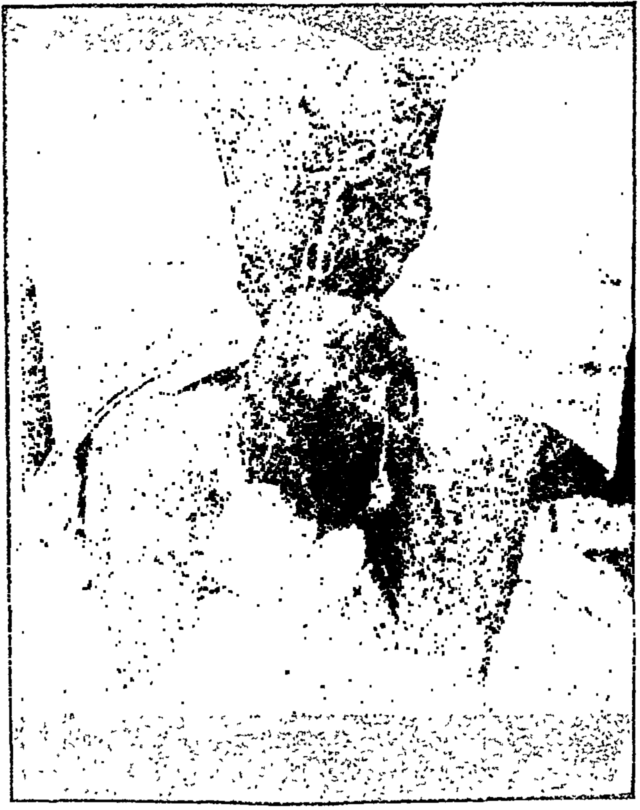
CASE 6.—Abdominal hysterectomy for fibroid filling the posterior cul-de-sac was performed on a patient, aged 33 years, on May 30th, 1899. This case presented difficulties owing to intestinal adhesions which gave trouble and had to be very carefully separated. The peritoneum was closed, but a drain was introduced sub-peritoneally from Douglas's pouch into the vagina. The patient made a good recovery and left the clinique on the thirty-eighth day.

CASE 7.—This case, in which an operation was performed on a patient, aged 44 years, on June 6th, 1899 is quoted because before the close of the operation it was found necessary to remove the uterus though at first only ovariotomy was contemplated. The case was one of a large cyst of the right ovary containing about 10 litres of fluid and extending between the layers of the broad ligament. The adhesions were dense and the shell of the tumour was separated with great difficulty. The left annexa were also removed as well as the uterus, which was large and fibromatous. The patient left well on the twenty-fifth day.

CASE 8.—This was a case of uncomplicated abdominal hysterectomy for fibroid and was performed on a patient, aged 43 years, on June 9th, 1899. The patient left the clinique well in 24 days.

CASE 9.—Abdominal hysterectomy for large fibromatous uterus was performed on a patient, aged 47 years, on June 19th, 1899. There was a cancerous degeneration of the cervix invading the left vaginal cul-de-sac. This degeneration involved the left ureter, which was removed for about three centimetres, the lower end being then sutured into the bladder, and a ureteral catheter was passed into it *viâ* the urethra through the bladder. In spite of the serious nature of this case recovery was practically uninterrupted. The catheters were removed on the eighth day and the patient left the clinique on the twenty-fourth day. When heard from at the end of September, 1900, she was in excellent health.

FIG. 1.



Illustrating the first step, the abdomen opened, and the tumour drawn out above the pubes. Behind are seen the handles of the forceps placed in the vagina. (Plate XIII., No. 1, facing p. 458, Macnaughton Jones, from photograph lent by Doyen.)

CASE 10.—This was a case of abdominal hysterectomy for large fibroid, the patient being aged 48 years. A rare and interesting feature in this case was that anteriorly to, and quite apart from, the uterus was a large dermoid cyst apparently between the layers of the great omentum. Both were enucleated without difficulty. The posterior peritoneal cul-de-sac was drained per vaginam. The patient left the clinique well in 24 days.

CASE 11.—Abdominal hysterectomy for fibroid with double hæmatosalpinx was performed on a patient, aged 42 years, on Sept. 5th, 1899. The operation was uncomplicated and the patient left the clinique well in 25 days.

CASE 12.—Abdominal hysterectomy on account of pain and fibrous tumour to the left of the uterus was performed on a patient, aged 35 years, on Sept. 29th, 1899. In this case there was also old inflammatory peritoneal thickening. The patient left well on the seventeenth day. Laparotomy had also been performed by Doyen upon this patient seven months before (on Feb. 23rd, 1899) for a suppurating cyst of the ovary. The patient arrived at the clinique in almost a dying condition, as the cyst had ruptured and there were both pelvic and general peritonitis. Both annexa were removed, but the uterus was left to aid the peritoneal suture. A drain was placed in Douglas's pouch and led into the vagina. The patient made a surprisingly good recovery and left the clinique on the nineteenth day.

CASE 13.—This was an abdominal hysterectomy for suppurating dermoid cyst with double salpingitis and was performed in October, 1899, the patient being 50 years of age. The case was rendered difficult on account of the close adhesions that had formed between the peritoneum of the small pelvis and the tumours and the intestine. A good recovery was made and the patient left the clinique on the twenty-sixth day.

CASE 14.—Abdominal hysterectomy for large fibroid was performed in October, 1899, on a patient, aged 38 years. There were a slight amount of albuminuria and persistent diarrhœa, so that for several days after the operation the patient's condition seemed precarious. The patient left the clinique well in six weeks, her departure being delayed by tardy healing of the silk suture.

CASE 15.—This was a case of hysterectomy for voluminous fibroid and was performed on Oct. 19th, 1899, the patient being 55 years of age. Some difficulty was experienced in getting the cervix raised, but otherwise the operation was uncomplicated and the patient left the clinique well on the twenty-second day.

CASE 16.—Hysterectomy for cancer of the uterus was performed on Oct. 11th, 1899, the patient being 55 years of age. She recovered well from the operation and left the clinique in 22 days.

CASE 17.—Abdominal hysterectomy for fibroid and salpingitis was performed on Dec. 5th, 1899. The patient, who was 28 years of age, made an uneventful and good recovery.

CASE 18.—The patient was 47 years of age and abdominal hysterectomy for large fibroid was performed on Dec. 8th, 1899. The incision was of unusual length on account of the size of the tumour and extended from the pubes to about midway between the umbilicus and ensiform process. Both the operation and the recovery were uneventful.

TECHNIQUE OF DR. DOYEN'S TOTAL ABDOMINAL HYSTERECTOMY FOR FIBROID.

It is curious to note how few surgical ailments there are in the treatment of which, no matter how frequently they may occur in practice, surgeons generally are [illegible] be adopted. In [illegible] nce, surgeons dif[illegible] of a century ag[illegible] methods of operating equally approach the ideal of excellence. The fault seems to lie in an excessive conservatism and in the lack of sequence and logical coherence in the literature of the arts of medicine and of surgery—a fault that is continually made evident by the re-discovery and the re-publication of suggestions and of facts that were know[illegible] have been forgotten by man[illegible] there are exceptions to this [illegible]rgeon will describe the technique of an operation so simple, so clear, and so perfect that it takes its place at once never to be forgotten. Thus, Macewen's method of osteotomy for genu valgum is probably practised by surgeons in every civilised country in the world and there is none to dispute its place. Who, however, would dare to name the best operation for the radical cure of hernia, for a cerebral or cerebellar abscess, for an intestinal anastomosis, or for a gastro enterostomy? The names of the claimants are legion.

I submit that Dr. Doyen's technique of the enucleation of uterine fibroids by abdominal hysterectomy is as perfect as operative technique can be. Dr Doyen has made several minor modifications since he first described it at the International Congress of Gynæcology at Brussels in 1892, but its three chief advantages remain These are—(1) the retention of sufficient peritoneum around the opened vagina to admit of complete closure of the peritoneal cavity; (2) the avoidance of the use of clamps, ligatures, and forceps prior to the section of the broad ligaments; and (3) the applicability of the operation to the enucleation of all forms of uterine and broad ligament fibroids. I will now give a brief *résumé* of the technique and then describe each step in detail.

The patient is placed in Trendelenburg's position. The posterior vaginal cul-de-sac is opened from the abdomen by scissors cutting upon curved forceps introduced per vaginam by the assistant. The cervix is then easily caught by its posterior lip and freed by cuts of the scissors to right and left until completely circumcised. It is then drawn well up, *separating itself* from the bladder. The right broad ligament is isolated and cut and then the left. The success and safety of the operation lie in its simplicity and rapidity, the complete closure of the peritoneal cavity, and the extra-peritoneal treatment of the pedicles of the removed annexa.

FIG. 2.

Illustrating the removal of the uterus and hæmostasis of its pelvic attachments (Plate XIII., No 2.) The cervix is seen caught by the tenaculum after incision behind the posterior lip of the cervix upon the point of the forceps in the [illegible]n The right [illegible] ceps need be applied ;

First step: abdomen opened, and tumour drawn out above the pubes.—The patient (vide Fig. 1) is placed in Trendelenburg's position and the abdominal wall is incised from the pubes towards the umbilicus and as far above it as is necessary to permit of the extraction of the tumour. The peritoneum is caught on each side of the incision by several catch-forceps and a large compress is thrust in behind the tumour to isolate it and to protect the intestine, &c The fibroid is then drawn well up and out by means of the large fibroid-screw. Several other compresses are introduced at the sides above the pelvic brim to isolate the field of operation, to prevent the escape of intestine, and to protect the peritoneum from contamination by clots of blood or uterine mucus.

Second step: perforation of Douglas's pouch and seizure of the cervix.—If it has been easy to draw the tumour well out of the abdomen its removal should be rapid and simple. The vagina has, of course, been cleansed and long curved forceps are pushed by the assistant behind the cervix in the posterior cul-de-sac as high up as possible (*vide* Figs. 2 and 3). (A manœuvre, now neglected but followed by Dr. Doyen in his earlier cases and certainly of use to those unfamiliar with the operation, is to place at this stage a strong silk ligature through the peritoneum at about half an inch below the point made prominent by the forceps in the vagina. The peritoneum is opened at this point and the ligature enables its posterior border to be easily picked up at the close of the operation when the suture of the peritoneum is commenced.) Douglas's pouch is then incised. This is best done with scissors cutting longitudinally upon the point of the long curved forceps which then penetrate the peritoneal cavity and are widely opened by the assistant. The incision is extended a little on either side and the cervix is firmly seized by strong catch forceps, or, better still, by Doyen's special sliding tenaculum, and drawn well up, the assistant steadying the tumour by holding the fibroid screw firmly embedded in its tissue.

Third step: isolation of the cervix.—It is now easy to feel with the index finger of the left hand the strong lateral attachments of the cervix. Two cuts with the scissors laterally close to the uterine wall free the cervix from its relations to the lower part of each broad ligament, and being thus freed it is at once easily drawn further up and out. The anterior vaginal cul-de-sac now comes into view and the cervix is separated from it by the fingers or by the scissors, strong traction being made upon it throughout. The right forefinger separates the bladder with the greatest ease, the traction alone, thanks to the loose cellular tissue separating the bladder and uterus, often sufficing to liberate entirely the cervix and the uterus.

Fourth step: removal of the uterus.—Only the lateral vascular connexions now remain, to be simply and rapidly divided as follows. The left forefinger is passed above the superior border of the right broad ligament, through the vesico-uterine peritoneum and gently but rapidly strips off the right broad ligament which the assistant then seizes. The surgeon then cuts between the annexa and the uterus, thus entirely freeing the tumour on its right side. It is then drawn over to the left, the anterior peritoneal covering stripping off as this is done or, if not, separated by a few cuts with the scissors, and finally only adhering by the upper part of the left broad ligament, which is similarly cut, and the tumour and uterus are removed.

Fifth step: arrest of hæmorrhage.—The surgeon then seizes the broad ligament on his side of the patient (the left). The uterine and utero-ovarian vessels, which alone are now bleeding, are caught and ligatured, and if care has been taken to cut close to the uterine tissue only minor branches of these arteries will have been opened. The right and left appendages are now ligatured and removed and the pelvic cavity is sponged out. It only now remains to close the peritoneal cavity.

Sixth step: closure of the pelvic peritoneum.—The right vaginal commissure is picked up with strong dissecting forceps and a curved needle successively threads it, the retro-uterine peritoneum, the peritoneum of the tubo-ovarian pedicle and finally the peritoneum between that pedicle and the bladder. A medium silk ligature is passed through the eye of the needle and when drawn tight completely closes the peritoneum over the tubo-ovarian stump. The left side is similarly treated and a transverse suture between the two closely unites the retro-vesical peritoneum to that of Douglas's pouch. Any redundancy of peritoneum or tear should be carefully sutured. A dry compress again sponges out the pelvis and the operating table is placed horizontally.

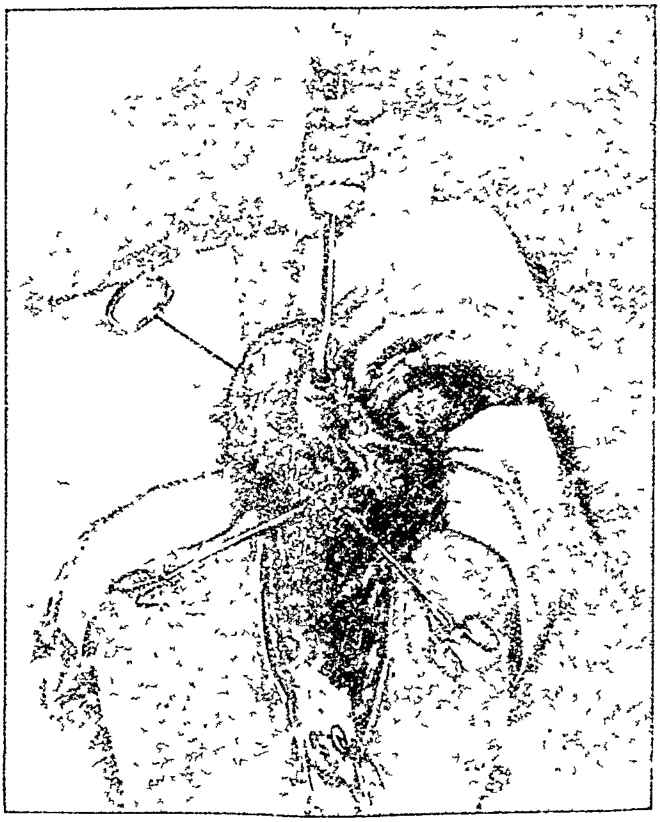
Seventh step: closure of the abdomen.—This is effected by a deep sero-aponeurotic layer with interrupted silk suture or continuous catgut and a superficial skin suture with silkworm or catgut. Thus it will be seen that while the tumour is rapidly removed much time is spent on the careful suture of the peritoneum and of the abdominal wall.

Remarks on Special Manœuvres.

1. *The broad ligaments.*—Frequently the broad ligaments are unduly short owing to their attachment high up on the lateral parts of the tumour and it is difficult to get the latter elevated well out of the pelvis. These tight bands, as it were, of the broad ligaments are at once felt by the index finger and may be caught either by the assistant or with long curved elastic forceps and cut through close to the uterus. It is rarely necessary to apply pressure forceps to the uterine surface. If necessary the left broad ligament is similarly treated.

2. *Hæmorrhage from the uterine artery during the isolation of the cervix uteri.*—This usually occurs while the cervix is being drawn up with the tenaculum, but the surgeon is prepared for it, and it is as easy to catch it with pressure forceps as to catch an artery of similar calibre, say, in an amputation of the breast. As the patient is in the Trendelenburg position and is more or less congested it is frequently of use to proceed with the removal of the tumour and then return to the ligature of the two uterine arteries which have served the purpose of a venesection.

FIG. 3



The result of further traction is seen in this illustration, where the cervix is entirely freed. The opened forceps are still seen in the vagina. (Plate XIV., No. 1, facing p. 459, Macnaughton Jones. From photograph lent by Doyen.)

3. *Difficulty in reaching Douglas's pouch on account of adhesions or a posterior sub-peritoneal fibroid blocking the pelvis.*—Dr. Doyen remarked upon this difficulty in 1892 and showed how slight were the changes which it was necessary to introduce into the technique. The tumour is drawn up as high as possible, any adhesions are separated, and if there are multiple posterior fibromata present the peritoneum and uterine tissue are incised and these fibroids easily enucleated with the fingers or the screw. If the posterior cul-de-sac remains inaccessible the forceps in the vagina are simply pushed towards the right broad ligament and the right lateral vaginal cul-de-sac is perforated as close as possible to the insertion into the cervix of the lower edge of the right broad ligament and the operation is proceeded with as in more ordinary conditions.

4. *Isolation of the cervix from the vagina before the abdomen has been opened.*—This is a manœuvre that considerably facilitates the operation, especially to those undertaking it for the first time. It is well, at any rate, during the preparation and toilette of the vulva and vagina to examine carefully the exact position and relations of the cervix. The

higher it is and the more difficult of access by the vagina the easier it will be to reach it from the abdomen. The lower and more normal it is the easier will be the preliminary circular incision of the mucous membrane *per vaginam*. Undoubtedly the most delicate step in the operation is the section of the lateral attachments of the cervix and of the mucous membrane of the posterior vaginal cul-de-sac, and when this is done as a preliminary step by the vagina the extirpation of the uterus by the abdomen is of the greatest simplicity.

5. *Drainage.*—Though not habitual it is sometimes well to drain Douglas's pouch, either after an exceptionally laborious operation or when the vagino-peritoneal wound has been plugged and not sutured. The best method is by a glass drain introduced from the most dependent part of Douglas's pouch into the vagina and covered externally by a small pouch of thin rubber or skin to collect aseptically any fluid that may thus drain.

6. *After-treatment.*—The patient is well purged on the second day, and sometimes on the first day, after the operation. If the temperature rises ice chopped in small pieces and placed in bladders is laid over the abdomen. I have yet to find the patient who did not find this soothing and comfortable. These are the two details in which the after-treatment differs from that followed in all laparotomies.

Paris.

BILATERAL RESECTION OF THE SUPERIOR CERVICAL GANGLION OF THE SYMPATHETIC FOR GLAUCOMA.

By H. WORK DODD, F.R.C.S. ENG.,
OPHTHALMIC SURGEON TO, AND CLINICAL LECTURER ON OPHTHALMIC MEDICINE AND SURGERY AT, THE ROYAL FREE HOSPITAL; SURGEON TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, ETC.

THE operation which I describe in this paper was performed upon a patient as a result of an article by Dr. Jonnesco of Bucharest which appeared in *La Presse Médicale*, June 8th, 1898. In that article Dr. Jonnesco stated that he had performed the operation of resection of the superior cervical sympathetic ganglion for glaucoma seven times and that at the time of writing the cases were old enough to enable one to judge as to the value of the procedure. The results claimed by him consist in an immediate and permanent fall in the ocular tension in all the cases, very energetic contraction of the pupil even in those cases previously iridectomised, disappearance of peri-orbital pains and cephalalgia when these existed, disappearance of the attacks in the irritative glaucoma cases, and very marked and permanent improvement of the sight in the cases where optic atrophy was not complete. This lessening of the ocular tension, due to resection of the superior cervical ganglion, is explained by the ablation of the ocular fibres of the sympathetic which traverse this ganglion before reaching the eye. These fibres are distributed to the iris, the uveal tract, the vessels of the eye, and the peri-bulbar muscular apparatus contained in the capsule of Tenon, &c. Their excitation, permanent or intermittent, peripheral or central, produces a collection of phenomena which is termed "glaucoma." Permanent or intermittent contraction of the arterioles produces an increase of blood-pressure from which arise extravasation and increase of the aqueous humour. Permanent or intermittent dilatation of the pupil draws the iris towards the iridian angle, which condition obstructs the canals or the zone of filtration and prevents or slows down the flow of the aqueous humour. The permanent or intermittent contraction of the peri-bulbar muscular apparatus compresses the emissary veins of the bulb and clogs the venous circulation of the eye whence arises dilatation of the intra-ocular veins. This being admitted one easily understands the mechanism by which the resection of the superior cervical ganglion produces decrease of tension and with this cessation of all the troubles of glaucoma. Dr. Jonnesco believes glaucoma to be central and not peripheral in origin. In suppressing the superior cervical ganglion the origin of the trouble is not removed, but the ways of transmission are destroyed. He thinks that this operation should be especially successful in its results in chronic irritative glaucoma and in simple chronic glaucoma. The foregoing is a brief summary of what I take to be Dr. Jonnesco's views on the subject.

It is an undoubted fact that iridectomy has been found to fail in most cases of the chronic forms of glaucoma and that we are now in a state of peculiar uncertainty as to the best treatment of this most troublesome and painful disease. If it be true, as Dr. Jonnesco states, that the removal of the [illegible] beneficial effect upon [illegible] s operation a means for [illegible] whose eyes under the [illegible] to worse. After taking all the above facts into careful consideration in consultation with my friend and colleague Mr. E. W. Roughton at the Royal Free Hospital, Gray's Inn-road, I *felt justified* in performing the operation in the following case which seemed to present the characteristics most favourable for trial.

The patient was a woman, aged 62 years, who had been under treatment for chronic glaucoma off and on for about 14 years at the Royal Free Hospital. During that time her vision had been steadily and slowly diminishing and she had never been free from pains in the eyes and "all parts" of the head. During this long time exacerbations occurred at intervals of about six months. While these exacerbations lasted her sufferings from pain in the eyes and head were extreme. She then saw "flashes of light," and though she did not vomit she was the subject of nausea. The symptoms had always been somewhat relieved by the use of eserine. In November, 1891, vision = $\frac{6}{12}$ in both eyes and she wore + 3 50 D. glasses for near work. In October, 1896, the R. E. vision = $\frac{6}{36}$; L. E. vision = $\frac{6}{60}$. In December, 1898, R. E. vision = $\frac{6}{24}$; L. E. vision = $\frac{6}{60}$. The fields of vision had very slowly contracted, this being most marked on the temporal sides. The tension had never been extreme, varying up to + 1 in either eye during the exacerbations. The patient had been the subject of dysmenorrhœa through most of her adult life. Two years ago she had hæmorrhage from the mouth (gastric ulcer?), but she had had no other serious illness. The patient was a milliner and had had for many years a successful business, but about 10 years ago it began to deteriorate and since then she had been in struggling circumstances. One of her sisters had had the left eye removed for "ulcers" and had had an iridectomy performed on the right eye for chronic glaucoma, for which condition she is still under my treatment. There was said to be gout in the family. The patient was a rather thin, white-haired, somewhat anæmic woman. The pupils were equal, regular, and small, but not contracted. The field of vision for the right eye for white was slightly contracted and more marked on the temporal side; the fields for red and green were still more conspicuously lessened. Vision = $\frac{6}{18}$. In the left eye the field of vision for white was decidedly contracted, especially on the temporal side. In the upper temporal quadrant there was a scotoma and the whole of the centre of the field was blurred and indefinite. Colours were indistinctly seen with this eye. Vision = $\frac{6}{60}$.

Ably assisted by Mr. Roughton I operated in the following manner. An incision about four inches in length was made along the line of the anterior border of the right sterno-mastoid muscle, beginning above at the level of the angle of the lower jaw through the skin and fasciæ. The anterior border of the sterno-mastoid muscle was then exposed and its fascia divided in the whole length of the wound. The border of the muscle thus shown was drawn back. Several lymphatic glands were then removed. The common facial vein was ligatured in two places and divided between near to its entrance to the internal jugular vein. The fascia below the sterno-mastoid muscle was then torn through and the sheath of the great vessels of the neck was opened. The artery and vein were carefully dissected apart and the vagus nerve was then searched for and found. It was then drawn forward by a retractor, together with the carotid artery, while the internal jugular vein was held backwards by another retractor. The cord of the cervical sympathetic nerve with the superior cervical ganglion was then found in the fascia at the bottom of the wound, from which it was carefully dissected out. The ganglion was seized in a strong pair of forceps and pulled forcibly downwards with a twist so as to tear out the nerve from as high up as possible. The nerve was then cut off at the lower angle of the wound and about one and a half inches of its length were removed, including the ganglion. The operation was then repeated in exactly the same manner on the other side of the neck. The wounds were closed with separate silk stitches and a wet gauze dressing was then applied. The anæsthetic employed at first was ether, but it was found necessary to change this to chloroform for the second operation on account of the engorgement of the veins of the neck produced by the ether. This operation is practically identical with that described by Dr. Jonnesco under the name of "pre-mastoid."

The patient's pulse was good during the first operation but became rather feeble in the course of the second. It was noticed that it became slower and more feeble when the vagus was forcibly retracted, and this was more marked on the left side. After returning to the ward the patient vomited a good deal and sweated freely, but the pulse was good and there was never any serious collapse. The day after the operation, with the exception of a certain difficulty in swallowing, a somewhat excessive amount of mucus in the pharynx, and an aching pain of a moderate degree in the neck and the sides of the head, the patient was as comfortable as could be expected under the circumstances. The pulse was good and the temperature was normal. The tension of the eyes was a soft normal and the pupils were small. Several days later the patient was practically well The difficulty in swallowing quickly disappeared. The pupils remained small and she stated that since the operation she had had no pain in her eyes. At least several months must elapse, however, before any decided opinion can be formed as to the success of the operation as regards the relief of the glaucoma.

This operation is undoubtedly a severe one and more so in that it is usually required on both sides of the neck. The proximity of the great vessels and nerves of the neck which have to be themselves handled and pulled apart necessitates the greatest care and a certain amount of general operative experience on the part of the surgeon.

The question naturally arises as to the risk and magnitude of the operation as compared with the severity and gravity of the disease for which it has to be performed. If such an operation does permanently and satisfactorily arrest the glaucoma, preserve the sight, relieve the pains, and restore the patient to even comparative comfort, then I consider it may be undertaken.

I have to thank Dr. F. Eddison and Miss M. M. Sharpe for assistance in respect to the notes of this case.

Harley-street, W.

TWO ILLUSTRATIVE CASES OF SINUS PYÆMIA WITH UNUSUAL RESULTS.

BY JAMES KERR, M.A., M.D. CANTAB.,
HONORARY SURGEON, BRADFORD EYE AND EAR HOSPITAL.

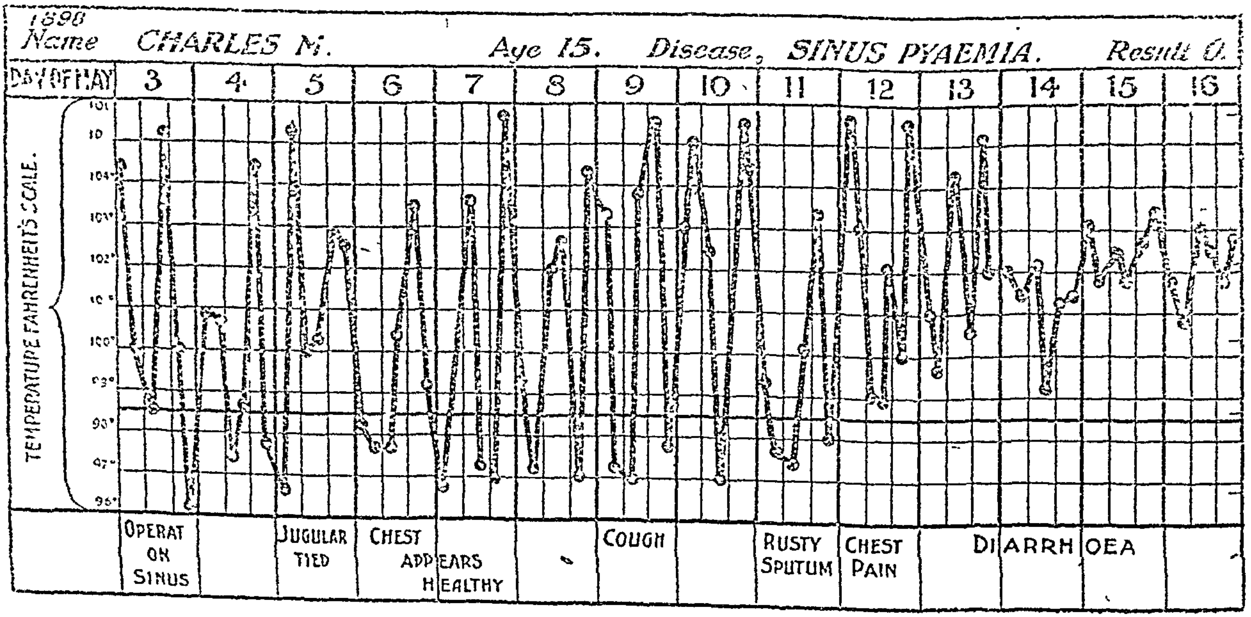
INCREASED attention is now being paid to aural diseases. The recorded mortality from otitis has increased from 5 to 25 per 1,000,000 in 20 years, between 70 and 75 per cent. of these deaths occurring in persons under 15 years of age, so that the suppurative ear disease so frequently neglected after the exanthemata is of serious import to life within a few years. Its import arises from extensions beyond the middle ear leading to abscess or pyæmia. Ten years ago these suppurative complications were looked upon as almost fatal; they are of the gravest import still, and one of the most formidable is sinus pyæmia. Two cases recently seen are worth recording; they are typical in clinical features, but unusual in the result. The treatment followed in both cases was by operative measures and the use of anti-streptococcic serum.

CASE 1.—A youth, aged 15 years, had suffered from chronic otitis for many years. Mastoid operation had been advised a year previously to his being seen by me on April 21st, 1898. There were acute exacerbation, pain, diffused swelling felt rather than seen over the right occipital and the parietal bones, loss of taste on the right side, and slight paresis on the right side of the face. The patient was admitted to hospital on the third day (April 25th). On the next day the right mastoid was explored. The antrum was continuous with a great smooth-walled cavity, which was filled with cholesteatomatous material. This was cleared out and a stinking abscess, which was found under the fascia over the parietal region, was disinfected. Some improvement took place, but there were rigors still, with a pyæmic temperature range of about 6° F. Some days later the sigmoid sinus was explored, when green pus was found. This was cleared out, the sinus was packed with gauze, and finally the jugular vein was tied. Ten cubic centimetres of anti-streptococcic serum were injected, at first once daily, then twice a day, but there was no improvement. The local infection was becoming generalised and there were great wasting and cough, and then chest râles and rusty sputum, pleuritic pains, steady increase of average temperature, general pyæmia, and offensive "typhoid" stools, with diarrhœa during the last ten days. Death took place on May 21st, within a month of the onset of the attack.

Post-mortem examination showed extension of the thrombus back from the obliterated part of the sinus and up the petrosal sinuses, general discolouration of bone, erosion and purulent lymph about the jugular foramen, several perforations punched out of the vein wall, and communication from the floor of the tympanum through the jugular dome, by which route infection seemed to have spread.

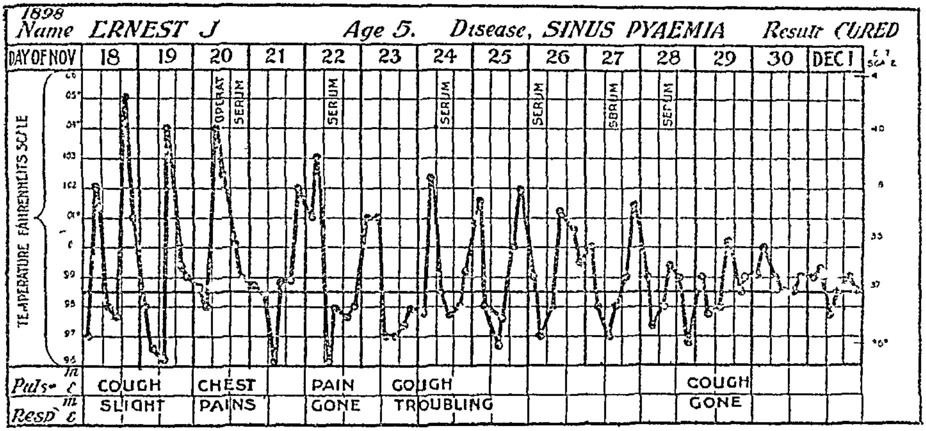
CASE 2.—The patient, a child, aged five years, had had ear trouble for a long time. The history was indefinite. For a fortnight recently there had been an abscess which had been opened by a medical man who sent the patient to the hospital, where he was admitted on Nov. 12th, 1898. The pulse-rate on admission was 104, the respirations were 28, and the temperature was 97·2° F. There was mental clearness, the tongue was coated with a thick, white, dry fur, and there was much discharge from the incision (Wilde's).

CHART 1.



Showing range of temperature.

CHART 2



Showing range of temperature and dates at which serum was given

Shotty cervical glands appeared on the side opposite to the wound only There was no thickening or tenderness over the jugular veins, the optic discs were normal, and there was no headache or pain During the night the pulse was 140 the respirations were 32, and the temperature was 103 6° F A diagnosis of probable left lateral sinus thrombosis was made An operation was performed on Nov 13th Bared bone was found for two inches back and above the incision The meatus had been stripped up, there was no discharging fistula Having chiselled deeply over the mastoid, pus was reached at a great depth The lateral sinus was thus fully exposed, it was solid and of a green blue black appearance (a drawing was made directly after the operation) The left jugular vein was tied and divided The sinus was now freely exposed till a healthy looking soft surface was reached Septic clot was freely scraped out till the bleeding at both ends necessitated plugging Both ends of the wound ultimately showed signs of being septic The pyæmic temperatures continued, but there were no rigors Cough began and there was rough breathing, and on Nov 20th there were acute chest pains Therefore further thorough exploration was made, the posterior end of the wound was opened up for an inch and scraped till a healthy area was reached The posterior wall of the middle ear was deeply chiselled till internal to, and below, the sinus a rudimentary antrum was found and cleaned out The whole tympanum was curetted and iodoformed The wound remained aseptic Serum injections (10 cubic centimetres) were administered about every 30 hours The patient's appetite improved except during 12 hours after each injection, the chest pains disappeared and the cough, which at first had been troublesome passed away within a week The temperature came slowly down to normal and the patient rapidly regained flesh and was discharged cured on Dec 10th

The mechanism of these cases is usually a chronic suppurative otitis with extension to the mastoid antrum and cells which discharge freely until suddenly, either from increased thickening of the mucous membrane or from slow thickening of the bone, the antral
ceases The first signal
inflammation from the
breaks its way through the ununited squamoso mastoid fissure but in others more often finds its way into cerebral sigmoid, or cerebellar fossæ The usual route leading to sigmoid sinus pyæmia is perforation from the antrum into the knee of the fossa, but in Case 1 the perforation appears to have followed a very unusual route in perforating the jugular dome When the local focus becomes diffused and the chest becomes affected recovery can scarcely be expected, yet this took place in Case 2 and probably was greatly aided by the use of the anti streptococcic serum With a rapid pulse and pyæmic temperature early exploration of the sinus should be made, and if it be found to be affected operative measures for the thorough removal of all septic material should be resorted to

Bradford.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus Morb*, lib iv *Prœmium*

HERBERT HOSPITAL, WOOLWICH.

TWO CASES OF ARTERIO VENOUS ANEURYSM CAUSED BY MAUSER BULLETS

(Under the care of Lieutenant-Colonel J T LEWTAS, I M S)

AN abnormal communication between an artery and vein is a fairly rare condition and it is rarer at the present time than formerly, for its most common situation was at the elbow, where venesection was usually performed The treatment of this condition advocated in the text books is based on the fact that the aneurysm which exists is traumatic in origin and therefore may be treated in the same manner as other traumatic aneurysms and so may be excised It is, however, by no means always necessary to excise these aneurysms, as Lieutenant Colonel Lewtas's interesting cases show, for a simple ligature sufficed The tendency, however at the present day is to excise the sac of aneurysms which are not traumatic in origin as well as those which arise from injury and the arguments advanced in support of this practice are that the harmful pressure exerted by the sac on neighbouring structures is more completely removed than by mere ligature of the artery and that the chance of recurrence of the aneurysm is much lessened It has also been found in practice that the probability of gangrene of the limb following the operation is lessened

CASE 1 —A private of the Argyll and Sutherland Highlanders when charging at Paardeberg on Feb 18th, 1900, was hit by two bullets, one of which passed through the right side of his chest and the other through the centre of his left patella making its exit at the back of the thigh, about the junction of the middle and lower thirds He soon recovered from both wounds but a varicose aneurysm developed between the popliteal artery and vein, for which he was invalided home On arrival at Woolwich there was a pulsating tumour in the left popliteal space of about the size gauze dressing was then applied. The anæsthetic employed at first was ether, but it was found necessary to change this to chloroform for the second operation on account of the engorgement of the veins of the neck produced by the ether. This operation is practically identical with that described by Dr. Jonnesco under the name of "pre-mastoid."

The patient's pulse was good during the first operation but became rather feeble in the course of the second. It was noticed that it became slower and more feeble when the vagus was forcibly retracted, and this was more marked on the left side. After returning to the ward the patient vomited a good deal and sweated freely, but the pulse was good and there was never any serious collapse. The day after the operation, with the exception of a certain difficulty in swallowing, a somewhat excessive amount of mucus in the pharynx, and an aching pain of a moderate degree in the neck and the sides of the head, the patient was as comfortable as could be expected under the circumstances. The pulse was good and the temperature was normal. The tension of the eyes was a soft normal and the pupils were small. Several days later the patient was practically well The difficulty in swallowing quickly disappeared. The pupils remained small and she stated that since the operation she had had no pain in her eyes. At least several months must elapse, however, before any decided opinion can be formed as to the success of the operation as regards the relief of the glaucoma.

This operation is undoubtedly a severe one and more so in that it is usually required on both sides of the neck. The proximity of the great vessels and nerves of the neck which have to be themselves handled and pulled apart necessitates the greatest care and a certain amount of general operative experience on the part of the surgeon.

The question naturally arises as to the risk and magnitude of the operation as compared with the severity and gravity of the disease for which it has to be performed. If such an operation does permanently and satisfactorily arrest the glaucoma, preserve the sight, relieve the pains, and restore the patient to even comparative comfort, then I consider it may be undertaken.

I have to thank Dr. F. Eddison and Miss M. M. Sharpe for assistance in respect to the notes of this case.

Harley-street, W.

TWO ILLUSTRATIVE CASES OF SINUS PYÆMIA WITH UNUSUAL RESULTS.

BY JAMES KERR, M.A., M.D. CANTAB.,
HONORARY SURGEON, BRADFORD EYE AND EAR HOSPITAL.

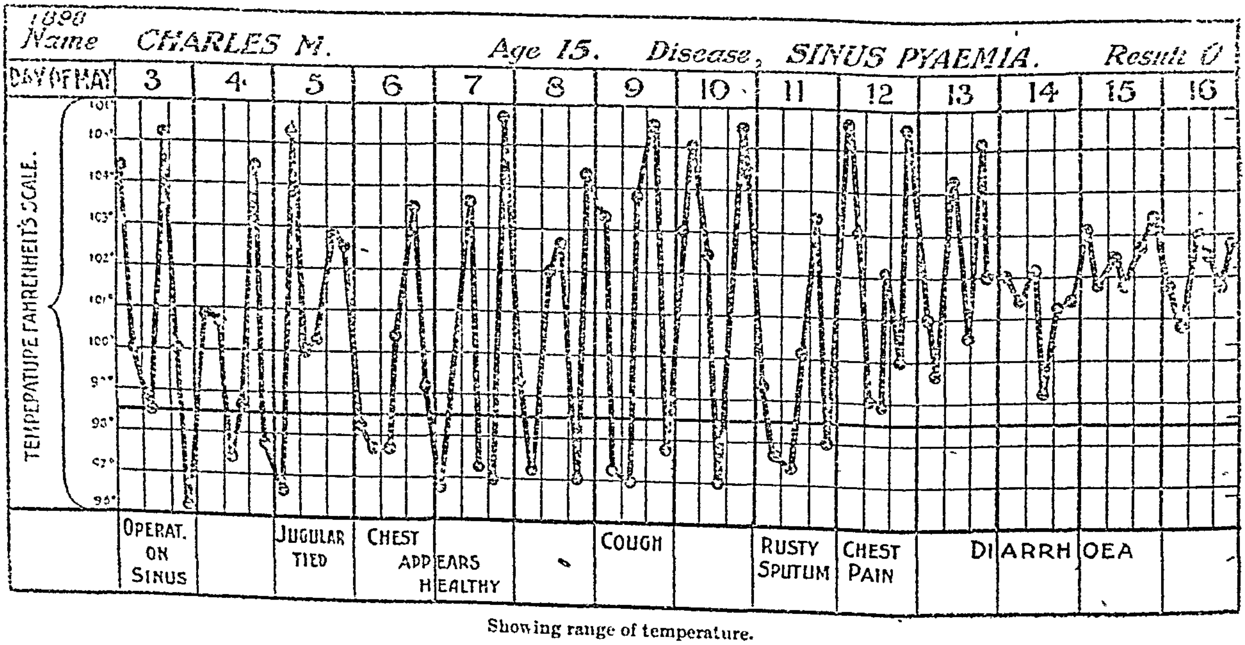
INCREASED attention is now being paid to aural diseases. The recorded mortality from otitis has increased from 5 to 25 per 1,000,000 in 20 years, between 70 and 75 per cent. of these deaths occurring in persons under 15 years of age, so that the suppurative ear disease so frequently neglected after the exanthemata is of serious import to life within a few years. Its import arises from extensions beyond the middle ear leading to abscess or pyæmia. Ten years ago these suppurative complications were looked upon as almost fatal; they are of the gravest import still, and one of the most formidable is sinus pyæmia. Two cases recently seen are worth recording; they are typical in clinical features, but unusual in the result. The treatment followed in both cases was by operative measures and the use of anti-streptococcic serum.

CASE 1.—A youth, aged 15 years, had suffered from chronic otitis for many years. Mastoid operation had been advised a year previously to his being seen by me on April 21st, 1898. There were acute exacerbation, pain, diffused swelling felt rather than seen over the right occipital and the parietal bones, loss of taste on the right side, and slight paresis on the right side of the face. The patient was admitted to hospital on the third day (April 25th). On the next day the right mastoid was explored. The antrum was continuous with a great smooth-walled cavity, which was filled with cholesteatomatous material. This was cleared out and a stinking abscess, which was found under the fascia over the parietal region, was disinfected. Some improvement took place, but there were rigors still, with a pyæmic temperature range of about 6° F. Some days later the sigmoid sinus was explored, when green pus was found. This was cleared out, the sinus was packed with gauze, and finally the jugular vein was tied. Ten cubic centimetres of anti-streptococcic serum were injected, at first once daily, then twice a day, but there was no improvement. The local infection was becoming generalised and there were great wasting and cough, and then chest râles and rusty sputum, pleuritic pains, steady increase of average temperature, general pyæmia, and offensive "typhoid" stools, with diarrhœa during the last ten days. Death took place on May 21st, within a month of the onset of the attack.

Post-mortem examination showed extension of the thrombus back from the obliterated part of the sinus and up the petrosal sinuses, general discolouration of bone, erosion and purulent lymph about the jugular foramen, several perforations punched out of the vein wall, and communication from the floor of the tympanum through the jugular dome, by which route infection seemed to have spread.

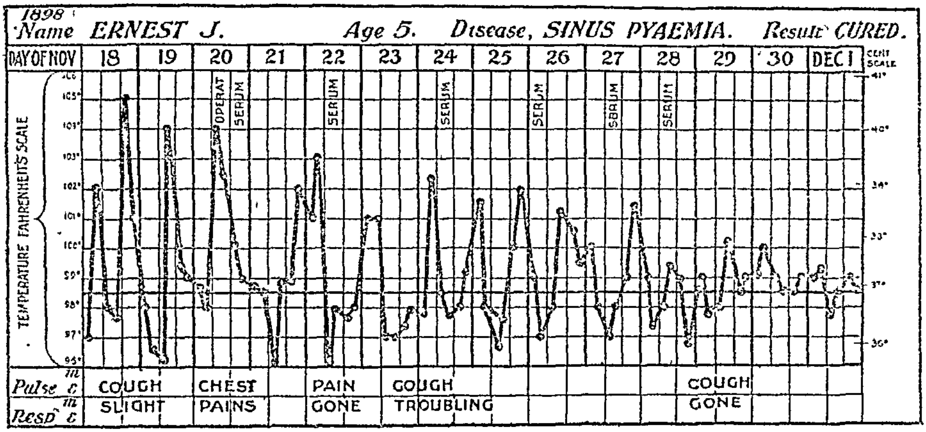
CASE 2.—The patient, a child, aged five years, had had ear trouble for a long time. The history was indefinite. For a fortnight recently there had been an abscess which had been opened by a medical man who sent the patient to the hospital, where he was admitted on Nov. 12th, 1898. The pulse-rate on admission was 104, the respirations were 28, and the temperature was 97·2° F. There was mental clearness, the tongue was coated with a thick, white, dry fur, and there was much discharge from the incision (Wilde's).

CHART 1.



Showing range of temperature.

CHART 2.



Showing range of temperature and dates at which serum was given.

Shotty cervical glands appeared on the side opposite to the wound only. There was no thickening or tenderness over the jugular veins, the optic discs were normal, and there was no headache or pain. During the night the pulse was 140, the respirations were 32, and the temperature was 103·6° F. A diagnosis of probable left lateral sinus thrombosis was made. An operation was performed on Nov. 13th Bared bone was found for two inches back and above the incision. The meatus had been stripped up; there was no discharging fistula. Having chiselled deeply over the mastoid, pus was reached at a great depth. The lateral sinus was thus fully exposed; it was solid and of a green blue-black appearance (a drawing was made directly after the operation). The left jugular vein was tied and divided. The sinus was now freely exposed till a healthy-looking soft surface was reached. Septic clot was freely scraped out till the bleeding at both ends necessitated plugging. Both ends of the wound ultimately showed signs of being septic. The pyæmic temperatures continued, but there were no rigors. Cough began and there was rough breathing, and on Nov. 20th there were acute chest pains. Therefore further thorough exploration was made; the posterior end of the wound was opened up for an inch and scraped till a healthy area was reached. The posterior wall of the middle ear was deeply chiselled till internal to, and below, the sinus a rudimentary antrum was found and cleaned out. The whole tympanum was curetted and iodoformed. The wound remained aseptic. Serum injections (10 cubic centimetres) were administered about every 30 hours. The patient's appetite improved except during 12 hours after each injection, the chest pains disappeared, and the cough, which at first had been troublesome, passed away within a week. The temperature came slowly down to normal and the patient rapidly regained flesh and was discharged cured on Dec. 10th.

The mechanism of these cases is usually a chronic suppurative otitis with extension to the mastoid antrum and cells which discharge freely until suddenly, either from increased thickening of the mucous membrane or from slow thickening of the b[illegible]nd discharge ceases [illegible] with violent inflamm[illegible] in children breaks its way through the ununited squamoso-mastoid fissure, but in others more often finds its way into cerebral, sigmoid, or cerebellar fossæ. The usual route leading to sigmoid sinus pyæmia is perforation from the antrum into the knee of the fossa, but in Case 1 the perforation appears to have followed a very unusual route in perforating the jugular dome. When the local focus becomes diffused and the chest becomes affected recovery can scarcely be expected, yet this took place in Case 2 and probably was greatly aided by the use of the anti-streptococcic serum. With a rapid pulse and pyæmic temperature early exploration of the sinus should be made, and if it be found to be affected operative measures for the thorough removal of all septic material should be resorted to.

Bradford.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HERBERT HOSPITAL, WOOLWICH.

TWO CASES OF ARTERIO-VENOUS ANEURYSM CAUSED BY MAUSER BULLETS.

(Under the care of Lieutenant-Colonel J. T. LEWTAS, I.M S)

AN abnormal communication between an artery and vein is a fairly rare condition and it is rarer at the present time than formerly, for its most common situation was at the elbow, where venesection was usually performed. The treatment of this condition advocated in the text-books is based on the fact that the aneurysm which exists is traumatic in origin and therefore may be treated in the same manner as other traumatic aneurysms and so may be excised. It is, however, by no means always necessary to excise these aneurysms, as Lieutenant Colonel Lewtas's interesting cases show, for a simple ligature sufficed. The tendency, however, at the present day is to excise the sac of aneurysms which are not traumatic in origin as well as those which arise from injury and the arguments advanced in support of this practice are that the harmful pressure exerted by the sac on neighbouring structures is more completely removed than by mere ligature of the artery and that the chance of recurrence of the aneurysm is much lessened. It has also been found in practice that the probability of gangrene of the limb following the operation is lessened.

CASE 1.—A private of the Argyll and Sutherland Highlanders when charging at Paardeberg on Feb. 18th, 1900, was hit by two bullets, one of which passed through the right side of his chest and the other through the centre of his left patella making its exit at the back of the thigh, about the junction of the middle and lower thirds. He soon recovered from both wounds, but a varicose aneurysm developed between the popliteal artery and vein, for which he was invalided home. On arrival at Woolwich there was a pulsating tumour in the left popliteal space of about the size of a walnut, with the characteristic thrill of an arterio-venous aneurysm. An interval could be distinguished by the fingers between the tumour of the vein and the underlying artery. His chief complaint was of constant pain over the dorsum of the foot and lower part of the front of the leg. On May 23rd an incision was made over the popliteal space and the vein was tied above and below the aneurysm. The artery could not be tied at the same place as it lay deep upon the lower end of the femur and was obscured by oozing of blood. A second incision was therefore made in the usual situation for ligature of the popliteal artery at its upper end, and the artery was tied there. The patient made a good recovery, the tumour quite disappeared, and when he was discharged in August the pain in the foot had also almost gone, showing that it was chiefly due to pressure of the tumour on nerves.

CASE 2.—This case did not end so favourably. A private of the West Yorkshire Regiment was hit on Feb. 11th, 1900, at Monte Christo by a bullet which passed through the inner border of his right thigh above its middle. On arrival at Woolwich the patient was found to have a varicose aneurysm at the upper end of Hunter's canal. On May 31st the femoral artery was ligatured just above its communication with the vein, and as this stopped all pulsation in the vein it was decided to postpone ligature of the latter to a subsequent occasion if it should ever be necessary; such a procedure would, it was thought, interfere less with the circulation of the limb and would therefore be less likely to be followed by gangrene, which is so frequent a result of high ligature of the femoral. But a few days after the operation the foot became cold and mummified and there was no alternative but to amputate the limb through the condyles of the femur. From this the patient made a good recovery, and when discharged there was no sign of an aneurysm of the vein.

Remarks by Lieutenant-Colonel LEWTAS.—The practice of tying both artery and vein above and below these aneurysms and then dissecting out these appears unnecessarily elaborate and severe, and the simpler operation adopted in these two cases was quite satisfactory so far as the aneurysms were concerned.

ROYAL NAVAL HOSPITAL, PLYMOUTH.

TWO CASES OF BULLET WOUNDS.

(Under the care of Deputy Inspector-General H. T. COX, R.N.)

THE former of the following two cases is a good example of the value of suture for a divided nerve even when it is not possible to bring the two ends into exact apposition. In such cases, however, a good result is always doubtful and sometimes transplantation of a portion of nerve is advisable. In the second case an aneurysmal varix interfered seriously with the use of the limb. Any such interference is rather exceptional with this condition, but is more likely to occur in the lower than in the upper limb because the blood-pressure in the veins is greater in the former. For the notes of the cases we are indebted to Surgeon H. W. Gordon Green, R N.

CASE 1. *Fracture of the humerus with division of the musculo spiral nerve by a Mauser bullet.*—A private, aged 29 years, Royal Marine Light Infantry, H.M.S. *Powerful*, was wounded in the left arm by a Mauser bullet at Graspan on Nov. 25th, 1899. He was carrying his rifle at the slope when he received the injury. The bullet passed between the ring finger and little finger (as shown by slight skin wounds), struck the butt of his rifle, which was sent flying out of his grasp some distance away, grazed the palm of the hand, and entered the centre of the arm through the anterior and outer aspect of the biceps, fracturing the humerus and dividing the musculo-spiral nerve. He was admitted into the Royal Naval Hospital, Simon's Town, on Nov. 29th, where a radiograph showed extensive comminution of the humerus and lodgment of the bullet beneath the skin at the back of the arm. On Dec 4th the bullet was removed and was found to be a Mauser (ricochet) bent into a V shape. The bullet was probably bent on striking the brass-bound butt of the rifle, and it now adorns the man's watch-chain. On Jan. 10th, 1900, he was discharged invalided to the s.s *Simla* for passage to England. The fracture had united, a large amount of callus extending from two inches from the elbow joint to three inches from the upper end of the humerus having been thrown out. There was a fair amount of œdema of the forearm.

On March 5th the patient was admitted into the Royal Naval Hospital, Plymouth, under the care of Deputy Inspector-General H. T. Cox, R.N., with wrist-drop, complete motor and sensory musculo-spiral paralysis, with clamminess of the hand and wasting of the muscles. On the 20th, the patient having been prepared for an anæsthetic, the arm shaved and the skin antisepticised, chloroform and subsequently ether were administered. The arm being placed over the body a slightly oblique incision four inches in length was made half an inch behind the posterior border of the deltoid muscle which was defined, the intersection between the long and outer heads of the triceps was found, and the bone was exposed. The cicatricial tissue marking the track of the bullet could be easily traced down to the bone, and after much search the ends of the nerve were found, freshened, and sutured with catgut. Accurate apposition could not be obtained, about half an inch of the nerve having been destroyed, but on tightening the sutures there was a gap of only about a quarter of an inch. There was troublesome hæmorrhage from the upper end of the superior profunda artery in searching for the nerve. The muscles and skin were sutured, the wound was dressed antiseptically, and a rectangular splint was applied. The temperature reached its highest point (100·8° F.) on the 22nd and was normal on the 24th. On the 28th the sutures were removed and the wound was found to be soundly healed. On April 6th there was slight return of sensation in the back of the forearm and in the thumb. On the 18th galvanism was applied. On May 23rd the patient was discharged to 90 days' furlough. Sensation was completely restored and the hand had lost all coldness and clamminess. The muscles supplied by the musculo spiral nerve responded to the galvanic current and there was considerable increase in power in the extensors of the thumb, but wrist-drop still persisted.

CASE 2. *Aneurysmal varix of the femoral artery and vein caused by a Mauser bullet-wound.*—A private, aged 23 years, Royal Marine Light Infantry, H.M S. *Doris*, was wounded at Graspan on Nov. 25th, 1899, by Mauser bullets in the right thigh and leg. The wound of entry in the thigh was situated four inches below Poupart's ligament in the course of the femoral artery, the bullet passing directly back through the thigh, the exit wound being five and a half inches below the tip of the great trochanter. The wound of entry in the leg was situated one inch vertically below the tubercle of the tibia, apparently passing obliquely through that bone, the exit wound being at a level five inches lower down slightly to the outer side of the calf. The two bullets struck the man almost simultaneously as he was in the act of getting up from the prone firing position and they brought him to the ground. The distance from the enemy was about 300 yards, the Boers occupying a position on the face of a hill between 200 and 300 feet above the plain. There was considerable hæmorrhage from both wounds, saturating his clothing but not causing him to faint. Within a few minutes an officer of the Royal Army Medical Corps applied to the thigh wound the field dressing which he carried and five minutes later a corporal of the Royal Army Medical Corps bound up the wound in the leg. The patient was then removed by stretcher 500 yards to the rear, and thence by ambulance wagon one and a half miles to the dressing-station, where the wound in the leg was re-dressed, as it was still bleeding. From the dressing-station he was conveyed by ambulance wagon to Graspan Station Field Hospital, reaching there about five hours after being wounded. Here his wounds were dressed without hæmorrhage occurring and he remained until Nov. 27th, when he was sent by ambulance train to the Naval Hospital, Simon's Town, arriving there on Nov. 29th. On Dec. 7th the wounds had healed. A distinct thrill could be felt over the course of the femoral artery close to the upper wound and a loud buzzing bruit could be heard synchronously with the pulse. The condition of arterio-venous aneurysm was treated by rest, pressure, and elevation of the limbs, and on Jan. 10th, 1900, the patient was invalided home per s.s. *Simla*

On March 5th the patient was admitted into the Royal Naval Hospital, Plymouth, under the care of Deputy Inspector-General H. T. Cox, R.N. The limb was cold and slightly œdematous as compared with the other and it was practically useless as regards progression, the patient being unable to get about without the aid of crutches. The position of the wounds was as previously described. Pulsation in the posterior tibial and dorsalis pedis arteries was feeble. The bruit could be felt and heard about four inches above and below the scar of the entry wound, and it disappeared completely on compressing the femoral artery. There was no expansile tumour or enlargement of the veins, and the nutrition of the limb was good, with slight impairment of sensation. The patient stated that immediately on receipt of the injury and for four days following he lost all sensation in the limb, but that this had improved considerably since. On April 10th, the patient having been prepared for an anæsthetic, the thigh shaved and the skin antisepticised, he was placed under ether. The limb having been rendered bloodless by Esmarch's bandage and a tourniquet applied an incision five inches in length was made in the course of the artery through the cicatrix of the bullet-wound The track of the bullet led down to the sheath of the vessels, passing between the femoral artery and vein, a small amount of cicatricial tissue indicating the point of injury to the coats of the vessels, binding them and the sheath together, there being direct communication between the vessels at this point. The femoral artery was isolated and ligatured with kangaroo tendon half an inch above and below the wound in the vessels, the fibrous tissue joining the artery and vein being left undisturbed. On releasing the tourniquet no pulsation or thrill could be felt in the vein. The fascia and skin wounds were sutured with catgut and silkworm gut, the wound was dressed antiseptically, and the limb was enveloped in cotton-wool and elevated, warmth being maintained by hot-water bottles. The temperature never rose above 99 6° F. The limb and foot were quite warm and sensitive on the morning after the operation and the wound had healed and pulsation was felt in the posterior tibial on April 19th. He was allowed to get up on May 1st, from which date he made an uninterrupted recovery, and was discharged to duty on June 1st with full use of the limb.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Adenoma of the Body of the Uterus.—Subcutaneous Symphysiotomy.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 4th, Mr. ALBAN DORAN, the President, being in the chair.

Dr. HUBERT ROBERTS read notes of a case of Cancer of the Cervix associated with an Adenomatous Growth of the Fundus. The patient was a multipara, aged 38 years, who had advanced cancer of the cervix, the history dating from about four months before her admission. Except for discharge and hæmorrhage the patient was in good health. Though not a favourable case for vaginal hysterectomy this was performed on March 12th, 1900. The patient recovered well and was still without recurrence. The interest of the case was centred in the specimen, which showed a uterus with advanced cancer of the cervix associated with a curious growth in the fundus uteri, which proved on microscopical examination to be of an adenomatous nature and to have no connexion with the columnar-celled epithelium of the cervix. Mr. J. H. Targett and Dr. Walter Tate carefully examined the microscopical sections, which were prepared by Mr. Corrie Keep. Dr. Cosens prepared the excellent micro photographs shown. Dr. Hubert Roberts first discussed adenomatous growths occurring in the cervix uteri, the simplest forms being erosion, mucous polypi, and the follicular hypertrophy of pregnancy. There were also some rare cases of true adenomatous tumours, which were sometimes almost indistinguishable from columnar-celled carcinoma. As regards adenoma of the body of the uterus he considered that great confusion existed. "Endometritis," so-called, was a misleading term, for although a true septic endometritis existed, many conditions called "endometritis" associated with overgrowth were really adenoma, some apparently simple, othe[illegible] if they recurred. Reference was [illegible] which glandular elements inva[illegible] the uterus. Such growths [illegible] Mere curettings in adenoma [illegible] looked upon recurring adenoma- of the uterus in old women with grave suspicions.—The PRESIDENT said that it was clear that two different forms of new growth had developed in the same uterus. The tumour in the body was a pure adenoma according to its microscopical appearances, but to the naked eye it looked malignant. Much remained to be learnt about the earliest stage of cancer of the uterine body.—Dr. A. H. N. LEWERS said that he had met with a case presenting all the characters clinically of cancer of the cervix in which the microscopic examination merely showed large cavities lined by a single layer of columnar epithelium. Supra-vaginal amputation of the cervix was performed. For a time the patient remained well, but about a year after the operation the disease recurred in the scar, and before long there was a large typically malignant ulcer at the top of the vagina. As regards the cause why the uterus was fixed in advanced cancer Dr. Lewers believed the principal cause was extension of the malignant growth to the tissues in the neighbourhood. This seemed proved by cases where, as the impairment of mobility was only slight, an attempt was made to remove the uterus In several such cases the operation revealed infiltrated tissue beyond the uterus at the situation where the mobility of the uterus appeared to be checked.—Dr. W. S. A. GRIFFITH remarked upon the nature and significance of peri-uterine indurations in cases of presumably operable uterine cancer.—Dr. AMAND ROUTH said he believed that any definite growth developing from the lining membrane of the uterine body after the menopause tended to become malignant and should be treated as such. He instanced a case of recurrent papilloma, innocent microscopically, in which after hysterectomy the growth was seen to have deeply invaded the muscle of the uterus. He did not consider that hysterectomy was justifiable if the broad ligament or utero-sacral folds were indurated, for as all the disease could not be removed the growth was sure to progress —Dr. G. E. HERMAN could not agree with Dr. Griffith that fixation of the uterus in early cancer was often due to adhesions. He agreed with Professor W. J. Sinclair of Manchester that the usual direction of extension of uterine cancer was into the cellular tissue of the utero sacral ligaments. The situation of the induration due to spread of cancer in this direction was different from that of induration from pelvic peritonitis. In some doubtful cases in which he had commenced operation, but found that there was too much extension of cancer laterally for the operation to be completed, he had opened Douglas's pouch and found it free from adhesions. He had seen cases of large adenomatous polypoid growths in the uteri recurring again and again after removal; and the microscopical signs of such growths were distinctive; they were not solid, friable tissue like cancer, but pulpy, gelatinous translucent stuff. When such recurrence took place more than once he thought hysterectomy was indicated.—Dr. HERBERT SPENCER thought the report of the case a most valuable one. It clearly showed the association of a simple adenoma of the body with cancer of the cervix. He had no doubt that these adenomata had often been described as secondary deposits of cancer. Ruge and Veit's case ("Krebs der Gebärmutter," Fig. 34) was in his opinion erroneously so described. Cases of simple adenoma of the body had often been removed for cancer. He had met with simple adenoma in old women even recurring after curetting, and yet the patient remaining well and the uterus atrophying after as long as six years from the second curetting. The diagnosis between these cases and cancer was often very difficult —Dr. HUBERT ROBERTS, in reply, said he thought that in Dr. Lewers's case of suspicious recurrent adenoma of the cervix hysterectomy would have been a better proceeding than supra-vaginal amputation. He criticised Dr Griffith's remarks and thought it was impossible clinically to decide whether fixation of a malignant uterus was inflammatory or cancerous, and he considered that if the uterus could not be drawn down by traction with a pair of volsella owing to parametric invasion it was unsuitable for operation. He considered that vaginal hysterectomy was the best treatment for recurring adenoma of the body of the uterus in old women.

Dr. G. ERNEST HERMAN read a paper on Subcutaneous Symphysiotomy, pointing out the advantages of the subcutaneous operation especially as regards its simplicity, quickness, small risk of sepsis, insignificant hæmorrhage, absence of a gaping wound and of a subsequent scar. He urged that if the maximum benefit from symphysiotomy was to be secured it should be done under the most favourable conditions. It ought not to be postponed until the necessity for some kind of operative delivery had been demonstrated by the complete failure of the natural powers. The accoucheur should ascertain the size of the pelvis before labour and estimate also the size of the child. If he decided upon symphysiotomy it should be done at the most favourable time, and that was immediately after full dilatation of the os uteri. The frequency with which in contracted pelves the membranes ruptured prematurely would make the dilatation of the cervix with Champêtier de Ribes's bag usually advantageous. Dr. Herman pointed out that one risk at present inseparable from symphysiotomy was that of injury to the urethra; this was likely to happen in cases in which an attempt was made to deliver by symphysiotomy a child too large to be delivered in that way, and thus the pubic bones were excessively separated. This was to be guarded against by carefully estimating the size of the child beforehand.—Dr. Griffith described an easy method of ascertaining the relative sizes of the fœtal head and the maternal pelvis. The woman was made to sit on the edge of the bed at such an angle that the long axis of the fœtus was vertical. The fœtal head, if smaller than the pelvis, would then spontaneously dip into the cavity owing to the weight of the fœtus being free to act. He discussed the relative indications for induction of premature labour, symphysiotomy, and Cæsarean section in cases of contracted pelvis.—Dr. Lewers said he had seen some of the operations described in the paper and he regarded subcutaneous symphysiotomy as a great improvement on the method involving a large open wound. It was not applicable, however, in all cases. In his own case of symphysiotomy, for instance, there was a sort of "bite" or dovetail at the middle of the joint and a saw had to be used before the joint-surfaces could be separated. His patient had incontinence of urine for some weeks after the operation but ultimately recovered complete control in this respect and micturition was now quite normal.—Dr. Spencer thought the subcutaneous method recommended by Dr. Herman had advantages over the open method, but it was to be remembered that many cases of severe hæmorrhage from division of large vessels had been recorded and this had led some authorities to advocate the open method and packing the wound with iodoform gauze. Wounds in the vagina were also very apt to occur and if these communicated with extensive effusions about the pubes the danger of sepsis would scarcely be diminished by the subcutaneous method of dividing the joint.—Dr. Herman, in reply, said he was much interested in the method of ascertaining the relative size of the pelvis and child described by Dr. Griffith and hoped to put it in practice. He had included lacerations of the vagina in the injuries of the urethra of which he had spoken, for lacerations of the urethra usually affected the vagina also, and a laceration of the vagina so slight as not to reach the urethra was not important.

The following specimens were shown:—

Dr. H. Russell Andrews: Three specimens of Supernumerary Digits with Microscopical Section and Skiagrams.

Mr. J. H. Targett: 1. Pregnancy in a Rudimentary Uterine Horn; successful removal of gestation sac five months after full term. 2. Squamous-celled Epithelioma of the Body of the Uterus.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimen.—President's Address.

The first meeting of the nineteenth session was held at the West London Hospital on Oct. 5th. Dr. F. F Schacht occupied the chair. The minutes of the last meeting were read and confirmed and several new members were balloted for.

Dr. J. A. Mansell Moullin exhibited a Fibroid Tumour which, with the pregnant uterus, he had removed by subperitoneal hysterectomy. The patient, who was aged 25 years, had been married for four months. She stated that she was three months pregnant, but she presented a swelling in the abdomen resembling a seven months' pregnancy. She complained of severe pain in the left ilio-hypogastric region which commenced suddenly. There were considerable distension, great tenderness, feeble pulse, and collapse. As the patient grew worse Dr. Mansell Moullin determined to explore the abdomen. He opened it in the middle line by a long incision extending above the umbilicus. The tumour was at once seen, and on its summit was found a soft spongy mass of dark appearance with the peritoneal covering ruptured over it to the extent of about four inches. The operation was completed by removing the whole mass and together with it the uterus containing a four months' fœtus and the placenta. The patient made a very good recovery. The tumour was found to be an immense fibroid growing from the back and the upper edges of the uterus. It was sub-peritoneal and of such a size that it reached above the umbilicus. The uterus could be made out about eight inches lower down by means of the Fallopian tubes. The top of the tumour had sloughed and had broken through the peritoneal coat Dr. Mansell Moullin thought that this case illustrated well one of the many dangers that women with fibroids were exposed to. He said that he was unable to understand the mental attitude of a certain school which inculcates a "do-nothing' policy." Without an operation the patient in this case must have died. She was now spared the tremendous risk which she incurred by becoming pregnant.

Dr. F F. Schacht, the newly elected President, then delivered his address on the Early Treatment of Abdominal Symptoms. After thanking the members for the honour which they had done him by placing him in the chair, he alluded to the fact of his having been the first secretary with Mr. C. R. B. Keetley (the founder of the society) during his presidentship and to his now occupying the chair as a sort of evolutionary development from that position some 18 years ago. Other presidents of this and kindred societies had in their various addresses sketched the advance of every branch of medicine and surgery during the last 50 years. Among those were included the surgical triumphs in the domain of abdominal surgery. During the life-history of the society many fashions in abdominal surgery had arisen and passed away, or sunk to their proper levels, but these triumphs led occasionally to the neglect of the earlier clinical symptoms and their medical prevention. The surgeon's familiarity with the peritoneum had taught them to differentiate and realise many affections, but the clinical symptoms were much the same as of old—vomiting, constipation, diarrhœa, raised temperature, increased pulse-rate, pain, and tenderness. All these were most valuable as symptoms, but yet in many cases they were individually so uncertain in their manifestations that a large proportion of cases must remain of doubtful diagnosis in the early stage. As, however, many serious complications might arise unexpectedly if all possible precautions were not taken, a uniform and systematic method of treatment ought to be adopted from the very beginning in all cases of abdominal disturbance. The wonderful healing power of the peritoneum when left to nature and the process by which this was best attained were then discussed, with a view to showing that rest, mechanical and physiological, should be the object aimed at. Although this appeared to be a truism and was agreed to by all in advanced cases when the damage was done, it was clear from the number of cases of neglect seen daily that in the early stages sufficient care was not given either by the public or the profession to the essentials of rest. Dr. Schacht proceeded to urge that all cases of doubtful abdominal symptoms should be treated in a uniform manner—i.e., by absolute rest in bed, restricted fluid diet, the avoidance of all aperients, and the administration of small doses of opium, preferably hypodermically administered. Illustrative groups of cases—such as gastric ulcers, appendicular inflammations, obstructions, twisted ovarian pedicles, ovarian and tubal inflammations, including ruptured tubal pregnancies—were cited to show what a long list of abdominal troubles were seriously affected by this question of early care, even if they did eventually require the surgeon's interference. The constant reiteration in previous histories of wasted early opportunities had so struck him that he felt that their increased knowledge had, perhaps, developed a new danger and that there was apparently a liability to overlook medical prevention because of the familiarity with surgical cures The public must ultimately be guided by the profession and must be taught that prompt and strict treatment of a uniform character, if applied in the early stages of any abdominal attack, would shorten many an illness, would lessen its gravity, and would diminish the necessity for surgical interference.

A vote of thanks to the President for his address was proposed by Dr W. Travers and seconded by Mr. F. Swinford Edwards.—The President then replied and the meeting adjourned.

Reviews and Notices of Books.

A Text-book of Medical Treatment, Diseases, and Symptoms. By NESTOR TIRARD, M.D., F.R.C.P. Lond., Professor of the Principles and Practice of Medicine, King's College, London; Physician to King's College Hospital; and Senior Physician to the Evelina Hospital for Sick Children. London: J. & A. Churchill. 1900. Pp. 692. Price 15*s.*

IN most text-books on practical medicine the etiology, symptoms, and pathology are dealt with in detail, but the subject of treatment is considered only in general terms, thus affording little help in practical work; a desire is therefore felt by the student for a book in which treatment holds the primary place. Several such works have been published and the volume now before us is one of the latest additions to the number. Dr. Tirard has attempted something more, however, than a treatise on treatment only. The various diseases are described *seriatim*, the sequence of the chapters resting chiefly on an anatomical and physiological basis. Under the head of the different maladies the main symptoms are described, stress being laid on those which afford indications for treatment. Similarly, with regard to the causes and complications of certain morbid conditions, attention is directed to those which call for prophylactic or remedial measures. The student, in studying this work, in addition to receiving valuable hints and suggestions with regard to therapeutics, will be able to refresh his memory and to add to his knowledge of the symptoms of diseases.

Throughout all the chapters numerous prescriptions are given culled partly from the author's own experience and partly from the pharmacopœias of the London hospitals.

The various disorders of the circulation are first considered and the treatment suggested is sound and up to date. We would draw the reader's attention to the remarks on the use of digitalis in aortic disease, a subject which is always one of difficulty to the junior practitioner. Very instructive also are the observations on the treatment of chlorosis, a condition which not uncommonly is somewhat rebellious to treatment. We are unable to find any reference to the addition of iodide of potassium to iron salts, a procedure often productive of satisfactory results.

Three chapters are devoted to the therapeutics of disorders of respiration. In describing the treatment of tuberculous laryngitis sufficient stress is not laid on the use of strong solutions of lactic acid, which has frequently met with great success. The sections devoted to "Asthma," "Pneumonia," and "Reflex Cough" will also repay perusal.

The consideration of the diseases of the digestive tract occupies six chapters and a large amount of information is afforded. The chapters are sub-divided into sections for convenience of reference. The one devoted to "Organic Stricture or Chronic Obstruction of the Œsophagus" contains an excellent account of the procedures which may be adopted in that very troublesome and painful affection, and minute instructions are given for the preparation and administration of nutrient enemata. The consideration of acute and chronic gastritis and of gastric ulcer constitutes one of the best sections of the book. All these conditions are frequently met with, yet the student entering on the final stages of his medical curriculum will be frequently puzzled when asked to give minute instructions as to the treatment of a case of chronic gastritis or of a case of dyspepsia. He will suggest "Mist. gent. alk." or "Mist. bismuthi," but when requested to give the ingredients and necessary modifications of these standard mixtures he will most probably be at fault. In reference to the diet requisite for such cases, also, he would find it very difficult to put into writing a detailed diet chart containing the nature and quantity of the daily food. It is in reference to points such as these that a book of the nature of the one now under review is of such value. The use of lavage is recommended in some cases of chronic gastritis, especially when the morbid condition is suspected to be due to alcoholic or some other dietetic excess, and the method of carrying out the procedure is plainly described.

The principles involved in the treatment of diseases of the liver, kidney, and nervous system receive their due amount of attention, as do also the various specific infectious diseases.

Two chapters are devoted to the treatment of tuberculosis. The pulmonary form is naturally taken as the chief one coming under the notice of the practitioner, tuberculosis affecting other viscera being considered only as complications of what is ordinarily called pulmonary phthisis. The "open-air" method is fully described, but Dr. Tirard abstains from enthusiastic praise. He says: "It is not claimed for the open-air treatment that it is an infallible cure or that it will serve to prevent the extension of tubercle to other organs; but it is asserted, and apparently with justice, that in a large percentage of patients improvement will follow the adoption of this system; and there seems to be but little reason why establishments for the open air treatment of phthisis should not become part of the health arrangements of every town."

The book concludes with three chapters on the treatment of "Constitutional Diseases," including rheumatic fever, gout, rickets, and diabetes.

We have perused Dr. Tirard's book with much pleasure. The manner in which it is written is pleasing and attractive and, as we have already said, the instructions given for the treatment of the various diseases are sound and reliable and the student should have no difficulty in following them.

The Care of the Child in Health. By NATHAN OPPENHEIM. London: Macmillan and Co., Limited. 1900. Pp. 308. Price 5*s.*

THIS is a readable volume in which the author describes in detail the care required in rearing infants and young children, offering much good advice as the result of his experience. The book will prove useful in diffusing knowledge of scientific principles and common sense, which appear to be much needed among mothers. The author warns mothers against feeding children with "pungent and aromatic spices, preserved, pickled, and desiccated articles," further pointing out that "salads, pickles, beer, and wines, &c.," are unfitted for a child aged three years. Various ideas are expressed as to a woman's duties and as to the ideals and the aspirations of womanhood, which in some cases lead to the desire for public and laborious positions rather than for a domestic and social sphere of usefulness. Such a change may be gradually accomplished by women for themselves but should not interfere with the true well-being of women and the development of healthy well bred children. The chapters on health in pregnancy and in confinement, as well as that on the infant's outfit and nursery, are useful and give good guidance. Some of the details as to dress are original and full of common sense, while the expectant mother is wisely urged not to give way unnecessarily to habits of indolence or to apprehension of "maternal impressions" hurtful to the child. When speaking on the care of infancy there is a marked absence of description of the infant, and no instruction or encouragement is given to the mother in observing the conditions of developmental growth and the evolution of brain action such as indicate healthy progress, or the need of special care and advice, this seems to be an omission of importance. The mother's own observations of the growth of her infant's body and the evolution of the brain would prove a strong incentive to maternal care, affording an additional interest and self-acquired knowledge from experience as to health and growth day by day. The subject of infant feeding naturally occupies much space, and the proper use of the feeding-bottle and the preparation of milk foods affording appropriate diet are described in detail, while the dangers arising from the employment of an exclusive diet of sterilised milk are pointed out. The recommendation to add lime-water to the milk is in accordance with established practice; this helps towards neutralising acidity, but does not usually suffice for that purpose. Human milk has a slightly alkaline reaction; normal cow's milk is either neutral or slightly acid in reaction, and when supplied to the house it is usually acid in a degree not neutralisable by lime-water. Mothers are advised as to their health, exercise, and diet, but are not, we think, sufficiently urged to adapt their habits to the necessities of lactation and to use the natural supply for the benefit of the child, supplemented if need be by bottle-feeding. It is curious to find among the list of fat foods "sweet oil, olive oil, and some cereal oils"; such vegetable products are laxatives, not foods. It also appears of doubtful usefulness to mention to mothers a number of patent foods without explaining their uses and dangers The chapter on Sleep is good. It would be well if parents learned to observe the infant during sleep, the appearance of the face, and those transient and often asymmetrical smiles which may precede convulsions, as also the hands and twitching fingers accompanied by tooth-grinding which indicate absence of a full condition of brain rest. Education is dealt with in the abstract rather than by pointing out the natural brain faculties which the mother should study to exercise, such as imitation of initial sounds and speech, the use of the hands and their control through the senses. We do not agree with the author that the sense organs are too immature for early culture; a child under three years of age may receive impressions of colour if care is taken to present appropriate coloured objects; the naming and matching of the colours may be left for later training. This and other matters should not be left to chance experience; early impressions afford material for later mental acquisitions. Defective children are briefly described; here in particular the mother's habits of observation will help her to cultivate the special needs of the child.

Sewage and the Bacterial Purification of Sewage. By SAMUEL RIDEAL, D.Sc. Lond. London: Robert Ingram. 1900. Pp. 278. Price 14s.

THIS book has appeared most opportunely. Now that the purification of sewage has virtually passed from chemical methods to bacteriological methods the series of practical investigations that have been made on all sides needed crystallising into a *résumé* in which the present position of the subject could be seen at a glance. Dr. Rideal thinks that such a *résumé* would be acceptable to a wide class of readers in this country. We not only join him in this view but congratulate the wide class of readers on the fact that Dr. Rideal has undertaken the task. A *résumé* was decidedly in demand and Dr. Rideal has successfully supplied it in the volume before us. The very title of this work is surely a sign of the times and it is a remarkable fact that what must be regarded as a standard work upon the subject relates incidentally only to the methods of purification of sewage by chemical means, being devoted rather to a detailed and historic account of the life processes of purification—i.e., bacterial methods. We did not think that the views which we expressed 10 years ago would so soon be realised and that the unscientific and anti-utilitarian methods of treatment by chemical precipitants would by the end of the century be banished in favour of more rational methods depending upon the purifying action of microscopic agents. We use the word "rational" advisedly. Chemical treatment did not utilise the nitrogenous constituents of sewage, whereas bacterial methods promised to bring about the long-searched-for ideal, the conservation, as Dr. Rideal puts it, of the valuable constituents of sewage. The food question is very closely related to the sewage problem. The two subjects are adjacent, so to speak, in the maintenance of the cycle of existence, for it should be possible that excreted matters should be so appropriated by plants as to present the original offensive materials in a new and inoffensive shape in the form finally indeed of human and animal food. Hence the logical conclusion that by discharging human excreta into the sea and so entailing an enormous loss of nitrogenous constituents the land will be ultimately starved, and if the land then the plant, and if the plant then the animal. Sir William Crookes did a great service when he calculated that in the sewage and drainage of towns we hurried down to the sea fixed nitrogen to the value of £16,000,000 per annum. Though Liebig and others had anticipated that such a waste would lead to serious impoverishment, yet we have to thank Sir William Crookes for reminding us of this possibility in such forcible and practical terms. The point, however, which we would emphasise is that chemical precipitation gave no hopes after exhaustive experimentation that the valuable constituents of sewage would be realised by this method. It is true that chemical methods cleansed the sewage and stopped it from putrefying and from becoming offensive and a source of pollution to our water-supplies. So far the method was commendable, but mainly from the purely sanitary point of view and not from the economical standpoint. If we could convert the whole sewage in the United Kingdom into nitrates by bacterial methods we should derive, according to Mr. Scott Moncrieff, a revenue of £14,000,000 per annum, which is a recovery approaching in value the loss which Sir William Crookes estimated as occurring annually in the output of sewage and drainage of our towns. And this enormous waste may be obviated by micro-organisms. In this instance, at any rate, we must surely modify the cry, "Sterilise, sterilise," in favour of the cry, "Nitrify, nitrify." It may seem remarkable that the elaboration of bacterial methods applied to the purification of sewage has been slow, but when all the aspects of the problem are carefully considered it will readily be understood why we have not yet mastered all the details. It is on these details that Dr. Rideal's work is most valuable and instructive. There are all sorts and conditions of sewage to be met with in different parts of the country having different degrees of suitability for treatment bacterially, but so energetically has the practical study of the subject in all its aspects been carried on that we do not doubt that sooner or later the bacterial treatment of sewage will be universally applicable and universally successful.

It is now established in many places where large quantities of sewage are being treated that the effluent from the bacterial method is in every way satisfactory, but in spite of this there remains a requirement of the Local Government Board that the effluent must be passed through the land before it is discharged into a river or stream in accordance with the enactments of the Rivers Pollution Prevention Acts. The Local Government Board consider that the requirements of those Acts would be contravened unless the sewage is so purified. As Dr. Rideal points out—and we agree with him according to our observations of several bacterial installations in this country—the insistence on final land treatment is decidedly a mistake when purification is the main object—where a proper process is used no further purification will be necessary. Indeed, it is stated in many instances, and particularly at Hampton, that an originally good effluent suffers great deterioration by subsequent passage through the land. This requirement of the Local Government Board is to some extent a hindrance to the adoption of bacterial methods, since, *inter alia*, the question of a land-site convenient for the discharge of the purified effluent has also to be taken into account in addition to its suitability for bacterial beds Of course, this regulation was established before the present degree of purification of sewage by bacterial agencies was arrived at. Representations to the Board were accordingly made upon this point and this action resulted in the appointment of the Royal Commission upon Sewage in 1898, whose verdict we still await and probably shall have to await for some time on account of the great scope of the subject of inquiry. The delay, we fear, cannot be avoided, but until the conclusions of the Royal Commission are made public there is little doubt that the progress with bacterial methods will not be so rapid as is desirable. We feel confident, however, that the conclusions of the Royal Commission, as Dr. Rideal puts it, "will be in accord with those obtained from the experiments which have now been carried out on a sufficiently large scale to establish the safety of embarking on the treatment of sewage on bacterial lines for even the largest centres of population." Certain practical difficulties we all must admit have yet to be encountered, but we are sanguine that these will be overcome.

Dr. Rideal's book is most instructive on all the points connected with the bacterial treatment of sewage and its publication is, as we have said, timely and calculated to assist in attaining a complete solution of a very old and vexatious problem. We congratulate him on this (in our opinion his most important) contribution to the literature of sanitary science.

LIBRARY TABLE.

Glutton or Epicure. By HORACE FLETCHER. Including Nature's Food Filter, or When and What to Swallow, and What Sense? or Economic Nutrition. Chicago and New York. Herbert Stone and Co. Pp. 128.—This little book appears to be the outcome of some reflection and personal experiment on the part of a very benevolently disposed American gentleman. The author's aim is so altruistic and the means he recommends are on the whole so well advised that we are loth to cavil at his occasional logical and physiological mistakes. The preface states that "these studies have been pursued with the view to suggesting simple formulæ whereby busy persons may conserve physical health as an aid to harmony and happiness by preventive means." The simple formulæ alluded to may be gathered from the pages of the book to be "eat slowly" and "chew all things." For the great point that Mr. Fletcher seems to make is that most people eat a great deal too fast, that they get consequently comparatively little nutriment from a needlessly large food intake, and that they suffer many digestive troubles. These are truthful propositions, and Mr. Fletcher in preaching mastication is no more wrong than was the late Mr Gladstone who practised 33 bites to every mouthful. Mr. Fletcher insists also upon the chewing of liquids—a consummation that appears to us difficult of achievement. Honest endeavours in this direction would, however, no doubt guard against the swallowing of injuriously hot fluids. That such chewing would rob intoxicating liquors of their effect we cannot believe, and the experiment in this respect alluded to by Mr. Fletcher is one of those in which we do not recommend his readers to follow their adviser at any length. As an instance of experimental enthusiasm we may quote a passage. "The author has found that one fifth of an ounce of the midway section of the garden young onion, sometimes called 'challot,' has required 722 mastications before disappearing through involuntary swallowing. After the tussle, however, the young onion left no odour upon the breath and joined the happy family in the stomach as if it had been of corn-starch softness and consistency." It must not be supposed that Mr. Fletcher's creed often demands a perseverance of this magnitude, for, as he points out, with good food and good cooking comparatively short mastication soon induces involuntary swallowing. On the whole, readers of slight medical knowledge will find much profit in this little book from its quaint and striking directions to a leisurely and moderate manner of feeding.

The Diagnosis and Treatment of Syphilis. By TOM ROBINSON, M.D. St. And., physician to the Western Skin Hospital. Second edition. London: J. & A. Churchill. 1900. 8vo. Pp. 138. Price 3*s.* 6*d.*—We must confess that we do not understand the author's preface, where he tells us that "there seems no necessity, though doubtless much need, of making any substantial alteration in this edition." The progress that has been made in our knowledge of the disease since the first appearance of this work should have been recorded. The author tells us that he abolishes the terms "secondary" and "tertiary" and includes all the manifestations after the initial lesion in the term "sequelæ of syphilis" This is surely an utter misuse of the word sequela, which should be applied to signs and symptoms persisting after the disease itself has come to an end. On the whole a very fair account is given of the chief manifestations and treatment of syphilis.

ASYLUM REPORTS.

Joint Counties Asylum, Carmarthen (Annual Report for 1899).—The average number of patients resident during the year was 630 and comprised 314 males and 316 females. During the year 109 patients were admitted, 49 of these being males and 60 females. Of these 42 males and 52 females were first admissions, the rest being re admissions. The accommodation remaining the same as in the previous year, there were in residence 32 more patients than before, so that no vacant room now exists for the reception of out-county cases. At the isolation hospital the defective structure of the wall on the west side has for years been a source of trouble. Dr. E. Goodall, the medical superintendent, points out in his report that "a thorough overhauling of the defective parts will be desirable before the building comes into use as a permanent accommodation." Among the admissions is described a case of "moral insanity"—viz, a young girl admitted for the fourth time. "There being no defect or derangement of mind upon which a certificate of detention in an asylum could be returned she could not be kept here. This girl is a source of great trouble at home, but is neither mad enough to be in the asylum nor bad enough to be in gaol, and is probably best suited for a reformatory." One of the cases of acute mania occurred in a man, aged 73 years, and for the first time He passed through an attack which would have severely tried a man in the prime of life, and left quite well after a short residence in the asylum. Among the admissions the cause of insanity was traceable to heredity in 35 cases, alcoholic excess in 20 cases, recurrence of previous attacks in 16 cases, senile decay in six cases, domestic unhappiness in six cases, epilepsy in five cases, love troubles in four cases, privation in four cases, and the menopause in four cases Drink was responsible for rather more than 21 per cent. of the cases admitted. Of the admissions 21 were suicidal and 20 were dangerous. During the year 21 cases—viz., 10 males and 11 females—were discharged as recovered, or 3 3 per cent. of the average number resident. The deaths amounted to 46—viz., 25 males and 21 females—or 6·1 per cent., as calculated on the same basis Of the deaths one was caused by Landry's paralysis, two were due to influenza, two to colitis, three to renal disease, three to general paralysis of the insane, four to pneumonia, four to cerebral atrophy, seven to cardiac disease, and 11 to pulmonary phthisis. Typhoid fever has been absent since the outbreak of 1897. For the prevention of the high percentage of deaths from phthisis isolation and open-air treatment in separate blocks are regarded as highly desirable, and it is hoped that these will be provided for in the future. The farm and garden account shows a credit of £190 and the live stock have been free from disease.

THE LANCET.

LONDON: SATURDAY, OCTOBER 13, 1900.

The whole history of bubonic plague, as also does the testimony of recent events, points to the fact that the disease steals across the world mainly by unknown channels. It is true that when by the aid of little coloured flags we indicate upon a map the advance of any given pandemic wave we are able to follow its diffusion and the trade route by which it travelled; but when we investigate its progress from point to point we find, generally speaking, that the disease has been present in a town or country long before it was either officially or unofficially recognised. It is this attribute of plague—and for the matter of that of certain other exotic diseases—which has dealt the death-blow to quarantine. In this country we have long since recognised that all attempts to keep plague or cholera out of our islands, assuming the disease to have taken upon itself the truly epidemic garb, are likely to prove unavailing; and hence we have determined to rely largely on the internal machinery of the public health service. At our ports we have what we are pleased to term our first line of defence, but we endeavour to provide that everything which passes through this line shall be carefully labeled with its name and address; in short, the first line of defence is part and parcel of the whole fortification system, and if it plays us false the inland forts are taken by surprise. Within the last few days our outworks at Lynn and along the banks of the Tyne have apparently failed us; indeed, as far as we can see, even the lines of communication have broken down, and the brunt of the attack has devolved, in the first place, upon a medical practitioner, and in the second upon the medical officer of health in a rural district in South Wales These are serious facts, and the Local Government Board have taken the opportunity—we trust it is the psychological moment—to issue a "Plague Memorandum" dealing with "administrative considerations" and with "the symptoms of plague." The document is a model of reasonableness and simplicity, short and to the point. We are encouraged by it to believe that "the plague will not readily fasten upon that section of our population which is properly housed, cleanly, and generally in a sanitary sense well to do; that rather it will especially affect, if it obtains foothold in one or another district, insanitary areas such as are peopled by the poorest class, and where overcrowding of persons in houses and dirt and squalor of dwellings and of inhabitants tend to prevail." Here is the key-note for our sanitary authorities throughout the country, and it is a matter of national concern that they shall respond to the call. It is, we think, probable that the immediate danger is small; but the plague has assumed pandemic proportions, and no small degree of responsibility will rest on the sanitary authority which, in face of the obvious danger of the near future, elects to leave its slums as they are or neglects to see to the working of its administrative machinery. The memorandum here in question takes typhus fever as the type of the disease with which plague may be best compared, and in this it is doubtless right. But let us not be beguiled into believing that because typhus fever is not with us we shall therefore remain free from plague. The latter disease is awake throughout the world; typhus fever is apparently asleep—for the time. Unfortunately, the individual members of our sanitary authorities are apt to leave their consciences too much in the hands of their clerks, but we should be glad to be able to believe that on this occasion the members themselves would read the memorandum and see that the provisions generally are acted upon. The symptoms of plague are tersely set out and the reader is warned as to the danger to be expected from the slight or "ambulant" forms of the malady. Accompanying this document there is also another, embracing directions for obtaining and forwarding for bacterioscopic examination material from suspected cases of plague, whether in the living patient or in the dead subject. The material, which will be examined without cost to the local authority, is to be forwarded to Whitehall by the medical officer of health. So, too, the Local Government Board, with a truly parental foresight, has provided itself with a supply of Mr. Haffkine's prophylactic, and the medical officers of health of districts actually invaded by plague may procure from the Board a limited amount of this material. It now remains for the local authorities to support these efforts made by the central authority with a view to meeting the necessities of the situation.

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He who can enter the temple of Æsculapius without reverence would do better to stay outside altogether. The mystery of life, the almost equal mystery of suffering and disease, the ever-expanding knowledge that comes to us of the range of suffering occurring in the creation, the discovery of means whereby this suffering may be at least partially controlled, and the pathetic cry of all sentient beings for the extension of such means constitute a theme which must command the respect of all but the frivolous and the stupid. Every advance in scientific medicine enhances the claim of our science and art to the reverence of those who undertake their study. When medicine was regarded and used as a mystery or a charm, and when its representatives were incapable of appealing to the intelligence of their age or were themselves half conscious of the hollowness of the system or systems which they practised, there may have been excuses for levity and insincerity in its votaries. But such times have gone for ever. Every step in the development of modern medicine as a science appeals to the interest and intelligence of the man who practises it as an art and adds immensely to his responsibility. Those who talk so glibly of the want of reverence in scientific men, and especially in medical men, are misinformed. We should be willing to have the truth of this view tested by the case of our medical students. We believe that even at an early and irresponsible age they are impressed powerfully and advantageously with the spirit of their profession They recognise that it calls for the highest qualities, mental and ethical, from its members and tends to develop those qualities. They note that the half-hearted student, and even the half-hearted lecturer, make no practical headway, and alike on high moral grounds and grounds of self-interest they take themselves seriously.

The matter and tone of the addresses which have ushered in the winter session at our medical schools will consequently appeal to many thoughtful young men. How could a young man upon the threshold of his medical career start better than the new students at Charing Cross Hospital have done by listening to Lord LISTER as he described his early researches leading up to the antiseptic system? A student entering on the study of medicine cannot expect to make for himself an everlasting name by such life-long studies of deep vital processes as those which have culminated in that antiseptic system which saves thousands of lives every day and has transformed our hospitals from veritable pesthouses to temples of healing, but every student can study the methods by which such success has been attained, and it can do him nothing but good to hope that his own work will be similarly beneficial to his race. He can imitate in a degree the spirit and the devotion with which these methods have been used and he can so acquaint himself with the facts and principles of the system as to ensure that in four or five years he will go forth into the world as a veritable saver of life, to be blessed by his generation wherever he goes. Another address should equally stir the student to be proud of the career of his choice, for it shows how world-wide is the bearing of the study of medicine. We refer to the address of Sir WILLIAM MACGREGOR, K.C.M.G., Lieutenant-Governor of British New Guinea, on Some Problems of Tropical Medicine, delivered at the London School of Tropical Medicine. Sir WILLIAM MACGREGOR modestly spoke of his technical ignorance of some parts of the subjects upon which he touched and excused himself as being an Administrator rather than a Doctor of Medicine. But his address, which we publish this week, is one which no mere Administrator could have written and which no physician could have excelled for the range of its medical knowledge and for the human and almost religious sympathy of its spirit. There is in it, too, that quality of the statesman which should inspire all medical men, especially those who deal with inferior races or classes. Sir WILLIAM MACGREGOR'S tribute to Mr. CHAMBERLAIN, and to the enormous service which as Secretary of State for the Colonies he has rendered to tropical medicine and through it to all tropical races, will be generally appreciated by the profession and even by the public. It is only a part of that larger service of high statesmanship which he has done for the colonies and which has thrilled them with new impulses of life and feeling towards the mother country. Even those who differ most directly from Mr. CHAMBERLAIN in general politics should forget their differences while they admit that he has done his best for races yet incapable of dealing with their own problems of disease. It will be well if both students and practitioners catch the enthusiasm, expressed in every line of Sir WILLIAM MACGREGOR'S address, for the possible results in the as yet untrodden fields of tropical medicine. "The man," he says, "who will work out an effective and practical means of dealing with contagious dysentery will be the greatest benefactor of the races that live in the tropics. He may claim to be the saviour of the Pacific Islander, the most loveable man of men now living."

We have left ourselves no space to speak of other addresses in detail, but our readers have had opportunities of reading last week in THE LANCET the words of Dr. G VIVIAN POORE, of Mr. H STANSFIELD COLLIER of Miss L. B. ALDRICH-BLAKE, M.D , and of Professor MCFADYEAN, and this week they will read with equal pleasure those of Sir JOHN WILLIAMS. In these addresses the absolute necessity of hard work, accurate observation, and systematic attention are duly insisted upon, but all the speakers have succeeded in holding up to their audiences a picture of the medical life which shows it to have great intellectual rewards but to offer no inducements to the man who is not earnest and self-sacrificing.

THE October issue of the *International Journal of Ethics* contains a highly interesting paper by Mr. R. BRUDENELL CARTER upon the difficult subject of Medical Ethics. Mr. CARTER has many qualifications fitting him to write with authority upon the theme. He has had in his professional life first-hand experience of general practice, of hospital practice, and of consulting practice, while ophthalmic surgery, which has in him so widely known an exponent, is both a pure specialism and intimately connected with all sides of medicine whatsoever. Moreover, Mr. CARTER was for many years an active member of the General Medical Council and has proved himself there and in other and more public arenas a logical thinker, an acute writer, and a fearless debater. It is not surprising, therefore, that what he has to say upon medical ethics is thoroughly worth reading, and we recommend a perusal of his article to all members of the medical profession, even while he is not in sympathy with movements which we know to make for progress. Ethical questions have a practical importance which has always been inherent in them but to which the immediate conditions of daily life have given unusual prominence, and it is absolutely necessary that the medical profession as a whole should strive to know what are the principles and rules by which professional conduct should be regulated. Undoubtedly the Ten Commandments inculcate the principles and include the rules, but the breadth of the precepts laid down in the Decalogue makes it occasionally difficult in a work-a-day world to decide what exact course should be pursued in concrete circumstances. We may know what is our duty towards our neighbour, but inasmuch as all mankind, and in a very special manner, is the neighbour of the medical man, it may well happen that we cannot see at once what is the line of conduct to follow where one neighbour must be preferred to another That many medical men experience this difficulty is particularly well known to us who receive daily requests to express an opinion upon the correctness or advisability of acting in certain ways in certain positions. We observe, by the way, that Mr. CARTER doubts the efficacy of this course because, to use his own words, "there is no evidence that the occupancy of the editorial chair has been preceded by any special study of ethical problems.' We would remind him—though, as he is obviously writing as an ethical expert, he should not require to have the fact pointed out to him—that in every walk of life to some extent a man learns his business by the carrying on of that business. It follows that, however unskilled Mr. CARTER'S imaginary editor may have been at the outset of his medico-editorial career in the theories of ethical lore, when he has sat for ten minutes in the editorial chair he will have begun to obtain an insight into the life of his professional brethren which cannot fail to make of him a very special student of ethical problems. And the editors of important journals, to which alone Mr. CARTER is referring, are not selected without an eye to their qualifications for office. We trust that these remarks will not be considered egotistical; they amount not to any claim of infallibility for ourselves, but only to an indication that we enjoy exceptional opportunities of understanding the difficulties of the medical life.

Medical ethics embrace two sets of questions—questions which relate to the conduct of medical practitioners towards the public and questions which relate to the conduct of medical practitioners towards each other. As Mr CARTER rightly says, there can scarcely ever be any real incompatibility between the duties which a medical practitioner owes to the public and those which he owes to his calling. And we think that the medical profession as a whole recognise this and do not discriminate between the two classes of questions in any way whatever. Prominence is more often given in medical journals to issues arising between two members of the medical profession than to those arising between medical men and the public, but this is because the columns of a medical journal form a natural place for the discussion of purely medical points, while matters in which the weal of the general public is concerned are better threshed out in the less domestic sheets of the lay press. But whether the debates upon medical ethics are conducted in the medical press or in the lay press, the wisest counsels are always given by those who remember that what is best for the medical profession is best for the public. An efficient code of medical ethics is that code which inculcates principles for the guidance of medical men which, if they follow them, will result in good to the public. The difficult point is how precise should those principles be made—when, that is, should the principles be defined by particular rules. It is obvious that it is not for the good of the community for a medical man either to treat a patient in association with a quack, or to throw the ægis of his professional position over a quack, and thus to enable him to practise an art in which he has not been duly instructed. A medical man must not consult with bone setters or herbalists or allow unqualified persons to visit and treat the public medically in his name, because by such misdoings the public would be gulled into purchasing as medical services the ignorant ministrations of the charlatan. It is easy here to turn the general principle into a particular rule But the translation may not be so simple and obvious. A medical man holding certain club appointments which place him in the position of the paid servant of laymen who demand from him work which he cannot do for remuneration which does not remunerate him, is not working for the public good. In many instances he is over-worked because the persons who avail themselves of his services are persons who really ought to pay for other medical assistance. In some instances he is underpaid because the lay managers of the association employing him desire to show a pecuniary balance, and can only do this by cutting down such immaterial expenses as the drug bill and the medical officer's salary. What rule, if any, is to be made about the men who fill these posts, for clearly they cannot be regarded in the category of those who regard quackery with complacency? Mr. CARTER gives no advice to the members of his profession upon this crucial point. He states the position and contents himself with adding that the General Medical Council cannot possibly treat members of the profession who choose to undersell their professional services as persons guilty of infamous conduct in a professional sense. We agree with Mr. CARTER here, but we cannot acquiesce in the view (which may or may not be his view, but which is held by many respectable persons) that nothing need be done. The principles of medical ethics are being violated and it is the proper part of the medical profession to make an organised attempt towards preventing the spread of the evil.

There is no longer any doubt in the minds of those members of the medical profession who have given ethical matters a share of their attention that the great weapon against abuses in any locality is solidarity of medical opinion. The series of articles which have appeared in our columns under the titles of "The Battle of the Clubs" and "Hospital Abuse," while proving that certain evils are widespread, have also shown that in many localities organised opposition to the exploiting of the medical profession has led to an abatement of abuse. This fact should encourage medical men in other districts to meet and to agree upon a definite line of action in regard to medical aid associations, while they should put completely out of their minds the idea that in forming and supporting such combinations they are exhibiting evidence of decadence from the standards of proper professional behaviour. It is the clear duty of medical men, upon the soundest ethical grounds, to take all measures to obtain for the public adequate medical service. Cheap medical work done by contract for lay employers, being without its proper professional stimulus, tends to become bad medical work; and to suffer bad medical work must always be contrary to medical ethics. This is the view which the medical profession should strive to educate the public to understand. They will not find it easy while some of their professional brethren can be found to stigmatise all attempts at the formation of professional opinion as mere combinations to raise prices, but they must not relax their efforts. From the constitution of modern society it follows that the principles of medical ethics cannot always be stated in rules, but the medical profession is doing its duty when it orders its conduct strictly towards providing the public with the best medical service.

UNIVERSITY COLLEGE, BRISTOL.- The introductory address in connexion with the Faculty of Medicine of University College, Bristol, was delivered on Oct 1st by Professor Stanton of the Engineering Department. The lecture dealt with the relative economy of the power derived from animals, food, coal, and other sources.

Annotations.

"Ne quid nimis"

ANEURYSM OF THE RENAL ARTERY

AMONG the rarest forms of aneurysm may certainly be classed aneurysms of the renal artery, for in an elaborate and interesting paper on this subject published in THE LANCET of Oct 6th (p 1002) Mr Henry Morris tells us that he has been able to find only 21 recorded instances in the whole of medical literature In two of these no particulars were obtainable, and of the 19 remaining cases 12 arose from injury and seven were spontaneous in origin, and from these figures it is seen that injury is the cause in nearly two-thirds of the cases Of the seven spontaneous aneurysms four were found at the necropsy and appeared to have given rise to few or no symptoms during life, in two others a tumour causing pain was noticeable, and the last case is remarkable seeing that in it the tumour and the kidney were successfully removed by Professor W W Keen of Philadelphia In the traumatic cases the most common form of injury appears to have been a fall The earliest traumatic aneurysm of the renal artery on record is related by Nebel who describes the case of a medical man He fell from his horse and four years later, in 1717, he developed a pulsating tumour in the left side of the abdomen and he died from the aneurysm bursting into the peritoneal cavity Curiously Titius describes in 1798 a very similar case, also of a medical man, who fell from his horse and died four years later from an aneurysm of his left renal artery It is perfectly possible that these were two distinct cases, but the coincidences are so many and so striking that we are justified in concluding that we have two separate accounts of one case As might be expected, the traumatic cases show a great preponderance in frequency in the male—two cases out of the 12 The age of the youngest patient was 15 years and of the oldest 66 years In many of the cases a "false" aneurysm was present—that is to say, an aneurysm no part of the wall of which was formed by the wall of the artery This false aneurysm may be formed in one of three ways It may result from the giving way of a small "true" aneurysm, which may have been of spontaneous or traumatic origin, or it may result from the yielding of a thrombus which has temporarily closed a ruptured artery; or, in the third place, it may be formed by the immediate outpouring of blood from a ruptured renal artery In the case under his own care which Mr Morris has contributed to the series the aneurysm followed immediately on the wound of the artery, and when operated on it was found to contain "several pounds' weight of blood clot" The diagnosis in these cases is often extremely difficult, for in most of them the two chief signs of an aneurysm, pulsation and bruit, are absent The history of an injury will be of but little assistance, for malignant growths are apt to follow injury, and hydronephrosis also may be traumatic in origin In the absence of pulsation the diagnosis may remain uncertain until an exploratory incision has been made The prognosis is extremely grave Every case that was not operated upon died Of the four cases in which an operation was performed three recovered, two of these successful cases were traumatic in origin, and the third was the spontaneous false aneurysm, under the care of Professor Keen, which has already been mentioned The records of these cases speak clearly as to the treatment to be followed The only chance of saving the patient's life is to perform excision of the kidney, with removal of the aneurysmal swelling If pulsation be present this may be decided on before the operation is commenced, but more commonly it will only be after an exploratory incision that the diagnosis will be made The dangers from hæmorrhage and from shock render the operation distinctly formidable, but the risk to the patient will be less than if the aneurysm be allowed to enlarge Mr Henry Morris's paper is a valuable contribution to the elucidation of an obscure subject

THE "LIMANKUR" IN ODESSA

THE term "liman" has been applied to the deposits of mud found at the mouths of rivers, but we here use it to denote an inland sheet of salt water formed by the silting up of the outlet of what was once an arm of the sea at the place where a river falls into it Odessa possesses three of these unusual features of the landscape called respectively Kujalnitzkiliman, Chadjebeiskiliman, and the liman of Liebenthal, of which the two former are the most important from a medical point of view The Kujalnitzkiliman is rather more than five miles from Odessa, is more than 18½ miles long, and is from one and a half to two miles broad, its depth is from six and a half feet to 16½ feet The "porosyp," or embankment of sand and mud, between the liman and the Black Sea is about a mile and a quarter broad The Chadjebeiskiliman is four and a half miles from Odessa, is 20 miles long, one and a half miles broad, and has an average depth of from 20 inches to 13 feet Evaporation has had the effect of making the liman water much denser than sea water, but its level and concentration are affected by rainfall and snow Analyses of the water of the Kujalnitzkiliman made in 1870, 1872 and 1894 show some extraordinary variations The last of these gave the total solid residue as 79 8 parts per 1000 and the sodium chloride as 58 0 parts per 1000 Analysis of the water of the Chadjebeiskiliman made in 1896 gave the total solid residue as 63 5 parts per 1000 and the sodium chloride as 48 1 parts per 1000 The total solid residue of the water of the Black Sea in the Bay of Odessa was found in 1894 to be 16 8 parts per 1000 and the sodium chloride to be 13 0 parts per 1000 The average temperature of the liman water from June to August may be put at 18 6° R (74° F), the average summer temperature of the air being 72° F Both animal life and plant life are well represented in a liman At the bottom of the water there is abundance of black mud of organic origin having an alkaline reaction and smelling strongly of sulphuretted hydrogen In 1892 new baths belonging to the municipality of Odessa were opened on Kujalnitzkiliman at a place about five and a half miles from the city and accessible by a railway The site has an area of 53,000 square metres (13 acres) and the buildings which are on the pavilion system, are divided into two sections for brine baths and mud baths, first and second class of each, with separate departments for each sex Patients may bathe in the open liman for from five to 20 minutes once a day, or twice with at least five hours' interval They may also have artificially warmed baths of the same water Mud baths may be had, the mud being either warmed naturally by the sun's rays or artificially by steam or hot water, the temperature of these baths is from 28° to 33° R (from 95° to 106° F), and the duration from 10 to 30 minutes, the mud bath is followed by a cleansing bath in fresh water, after which the patient goes to bed and assists perspiration by drinking hot tea, generally in astonishing quantities Sand baths are also given in the sand surrounding the liman The patient lies motionless in the sand either in the open or else in long boxes (Wannen) under a layer of sand four centimetres (one and a half inches) in depth, and they remain exposed to the sun's rays for from half an hour to an hour with a screen to protect their heads from the sun The "limankur" is indicated in rheumatism, rickets, the results of traumatic inflammatory processes (i.e., callus, ankyloses, and contractures), chronic joint diseases, osteitis, periostitis, myositis, pareses, neuralgias, chronic diseases of the skin, and late forms of syphilis. The treatment is contra-indicated in febrile diseases, heart diseases, arterio-sclerosis, amyloid degeneration, severe cerebral disease, epilepsy, pulmonary tuberculosis and new growths. With due precaution the baths may be taken up to the commencement of the second half of pregnancy. The natural features of these health-resorts and the methods of treatment followed there have been fully described in the *Deutsche Medicinirche Woohenschrift*, first by Stabsarzt Dr. Wilke of Dresden in 1897, and recently by Professor Adolf Baginsky of Berlin.

THE MEDICAL SOCIETY OF LONDON.

A MEETING of this society was held on Oct. 8th, the chair being occupied at first by Dr. Frederick Roberts and subsequently by Mr. John H. Morgan, the out-going and in-coming presidents respectively. The treasurer, Mr. D. H. Goodsall, presented his annual report. The subscriptions amounted to £508 14*s*. 6*d*., and though they were quite up to the average there had been no increase. The receipts included subscriptions from Fellows towards a magic-lantern, £16 4*s*. 6*d*., but this was not sufficient to purchase the instrument. The expenditure was about the same as last year and there remained a balance of £300, by which the whole of the debentures would be redeemed. Mr. H. Willmott Evans proposed, and Mr. John H. Morgan seconded, the adoption of the treasurer's report and a vote of thanks to that officer. Dr. George Shuttleworth proposed, and Mr. J. Peeke Richards seconded, a vote of thanks to the retiring officers and councillors. Mr. John Harold proposed a vote of thanks to the retiring President, Dr. Frederick Roberts, and this was seconded by Mr. Carter Braine. Dr. Roberts responded and conducted Mr. John H. Morgan, the in-coming President, to the chair. Mr. Morgan then delivered an address on the Romance of Surgery, which is published in full at p. 1061.

LUNG DISEASE IN THE NAVY.

A LETTER which appeared in the *Times* of August 16th, signed "Ernest Rason, retired Captain, Royal Navy," and headed "Lung Disease in the Navy," has aroused a good deal of interest and elicited a considerable amount of correspondence. Captain Rason quoted some figures which at first sight would certainly tend to show that lung disease in the navy has considerably increased during recent years. His figures show that "whilst the total of general disease has decreased one-fifth, diseases of respiratory organs have increased nearly one-fourth, that the increase of cases on the home station of diseases of respiratory organs has increased 60 per cent., and whilst the invaliding has more than doubled since 1883 from this complaint the general total of invaliding on home stations has considerably decreased." These conclusions are certainly disturbing to those who have the interests of the navy at heart, but when the figures are more closely examined certain fallacies are discovered. In the first place, Captain Rason was unfortunate in the years he selected for comparison—viz., 1868, 1883, and 1898. The above conclusions are fallacious, as the official statistics were after 1886 calculated on quite a different basis to previous years. Again, the term "diseases of the lungs" is very indefinite; in 1883 tuberculous disease of the lungs was not included under "diseases of the lungs" but under the heading "tubercle"; hence the inclusion of cases of pulmonary tuberculosis in later years under "diseases of the lungs" would make a vast difference in the statistics. In 1883 there was no influenza epidemic but in 1898 such an occurrence was the occasion of a very large number of cases being included under "diseases of the respiratory system," thus again detracting from the value of Captain Rason's figures. With reference to tuberculous diseases, mainly of the lungs, in 1883 there were 4·08 cases per 1000 in 1898 only 2·68—that is, of the total force; whils on the home station in 1883 there were 4·09 per 1000 and in 1898 2·49 per 1000, thus showing that tuberculou disease has actually decreased. Further, the statistic of 1868 show a considerably higher ratio of invaliding than those of 1898. The fears to which Captain Rason's statistics would give rise are therefore groundless. The correspondence by which this letter was followed is o interest as drawing attention to the different mode o life which is now experienced in the Navy as compared with the time when wooden sailing ships were employed In the steel steamships the men are certainly not so much in the open air as formerly, and if there be any increase in the number of diseases of the respiratory system this is probably the main cause. The suggestion that diseases o the respiratory organs are contracted in the training ship would appear to be improbable as the greatest attention is paid to prevent overcrowding and to promote efficiency o ventilation.

THE PROPOSED MEETING IN LONDON IN 1902 OF THE INTERNATIONAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

OUR readers are aware[1] of the circumstances under which an International Congress of Gynæcology and Obstetrics wa proposed to be held in London in 1902. We are now requested by the Council of the British Gynæcologica Society to publish the following translation of a letter from Dr. Jacobs of Brussels, permanent secretary of the Congress to the secretary of the society:—

> Much honoured confrère,—I write in the name of th foundation members of our Congress to ask you to expres to the President and members of the British Gynæcologica Society our united thanks for the efforts you made with view of the next session of the Congress being held i London. We are convinced that the incidents which unde the influence of certain members of the Obstetrical Society recently occurred in England are alone responsible for th failure of those efforts and that otherwise the British Gynæ cological Society would have secured for the session next ensuing a brilliant success. On the other hand, when made aware of those incidents, the founders found it impossible t ask your society to continue the organisation for the Congress to meet next time in London.
>
> In thanking you for all you have done in our behalf w desire to inform you that it is our decided wish that at some future time the Congress may meet in London, and our hope that the eminent members of the medical profession in England who are interested in the progress of obstetric and gynæcology may become permanent members of ou International Society.
>
> Accept, &c., the assurance of my most profound esteem,
>
> (Signed) JACOBS.

We are glad to see by the letter that the foundation members of the International Congress of Gynæcology and Obstetrics have taken the sensible course of postponing any meeting of the Congress in London for some years. By that time we may well hope that the differences of opinion which threatened to mar the success of the Congress which it was proposed to hold in 1902 will have been forgotten and will not be allowed to jeopardise the success of any future meeting. As we urged in an annotation upon the subject in THE LANCET of July 7th of this year, we think that when the question of a meeting of the Congress being held in London is next mooted it will be best to carry out the arrangements quite irrespectively of any particular society. The leading obstetricians and gynæcologists of the United

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[1] THE LANCET, May 12th (p. 1398) and 19th (p. 1466), 1900.

Kingdom do not owe their position to their connexion with any society and an invitation issued in their names by a general committee would carry much more weight than one issued by the council of the Obstetrical or Gynæcological Societies. In a matter of this kind the disagreements of individual societies should not be allowed to intervene. We feel sure that in a few years' time a meeting in this country of the International Congress of Gynæcology and Obstetrics, invited by a representative committee of the obstetricians and gynæcologists of Great Britain and Ireland, should not fail to be an unqualified success.

DRUNKENNESS IN RUSSIA.

WE have already informed our readers[1] that even in Russia the offence of drunkenness is coming to be regarded much more seriously by the law than has hitherto been the case. Both parties in the Royal Commission presided over by Lord Peel recommend that drunkenness *per se* in public should henceforth be considered an offence, but we scarcely venture to expect such rigorous enactments in this country as those which have been already brought into action in Russia. In accordance with these all persons found intoxicated in streets and public places will be sentenced to terms of imprisonment varying from three days to a fortnight. A repetition of the offence is punishable with three months' imprisonment. If the accused is remanded the time which he spends in prison whilst he is awaiting his trial is not to count in his favour. It is said that the effect of this law, if rigidly applied to all drunkards in the streets, will be to throw at least 10 per cent. of the population into gaol.

THE NEW LABORATORIES OF KING'S COLLEGE, LONDON.

THE new science laboratories of King's College, London, will be formally opened on Tuesday, Oct. 30th, at 5 P.M., by Lord Lister, P.R.S. The Lord Mayor and sheriffs will take part in the ceremony, and a great number of invitations have been sent to representatives of learned societies, City companies, and local governing bodies, as well as to members of the teaching staffs of other colleges and medical schools. King's College has long held a prominent position on account of the excellence of the teaching which is carried on within its walls. The popularity of the classes, especially of those attended by non-matriculated students, and the demands for further accommodation for original research have necessitated such an increase of space as to involve an entire re-arrangement of the existing laboratories. The council wisely decided to meet this need by providing new buildings, structural alterations, and new equipment which will cost over £20 000. An appeal was made to the public which, in spite of the demands for the various war funds, was generously, however inadequately, responded to. The new scheme was nevertheless carried out and a large debt has been incurred, but the College has at any rate the satisfaction of possessing laboratories for physiology, bacteriology, biology, botany, and geology which can compete with the best laboratories of the continental schools. The physiological laboratories are entirely new and form a magnificent suite of rooms consisting of a very large central laboratory fitted with all the requisite apparatus, a room for advanced classes, a laboratory for physiological chemistry, and a room for the professor. The bacteriological department, which since its foundation nearly 15 years ago has been the most complete of its kind attached to any medical school in England, has been considerably enlarged. There are a technical laboratory, a new class room, a research room, and a bacteriological library which we believe to be unique. There is also a new lecture theatre available for both bacteriology and physiology. In the same block there are also very fine rooms and laboratories to be devoted to teaching and research in geology and botany. The College museum has also been moved and the old museum has been reconstructed and fitted for the architectural department. The transference of the physiological department to the new buildings has enabled the anatomical department to obtain much-needed additions by absorbing the old physiological laboratories. There have also been great improvements made in the accommodation for teaching physics, pathology, materia medica, and state medicine as a result of the additions to the College premises. The new laboratories will be open for inspection after the ceremony and any member of the profession who has not received an invitation to be present may obtain one by applying to the secretary of the College.

ETIOLOGY OF PELLAGRA.

IN *Il Policlinico* of Sept. 1st Dr. Ferrati of Pavia records some observations which he has made on the symptoms produced by fungus-infected maize. In 1896 he and Dr. Gosio published in the *Rivista d'Igiene e Sanità Pubblica* researches showing (1) that the watery or alcoholic extract of maize containing hyphomycetes is very toxic for the common grey mouse (mus musculus), and (2) that the toxicity is due to, or associated with, a putrefaction simultaneously giving rise to products belonging to the aromatic series ("fermentazione aromatica"). Dr. Ferrati and Dr. Gosio used only the common mouse for their experiments, this animal being very sensitive to the toxins elaborated in maize. Dr. Pelizzi and Dr. Tirelli had, however, announced in 1894 that the putrefaction products of maize containing hyphomycetes were not toxic for rabbits or dogs, and with the object of testing this statement Dr. Ferrati continued his researches during 1897. Porridge ("polenta") made with good maize flour was cut into large thin slices which were sterilised in a current of steam at 100°C. for 30 minutes on three successive days. Having remained sterile for the next three days the porridge was treated with spores of penicillium glaucum suspended in sterilised water. The penicillium glaucum had been freshly isolated from maize, and when it was cultivated on Raulin's fluid there was an abundant production of phenols giving a red-violet colour with ferric chloride. In a few experiments common yellow bread or bread made with a mixture of maize and rye such as is sold in the shops in Pavia was submitted to the same process. The porridge or bread thus treated was left in the dark at the ordinary temperature for eight days and was then extracted with alcohol, the extract thus obtained being afterwards dissolved in water and administered to various animals either subcutaneously, intravenously, or mixed with their food. Except with mice all attempts to produce acute poisoning with the extract failed, but chronic poisoning could unquestionably be brought about in dogs, although not in rabbits. A dog weighing 5 lb. treated with subcutaneous injections of the extract on alternate days became in 16 days affected with general debility, drowsiness, and profuse diarrhœa and died 35 days later—namely, 51 days from the commencement of the experiment. A second dog weighing 12 lb. was fed plentifully with good bread, to which were added every day 150 grammes of the porridge or bread containing penicillium glaucum, boiled with sugar and water or milk. In 64 days it suffered from general debility, stiffness of the body and of the hind legs, dysphagia, and diarrhœa with blood in the fæces. 43 days later it was attacked with convulsions and the feeding with the fungus-infected maize was then finally abandoned. The convulsions ceased in about a week and the animal gained a little of the weight which it had lost, but it continued to suffer from stiffness of the back and spastic paresis of the hind quarters, and it died 173 days from the commencement of the experiment. Dr. Ferrati points out that the symptoms presented by this dog were almost identical with those produced in dogs fed on damaged maize ("mais guasto") gathered in the fields as described by C. Lombroso in 1891. In conclusion, he states at some length his reasons for supposing that pellagra is due to toxins produced in maize by moulds (hyphomycetes) and not to toxins produced by bacteria (schizomycetes).

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[1] THE LANCET, July 14th, 1900, p. 121.

A POLICE-COURT REFORM.

THE law's delays are proverbial and the cost which these entail has often proved a highly inconvenient and an injurious reality. For this reason the London public will follow with more than ordinary interest the fate of a proposal which is now before the Home Secretary, and which aims at lightening the duties of metropolitan police magistrates by transferring a portion of their less important business to the hands of county justices. In the opinion of some the proposed arrangement will prove beneficial both by relieving a stress of work and by keeping out of a criminal court a relatively innocent class of cases such as those of non-attendance at school and others of miscellaneous character. Others, however, maintain that further legal efficiency is rather to be sought by adding to the number of metropolitan police magistrates. Whatever decision may finally be arrived at it is much to be desired that the result will be a quickening of the too slow movement of law in an urban police-court. Much, we trust, may be expected from a redistribution of business, but even this must partly fail of its object unless it is supplemented by the adoption of more business-like methods than those which now prevail. The summoning and hearing of witnesses in particular might well be carried out on some better system than that at present in use. It should at least have some relation to the date and hour at which their evidence is likely to be taken. We allow that the duration of the hearing of cases is uncertain, but even so it should be possible to arrange them in some sort of order so as to obviate the attendance of witnesses for several days before their services are required. Bail cases are commonly taken late in the sittings of the courts, yet we have known witnesses for such cases to be called for the earliest hour on the first day of the sittings. It is hardly necessary to point out how greatly a want of method such as this indicates must interfere with the conduct of ordinary business. Our own profession is a sufferer by this lack of order and it is not necessary to dwell on the possible consequences of a practitioner's uncertainty in cases of critical illness. The saving of court expenditure, moreover, wherever practicable, is a not unworthy object. By a little ordinary foresight and management it might in many cases be at least halved. For more reasons than one, therefore, it is to be hoped that the very moderate measure of reform which we have indicated will not be overlooked in the proposed adjustment of police-court business.

ASTHENIC BULBAR PARALYSIS.

DR. ARTHUR J. HALL of Sheffield records in the summer number of *Brain* an interesting case of asthenic bulbar paralysis, a rare disease and characterised by symptoms similar to those of a case under the care of Dr. Wharton Sinkler previously recorded in these columns.[1] The case is that of a married woman, aged 44 years, a multipara, a sufferer from migraine and descended of a long-lived but nervous stock. Two of her sisters have suffered from severe migraine and a third sister has melancholia. There is no personal history of syphilis. Recently she has suffered profuse and painful menstruation and has had two years of considerable domestic worry and anxiety. The present illness began in December, 1896, when she complained of general muscular weakness. "She always seemed tired and could not even hold a tea-cup for long at a time." On Christmas Day she developed ptosis on the left side, while a swelling appeared on the same side of the face. The weakness and ptosis gradually increased, and one day in February, 1897, she fell down apparently from excessive weakness. She was put to bed and complained of headache and said that "things appeared all out of shape." Slight ptosis then appeared on the right side. The ocular muscles acted irregularly and she lay in bed languid and depressed with extreme muscular prostration, being unable even to sit up. There was no muscular wasting or loss of sensation. Control over the sphincters was normal. The superficial and deep reflexes were normal and there was no ankle clonus. Speech was slow and droning and the voice was feeble and tired. The muscles of mastication were easily tired. Ophthalmoscopic examination showed no abnormality in the fundus of the eye and electrical reactions were perfectly normal. She was placed in a private nursing home and treatment according to Weir-Mitchell's method (overfeeding, isolation, electricity, and massage) was carried out under which she improved a little for a while. The diagnosis was doubtful. A menstrual period then came on which lasted 10 days, during which she menstruated profusely. She now became rapidly worse and extremely feeble and depressed. She had occasional attacks of dyspnœa and the circulation became feeble. On April 2nd she had some beef-tea after which she suddenly began to have dyspnœa, became cyanosed, and died in a state of collapse, the respirations being stertorous and the pulse 100, while urine was involuntarily passed before death. A post-mortem examination of the brain and medulla oblongata was made on April 5th and so far as could be distinguished by the naked eye the examination "revealed absolutely nothing in any part of the membranes, vessels, or nervous tissue which could be distinguished from that of a perfectly normal adult." Portions of the pons, medulla, cerebral and cerebellar cortex were hardened in Müller's fluid, cut in celloidin, and stained by Weigert's method, aniline blue-black and alum-carmine. "A careful examination of a large number of sections failed to reveal any changes in the nerve-cells or fibres or in the interstitial tissue or blood-vessels." The disease was thus known to be the rare nervous affection known as asthenic bulbar paralysis or myasthenia gravis, only 10 cases of which have been described in this country since Wilks first described it in the *Guy's Hospital Reports* for 1877.

THE EXPECTATION OF STATURE IN BOYS AT 13 YEARS OF AGE.

IN France boys of 13 years of age who are orphans or whose parents may be in necessitous circumstances are admitted into State schools with a view to their becoming soldiers. The course of instruction extends over five years, but during this period the pupils are not taught any profession or trade which would enable them to gain a living as civilians. At the age of 18 years they are admitted to the ranks, provided that their stature is sufficient, but should they fail to measure five feet (which is the minimum standard for a French foot-soldier) they are summarily rejected. Writing in the *Archives de Médecine et de Pharmacie Militaires* for August Surgeon-Major L. G. Godin proposes to save these young men from being thus "thrown literally on the pavement" by fixing a minimum height below which no candidate for admission to the Government military schools can be accepted. It is quite possible, he thinks, to predict the stature which a boy of 13 years of age will have attained to on the expiration of five years. According to authorities consulted by him the average increment during the lustrum in question is 20 centimetres, or nearly eight inches, but should this datum be adopted it would place the rejection height at 1·34 metres, which his experience teaches him is not sufficiently low. Of 1000 boys whose cases came under his personal observation seven measured 1·33 metres at the age of 13 years, 13 measured 1·32 metres, and six measured 1·31 metres. In the first category three boys attained to the regulation height in five years, in the second the number successful was also three, but in the third there was only one, the percentage of failure being respectively 58, 77, and 84. In conclusion Surgeon-Major Godin gives it as his opinion that all boys of 13 years of age who measure 1·34 metres and upwards may be freely accepted in the schools, but that in the cases of boys who are under this height the examining medical man should look for guidance to the attendant circumstances. If an undersized boy has been badly fed, presents no signs of puberty, and has parents of good stature, the chances are that he will grow sufficiently during his period of probation. To chest circumference and weight as indicators of future height Surgeon-Major Godin attaches little or no importance. The minimum height he would establish is 1·30 metres. 12 boys out of *the 1000 were of that stature or less when they were 13 years* old, but not one of them grew sufficiently during the next five years to enable him to pass the test.

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[1] THE LANCET, Oct. 21st, 1899, p. 1110.

BACTERIAL LIGHT.

WE are indebted for a good many things to the wondrous synthetic and analytical powers of micro-organisms. Bacteria are being utilised in the arts and manufactures and they promise soon to be the effectual scavengers of the offensive products incidental to the existence of human life. Indeed, it would seem that the great species of bacteria around us present a variety of functions which doubtless could be turned to many a good account Bad microbes we know there are whose subtle operations set up the specific poison of disease, but it would indeed be a very odd circumstance if time should prove that the microbe can be so manipulated as to afford us artificial light. Yet there exists a microbe which when properly fed will grow and multiply enormously, emitting during its development a strange phosphorescent light. In the past we have been wont to look upon phosphorescence as a phenomenon due essentially to the presence of phosphorus somewhere. We now know that this is a mistake, for phosphorescence occurs in a very great number of instances in the entire absence of phosphorus. Phosphorescence is undoubtedly a manifestation of chemical or physical change, but the change, of course, may not always be due to the working of countless microscopic organisms. It certainly is in the case of the phosphorescence of the sea. In this case the phosphorescence is best when the sea is disturbed and the maximum of light is emitted from the crest of a short, rapid wave or in the foam produced by *some disturbance. This is due to the fact that the phos*phorescent bacteria or photo-bacteria are much more active in the presence of an excess of oxygen. Indeed, the respiratory exchange or oxidation of the bacteria is the cause of sea phosphorescence, since if the micro organisms be killed or oxygen be excluded the light is quenched at once, while on adding an abundant supply of combustible food-stuff such as sugar the light is intensified. The glow of ordinary yellow phosphorus is, of course, due to direct oxidation without the agency of micro-organisms. The peculiar greenish glow seen upon stale haddocks and other sea fishes is produced by this remarkable photo-bacterium and is in no way connected with the presence of phosphorus. It is possible to cultivate the phosphorescent bacteria so as to obtain a fluid which is very strongly phosphorescent. Thus by placing the flesh of fresh haddocks or herrings in a from 2 to 3 per cent. solution of common salt and keeping at a low temperature—about seven degrees above freezing—it will be found that after a few days, not merely the fishes, but also the whole of the liquid in which they are immersed, give off a pale greenish light which becomes much more brilliant if a little sugar be added. Pure cultures may thus be obtained exhibiting such a strongly phosphorescent light that by protracted exposure they may be photographed by their own light. It is not possible to say whether the culture will ever be carried to such a pitch that the vessel containing it may be used with advantage as a street lamp or a lamp upon our tables, or as a Chinese lantern at our garden-parties. But the wonderful functions of bacteria are many and the possibilities of using their powers multifarious.

EPSOM COLLEGE.

FOR some years past the boys in this school have done themselves no little credit in various public examinations and the work of the staff continues to yield excellent results. In the last five years the school has gained 12 open scholarships at the universities for classics, mathematics, history, and natural science. *One boy has passed direct into Woolwich* and passed out in the Royal Engineers. No less than 73 boys have passed the London Matriculation, 21 boys have passed the whole of the Preliminary Scientific Examination at one time direct from the senior modern form, and 21 others have also passed one part of the same examination. Three boys have passed the intermediate examination for the degree of B.Sc and two others have been successfully prepared for the first conjoint examination. Each summer several whole forms enter for the higher and lower certificates of the Joint Universities Board. 36 higher certificates (with four distinctions) and 144 lower have been won and in this period the total failures in these whole forms amount to 50 only. In making such a summary as this it is useful to turn to the doings of boys who have left the school. Amongst other distinctions gained we may notice a first and a second class in classical moderations at Oxford and a second in the classical tripos at Cambridge, three first classes and five second classes in the science tripos at Cambridge, besides honours in law and in history, the "Sword of Honour" at Sandhurst, a gold medal with honours in the final examination for the M.B Lond., and many other distinctions in various medical examinations. There is scarcely a hospital in London at which important posts have not recently been held, or are now held, by former members of the school, and those who have proved failures after leaving the school may be counted on the fingers of one hand The pupils of the college being drawn from all classes of society, a breadth of tone in the educational and school life pervades the whole school, with results much to the advantage of the students in their after life.

MISLEADING NEWSPAPER REPORTS.

A REMARKABLE paragraph recently appeared in one of the morning papers to the effect that the country is exposed to grave dangers from epidemics of enteric fever originating from the return of invalided soldiers from South Africa. An outbreak of enteric fever occurred in a village, and according to the newspaper report the medical officer of health of the district stated that upon investigation he attributed the outbreak to a member of the Imperial Yeomanry who had returned home invalided from the front in August. He had been inoculated against enteric fever and on his return was allowed by the military authorities to proceed home instead of going to Netley Hospital.

Two days afterwards a relative became ill and numerous other cases of enteric fever subsequently occurred in the village. The report adds: "The medical officer thought that the attention of the Government should be called to the case, as if patients of this sort were allowed to return direct to their homes there was a great danger of a general epidemic in the country." There are obvious absurdities in the above report, such as the idea that a person who has been "inoculated" against enteric fever could convey the disease to another, or that enteric fever could appear only two days after the supposed exposure to infection. We communicated with the medical officer referred to and received a reply from him showing how inaccurate the report was. The member of the Imperial Yeomanry referred to was inoculated with the serum for prevention of enteric fever on the voyage out to South Africa, but nevertheless suffered from an attack of the fever in May and was invalided home in August, and he was two or three weeks in his father's house before other people were attacked. We do not think that it has at all been proved that the outbreak of enteric fever in the village referred to can be traced to the home-coming of this member of the Imperial Yeomanry. Our knowledge of the length of time during which a patient may remain a source of infection after certain fevers is not definite, but it would seem to be very improbable that if the patient had been attacked with enteric fever and had been invalided home in August (unless, indeed, the disease had been prolonged by relapses) he could then have been the means of conveying infection to others. Every care will, of course, be taken with soldiers returning home from South Africa to prevent them becoming sources of infection, but the time allowed for convalescence is in nearly all the cases considerably longer than that allowed for patients who have been treated in English hospitals, and there is no cause for fear that the return of our soldiers is likely to prove a source of danger to their friends or to the community at large.

THE DEW-PONDS ON THE DOWNS.

The formation of dew-ponds on the downs, notably on the South Downs, has given rise to some very interesting speculation. Some of the ponds are of such size that it is a matter for wonder that the large bulk of water contained in them is maintained in spite of the enormous evaporation that must go on. There is a factor somewhere which must compensate for this rapid evaporation in such an exposed position for in dry weather or drought the dew pond remains full while the ponds in the valleys are empty. This factor, whatever it may be, is an important one, since without it the supplies of water for the sheep on the hills would probably soon cease. There is some contention as to the probable explanation of the supply of water being thus kept up. Recently, however, some experiments have been made of a quite simple character which, so far as they go, indicate how it is that water is almost always found in these high elevated hollows. The source of water at any rate is not a geological one. It is thought that a difference of electric potential must cause an attraction between the particles of moisture and the summit of the hill upon which the pond is situated. A simple experiment would seem to confirm this view. Thus by placing two similar receptacles in the neighbourhood of a dew-pond it was found that there was a marked increase in the water collected in the basin which was connected to the earth by means of a conductor, while in the insulated basin the quantity collected was decidedly less. Although this simple but extremely interesting experiment was necessarily imperfect owing to the difficulty of completely insulating a vessel under an environment of moisture, yet the indication seems clear. Whether or not by a perfect system of "earthing" reservoirs the quantity of water in the dew-ponds could be increased is a very interesting possibility to ponder over. Possibly if good results were obtained by this method we might derive a new, as it certainly would be a remarkable, source of supply of water for drinking purposes. The water so obtained would of course be pure and practically identical with distilled water.

LEONTIASIS OSSEA.

In the September number of the *Medical Chronicle* Mr. W. H. Stephenson of Harpurhey, Manchester, describes a case of the rare disease leontiasis ossea. The patient was a man 27 years of age. When 13 years of age he noticed for the first time a slight hard painless swelling on the left side of the lower jaw which had been gradually increasing in size ever since. About 18 months ago a similar swelling had commenced on the right side of the lower jaw and had gradually increased in size,. but was not accompanied by any marked pain. During the last 12 months he had noticed that the bones of his nose had been growing larger and that the nose had become markedly increased both in thickness and breadth—the left side rather more than the right; the left nostril had become almost occluded. During the last two months he had suffered at various times from severe neuralgic pains in the lower jaw especially on the left side, the pain extending up the left side of his face almost to the temple. Otherwise he enjoyed good health and was able to follow his usual employment His family history appeared to be very good. Mr. Stephenson found the whole of the lower jaw thickened and hypertrophied, especially the left half, and on examining the interior of the mouth the broadening and thickening of the alveolar margin were seen to be well marked. The teeth appeared to be somewhat small. The nasal bones were considerably enlarged and the left nostril was almost occluded. The superior maxillæ were slightly enlarged and there was a distinct bulging of the left frontal eminence. All the other bones appeared to be normal except that the patient suffered from slight genu valgum of the right leg. Two portraits which accompany the paper show a man of an intelligent aspect, with regular features free from disfigurement, although the fulness at the angles of the jaw is sufficiently noticeable. Leontiasis ossea was first described by Virchow and subsequently by the late Sir James Paget It is a hyperostosis distinguished from acromegaly by being confined to the facial or cranial bones.

THE QUESTION OF THE COMMUNION CUP.

In another column will be found a letter from a correspondent referring to the danger of infection which exists owing to the use of a common chalice at the administration of the Holy Sacrament. The point which our correspondent brings forward is a very real one and one, moreover, which should be taken up by ecclesiastical authorities without delay. We have ourselves commented upon the question on many previous occasions, to give an instance in our issue of Feb. 1st, 1896. There are three methods by which this danger may be avoided, but only two need be seriously considered. These are, one, the Roman Catholic mode of communion of the laity in one kind only, and the other the method of communicating technically known as "intinction"—namely, the bread being dipped in the wine. This latter method is still used in the Eastern Church and was common throughout the West up to the twelfth century. It went through various vicissitudes, being now allowed by one council and now forbidden by another, until at length, with a view of bringing about uniformity, the chalice was forbidden to the laity. The third method, mentioned by our correspondent, of a separate glass or cup for every communicant, is quite modern, has never so far as we know been adopted by any branch of the Church, and to our minds is open to the charge of introducing complications into a rite which should, at every cost be kept dignified, solemn, and reverent in its ritual, however much or little of this last there may be. Into the theological arguments for or against "intinction" or those which led to the supersession of the latter by communion in one kind only we shall not enter, for it is not our province to do so. But we earnestly urge the ecclesiastical authorities of the Church of this land to consider the matter. The Church in former days was a leader in sanitation, witness the way in which the great religious houses drained fens, planted waste places, and taught men the advantage of living a regular life under a disciplined rule. It is none the less her duty now to remove occasions of stumbling.

THE SIGNIFICANCE OF CHANGES IN THE CEREBRAL GANGLION CELLS IN PSYCHOSES.

IN the *Berliner Klinische Wochenschrift*, No. 32, 1900, Dr. E. Meyer gives an account of his studies based on cases at the psychiatric clinic of the University of Tübingen and made with a view to determine the significance of the cortical changes in the cerebral ganglion cells in acute mental diseases. The examination of microscopic specimens prepared by Nissl's and other methods showed interesting changes, the cases studied being one of delirium tremens in a woman aged 41 years, one of septic delirium and typhoid fever with high temperature, two of insanity following renal disease and uræmia, two of delirium associated with the inanition of pulmonary phthisis, one of acute delirium in a young woman aged 22 years, one of delusions of persecution in a woman aged 59 years, one of melancholia terminating in delirium acutum, one of mental confusion passing on to katatonia, and one of hallucinatory delirium occurring at the climacteric period. Many changes especially of a chromatolytic character as regards Nissl's granules were found, affecting especially the large and "giant" pyramidal cells, the extent and distribution of the changes being variable. Cases with septicæmic complications—e.g., multiple abscesses, purulent nephritis, and enteric fever—showed changes similar to those without such complications, though in the latter cases the agency of toxic substances—e.g., alcohol—could not be excluded. Dr. Meyer thinks that not all psychoses are accompanied by change in the ganglion cells, while those changes found to be present are known to occur in entirely different diseases marked by differences of etiology and clinical history, and hence that such changes are not pathognomonic. Many of the cellular changes (chromatolysis, fatty and pigmentary degenerations) are common to several and different psychoses, although the distribution of these changes in the various cortical "areas" may be different.

THE UNIVERSITY OF LONDON.

AS we announced in our issue of Oct. 6th was to be the case a meeting of the Convocation of the University of London took place on Oct. 9th for the purpose of electing members to serve on the Senate under the statutes made by the Commissioners. Mr. H. E. Busk, the chairman of Convocation, presided and before the business of the election commenced a motion was adopted expressive of the sympathy of the University with Her Most Gracious Majesty the Queen upon the occasion of the death of the Duke of Saxe-Coburg and Gotha. Polling then commenced and continued for some three hours. Members were elected by the registered graduates in Science, Arts, and Medicine and Surgery respectively. The graduates in medicine elected Dr. Thomas Barlow with 381 votes and Dr. Joseph Frank Payne with 314 votes, as against Dr. Sydney Ringer with 243 votes and Mr. Quarry Silcock with 212 votes. We are sincerely glad at this result, for, as we said last week, Dr. Barlow and Dr. Payne are in accord with the views which we hold upon the question of the establishment of a real teaching university for London, while Dr. Ringer and Mr. Quarry Silcock favour the continuance of the *status quo*. The Faculty of Medicine of the University will this afternoon (Friday), at 4 P.M., hold their first meeting at South Kensington for the purpose of electing three representatives upon the Senate in accordance with the new statutes. The three Senators elected by the Faculty will be *ex officio* members of the Academic Council, one of the most important standing committees of the Senate in its re-constituted form. With so small a number to elect probably no attempt will be made to choose candidates merely as delegates of particular medical schools, nor does it seem desirable that the Faculty should go outside its own body to find representatives. We understand that the following candidates will be put forward: Dr. J. Kingston Fowler, Dr. E. C. Perry, Dr. H. Montague Murray, Mr. A. A. Bowlby, and Dr. Isambard Owen, and doubtless other names will be submitted to the Faculty It was at one time thought that at this meeting a Dean of the Faculty would be elected, and Mr. H. T. Butlin's name has been mentioned in connexion with this important post. At the last moment, however, it has been ascertained that the election of dean must be postponed until the new Senate has prescribed the manner of election.

UP to the time of going to press the following medical candidates have been re-elected Members of Parliament:—R. Ambrose, L R C P. & S. Edin. (Mayo West); John Dillon, L.R.C S Irel. (Mayo East); R. Farquharson, M.D. Edin. (Aberdeenshire); Sir B W. Foster, M.D. Erlang., F.R.C.P Lond. (Derbyshire, Ilkeston); M. A. MacDonnell, M.D. R.U.I. (Queen's Co., Leix); Sir M. Foster, M.D. Lond., K.C.B. (London University); C. K. D. Tanner, M.D., M.Ch. R.U.I. (Mid Cork); and Sir J. Batty Tuke, M.D. Edin. (Edinburgh and St Andrews Universities). The following new Member has also been elected:—F. Rutherford Harris, L.R.C.S Edin. (Monmouth District). Sir R. B. Finlay, the Attorney-General, who was at one time a medical practitioner, has also been re-elected.

THE death is announced as having occurred on Saturday last, Oct. 6th, of Mr. John Frederick France, F.R.C.S. Eng., Mr. France, who retired from the medical profession some years ago, received his medical education at Guy's Hospital, where he was at one time ophthalmic surgeon and lecturer on ophthalmic surgery He edited "Morgan on Diseases of the Eye." He was a Fellow of the Society of Antiquaries and a justice of the peace for Middlesex.

THE opening meeting of the next session of the Chelsea Clinical Society will be held in the Holy Trinity Parish Hall, Pavilion-road, Sloane-square, on Tuesday, Oct. 16th, at 8.30 P.M. An address will be delivered by the President, Dr. William Ewart, on a Clinical View of some of the Mechanisms of the Heart and its Valves This meeting will be open to all members of the medical profession on presentation of card.

PROFESSOR B. C. A WINDLE, Dean of the Medical Faculty of the University of Birmingham, has been nominated by the Council to represent the newly established University on the General Medical Council.

A NEW out-patient department for mental disorders has been opened at Charing-cross Hospital and Dr. Percy Smith has been appointed physician-in-charge. Patients have to attend on Wednesdays at 9 30 A.M.

A FEW WORDS ON THE PUBLIC HEALTH SERVICE.

AT the meeting of the West of England and South Wales Branch of the Incorporated Society of Medical Officers of Health, held in Bristol on Oct. 4th, the presidential address was delivered by Mr. J. Herbert Jones, medical officer of health of the Rhondda urban district. After some preliminary observations on the existing administration of the Public Health Acts in England and Wales, and a disclaimer of any intention to suggest a scheme for reform of the public health service, Mr. H. Jones proceeded to give a *résumé* of the manner in which certain Acts of Parliament akin to the Public Health Acts were carried out, his opinion being that a study of the particular methods adopted in other public departments might be useful to the members of the society. He said:—

"The particular statutory enactments with which I will concern myself are the Factory Acts, the Mines Regulation Acts, and the Education Acts. The first two are administered by the Home Office—a department presided over by the Home Secretary, who is invariably a Cabinet Minister. The Education Acts are administered by local school authorities, but a controlling power is in the hands of the Board of Education—a department represented in Parliament by the Vice-Chairman of the Committee of Council, who does not always occupy a seat in the Cabinet. The practical administration of the Factory and Workshops Acts is in the hands of inspectors who are appointed to promote and enforce the uniform working of the Acts, the provisions of which are concerned with the safety of the workpeople, with the sanitary conditions of the places in which they work, and with the hours during which women and children are employed. There is a chief inspector who is responsible for the working of the department and for the carrying out of the Acts throughout the United Kingdom. He is stationed in London and has his headquarters at the Home Office. Then there are five superintending inspectors to whom are assigned definite 'divisions'; their headquarters are placed in large centres of population, such as London, Glasgow, Manchester, Birmingham, and Leeds. Each superintending inspector has under his supervision district inspectors, to whom are allotted definite areas within the wider division. These latter in large districts have the help of junior inspectors and assistants. There are altogether 47 inspectors attached to districts (15 ranking as first class and 32 as second class) and there are 37 junior inspectors and 31 assistants. In addition to the divisional and district staff the chief inspector has the further assistance of a deputy chief inspector, a medical inspector, an engineering adviser, an inspector of cotton cloth factories (and other factories in which artificial humidity is employed), and a principal lady inspector, under whose immediate direction are six lady inspectors. The inspectors are nominated and appointed by the Home Secretary after examination which is in part competitive in certain subjects. Their salaries are increased periodically up to a fixed maximum. An inspector may be called upon to retire at the age of 60 years and he is compulsorily retired at 65 years, in each case becoming entitled to superannuation. In exceptional circumstances he may be employed for a further term of five years after he has reached the age of 65 years.

The Coal Mines Regulation Acts of 1887 and 1896 contain provisions as to the employment of boys, girls, and women, the payment of wages, the prohibition of single shafts, the division of mines into parts, the appointment and certification of managers, inspection of mines, arbitration in disputes, as to coroners' inquests, the ventilation of mines, and as to general and special rules, &c. The Acts are enforced by officials of the Home Office styled inspectors of mines. Concerned with metalliferous mines alone there are one inspector and two assistant inspectors. For coal and metalliferous mines there are 12 inspectors and 24 assistant inspectors. To each inspector is allotted a district and he has associated with him assistant inspectors who in their turn have charge of a defined area The time of the inspector is primarily occupied in making inspections either at irregular intervals upon his own initiative, or when asked by some responsible person to do so, or when he receives a complaint of conditions calling for investigation. The inspectors possess extensive powers of entry to the works with which they are concerned and have very large powers enabling them speedily to enforce the provisions of the Mines Acts. They meet in conference in London once a year and oftener if necessary. The expenses of these meetings are defrayed by the Home Office. They are appointed by the Home Secretary and must have submitted themselves to examination in certain subjects relevant to their particular calling. They are paid a gradually increasing salary up to a maximum and are subject to the same regulations as to superannuation and retirement as factory inspectors.

The administration of the Factory and Workshops Acts and of the Mines Regulation Acts is entirely in the hands of the central authority. The Education Acts, on the other hand, more nearly resemble the Public Health Acts in that they are administered by local authorities controlled by a central authority. With the detailed work of the school boards or school committees I will not trouble you, but I will confine myself to the part played by the Board of Education. The duties of the local school authorities are set out in the Education Acts and in a code issued year by year by the Board of Education. The provisions of the code and of the Education Acts are to a certain extent enforced by a large staff of inspectors acting under the Board of Education. There are 12 chief inspectors, one of whom is designated senior chief inspector, and 91 inspectors. Then there is a staff of some 200 sub inspectors, one fourth of whom are styled first class and the remainder second-class sub-inspectors; these are usually drawn from the ranks of those teaching in the public elementary schools. Each of the 12 chief inspectors has allotted to him a division which is again subdivided into smaller areas under the control of an inspector who has associated with him one or more sub-inspectors. The inspector is not subordinate to the chief inspector, but reports to, and receives instructions directly from, the Board of Education. The sub-inspectors, on the other hand, report and take instructions through the inspector. The chief inspectors have periodical conferences with each other, and the chief inspector has conferences with the inspectors in his division in order to secure substantial uniformity of judgment and practice throughout a division. The expenses of these conferences are borne by the Board of Education.

In conclusion, I cannot refrain from asking you to contrast the administration of the Acts of Parliament which I have enumerated with the administration of the Public Health Acts as we know it in many parts of the country. There are, I admit, many towns and districts in which the local authority is alert and has a full sense of its great responsibilities, but this is the exception rather than the rule. Cannot something be done to make the exception the other way?"

THE WAR IN SOUTH AFRICA.

THERE is but little to be chronicled about the military situation in South Africa. As might have been confidently expected, now that the war has reached a final and merely guerilla stage, there have been much desultory fighting and occasional military raids on the part of the Boers. Their resistance as an organised body has been overcome and the back of the campaign is broken, and we are now witnessing the sequelæ of what has gone before. The Royal Commissioners having inspected all the hospitals and finished their work in South Africa, will soon be on their way to this country, where they will examine some more witnesses and complete their investigations. The publication of their report will, we need scarcely say, be awaited with great interest. Army reform will occupy a front seat in the immediate future and with Lord Roberts as the new Commander in-Chief—especially if supplemented and aided by the organising capacity of Lord Kitchener—the nation may expect to have the subject thoroughly threshed out. We can only trust that the danger will be avoided of perfecting a scheme which, however admirably adapted it may be for fighting the Boers under the exceptional conditions which obtained in the veldt and uplands of South Africa, may be little fitted for campaigns conducted under altogether different systems and conditions and against regularly organised European armies. After all that has been said and done, however, have we ever waged a war under the same difficulties that we have had to encounter in South

Africa or, all things considered, more successfully carried out what we set about to accomplish? There can be no doubt that no better equipped and provisioned army has ever been sent by this or any other country into the field. Its shortcomings were mainly attributable to our having under-rated the magnitude of the task, to the sudden and unexpected way in which war was thrust upon us by the Boer ultimatum, and to our having been brought face to face with new problems and a new experience.

The organisation of, and everything connected with, the Army Medical Service will be cast into the melting-pot and subjected to a fierce fire of criticism and rigorous investigation. We shall then see in what respects it is considered susceptible of being remodelled on new and improved lines. The new Government is pledged to undertake the problems, the settlement of which on a practically satisfactory and workable basis becomes more and more difficult. The adjustment of the scales of military and medical requirements, with a due regard to military efficiency and the demands of modern warfare, on the one hand, and progressive requirements of civilised society and sanitation, on the other, is no easy task. But it has to be faced. This brings us to a consideration of Dr. Leigh Canney's proposals and his letter in THE LANCET of Sept. 29th, p. 969. We may first of all take the opportunity of making a few prefatory remarks, if only to guard against any possible misapprehension of what we are about to say. Dr. Canney has, as a matter of course, our entire sympathy in regard to the objects which he has in view. In all that appertains to the sick and wounded soldier and the prevention of disease in the field we cannot fail to be deeply concerned. We heartily welcome every scheme claiming to introduce improvements in these respects and are always prepared to discuss them with a feeling of prejudice in their favour rather than otherwise As a general principle we have always held that what is best for the public is best for the profession, even where, as it occasionally happens, the views put forward may seemingly conflict with some real or alleged professional interest. But this does not remove the responsibility of considering every proposal from a practical and from every other point of view before adopting it. Turning then to Dr. Canney's letter, we disclaim all intention of prejudging his proposals; still we may allude to some points which struck us on reading it, and we follow the order he has laid down

1. The whole public who have been watching their relatives and friends through this anxious struggle, are no doubt immediately concerned, but it would be scarcely possible to submit any proposed remedial measures to the judgment of the public. They must be considered by persons competent to deal with them, and as this war is sure to be followed by an inquiry into everything connected with it and the question of prevention of disease in the field among others, we ventured to suggest that Dr. Canney might very usefully in the public interest take advantage of that opportunity.

2. We wish that we could see how the object of the second paragraph of his letter could be accomplished—viz., to keep the army free from typhoid fever and dysentery from the first day of landing and to discover and to treat suspicious cases. If, as is the case, the mildest cases of typhoid fever are as capable of spreading infection as the gravest this would be a very necessary but a very difficult thing to do But what about the very lengthened periods of time over which it is alleged the infection may extend in those who have apparently recovered from an attack of typhoid fever? We do not see why dust, during such dust-storms as occur in India, for example, should not be a vehicle of infection (if not direct, through articles of food and fluids—say water), notwithstanding that the fact has not yet been scientifically demonstrated. But be this as it may, we freely admit that the main channel of infection is water and that typhoid fever is a water-borne disease, and that if troops could be supplied with sterilised water from start to finish of a campaign a most desirable end would be accomplished. In the case of forced marches such as were carried out by General French, where weight tells and transport is deficient (which is so commonly the case), we nevertheless see some difficulties in the way of doing it.

3. It would, we fear, be simply impossible to be assured of what Dr. Canney demands of medical officers in India; nothing short of an experiment conducted with scientific accuracy would suffice to guard every channel of infection This paragraph appears to us to conflict somewhat with a previous one.

4. This is a matter of opinion and experience. All we can say is that the experience of officers in a campaign has not always been of the same fortunate character.

5. We do not know whether this would, or would not, be practicable under all the conditions of war. Certainly the transport of a "water corps" should be held sacred, but whether all the mules for carrying the boiling machines would be always forthcoming and could accompany and keep pace with the troops under all circumstances is another matter.

In conclusion, we wish to say that although we have criticised some of his proposals we consider that Dr. Canney has been at the trouble to work out a scheme for which he deserves, in our opinion, great credit, and it should receive (as it no doubt will) all the consideration which it merits when the time comes for inquiring into these and other matters connected with the South African War.

THE PLAGUE.

No fresh cases of plague have occurred in Glasgow since the date of our last issue, but the man who was admitted to the Belvidere Hospital from Govan on Sept. 20th died from plague on Oct. 7th.

Dr. A. K. Chalmers has forwarded to us some clinical notes of patients who were reasonably suspected of being affected by plague. We subjoin the notes of two of the most interesting cases.

1. A man sickened on Sept 27th with shivering and headache, which were followed on the 28th by pain in the right axilla. On examination on Oct. 2nd and 3rd there was a a general thickening in this situation, which was tender on pressure, although definite glandular enlargement in the axilla could not be discovered. In the left axilla, however, several glands were enlarged, but were not tender on pressure. He was removed to hospital for observation and in the course of the following day an abscess of a distinctly septic character appeared in the right axilla.

2. On Oct. 6th a boy was notified as suffering from "*fever, probably typhus*," and on the house being visited it was learned that he had died on the previous evening. A history of illness beginning suddenly in the midst of apparently perfect health and accompanied by vomiting and high fever with rapidly increasing prostration and death within 24 hours, aroused suspicion which was strengthened by an external examination of the body and the discovery of a chain of enlarged cervical glands in both sides of the neck and in the left axilla. The body was in consequence removed to the mortuary at Belvidere Hospital and with the father's consent a post-mortem examination was there made. This revealed a tonsillar abscess, with a widely distributed glandular enlargement, all pointing to an extreme degree of susceptibility towards septic poisoning to which the death can be attributed. Evidence of plague was entirely absent.

Professor Zabolotny of the Imperial Institute of Experimental Medicine, St. Petersburg, who in recent years was a member of the Russian expedition for the study of plague in India, Arabia, and Eastern Mongolia, and who spent several weeks in this country on behalf of his Government, has left Glasgow. His conclusions regarding the Glasgow out-break are here reproduced.

1. The epidemic in Glasgow, when compared with that of India, China, and Africa, and with those in Europe of recent years (Oporto, Kolobowka), is of the most mild description.

2. The extension of the epidemic is not great and the mortality is quite insignificant, which may be attributed to the medical and sanitary measures which have been practised with so great energy in Glasgow.

3 For the most part one meets with bubonic cases which are less dangerous from the point of view of epidemiology than the pneumonic forms. These latter are excessively contagious, because the sputum of the sick person teems with plague bacilli.

4. Since in the bubonic form the sickness does not spread except by contact with the skin, the measures of isolation and cleansing of linen and clothing play a most important rôle in prevention.

5. For persons in contact with the sick the best method of protecting them is by preventive injection with serum (from 10 to 20 cubic centimetres) as is practised in Glasgow.

6. Treatment of the patients is most effective when the serum is injected in large doses (from 60 to 120 cubic centimetres) intravenously.

7. The post-mortem examinations of fatal cases have presented a picture of protracted illness (suppuration, *nodules pesteuse*, mixed infection) and not that of an acute malady terminating fatally in from two to three days.

A fatal case of plague occurred at Cardiff on Oct. 4th. The patient was one of the crew of the ship *Southgarth* voyaging from the River Plate to the Tyne. On the way home one member of the crew was put ashore at King's Lynn suffering from typhoid fever—a diagnosis which was made by the medical man who first saw the patient and was subsequently confirmed by the medical officer of health. Another member of the crew who arrived with the ship in the Tyne landed at South Shields on Sept. 22nd. On Sept. 21st he was taken ill. On the 24th he went to North Shields and Newcastle, and from there to his home at Llandaff, where he arrived on the 27th. Here his illness was at first supposed to be typhoid fever, but it was eventually suspected to be plague—a diagnosis which was provisionally confirmed by bacteriological examination of the blood and cultures from the bubo. He was removed to the Cardiff Fever Hospital, where he was isolated and where he died on Oct. 4th. An absolute diagnosis was made from the result of the post-mortem examination and by inoculation of a guinea-pig, a diagnosis which was confirmed by Dr. Klein. By consent of the widow the body of the man was cremated on Flatholm Island. In view of these events the member of the crew of the *Southgarth* who was landed at King's Lynn is being carefully watched. The port medical officer of health, writing on Oct 10th, informs us that the patient is suffering from typhoid fever but is now nearly convalescent. The Local Government Board have issued a "Plague Memorandum" to which we refer in our leading columns.

In view of the possible appearance of the plague in London the Public Health Committee of the London County Council met on Sept 26th and drew up a report which was confirmed by the Council on Oct. 9th. The salient points of this report are as follows. After referring to a communication which had been received from the Local Government Board asking among other things what accommodation the Council could provide for isolating "contacts" the Committee go on to say:—

> We have given careful consideration to the Board's letter and we think it very desirable in the interests of efficiency and economy in administration that the Council should undertake the duty indicated by the Board and should provide the whole of the accommodation required rather than that the duty should be divided among a number of local sanitary authorities. The Council has in its possession a number of properties acquired under various improvement or other schemes some of which could at a few hours' notice be rendered fit for occupation, while the repairs necessary at the others would not take more than a few days. Having regard to the urgency of the matter we have informed the Local Government Board that the Council is prepared to undertake the duty indicated in the Board's letter, and we have sent to the Board a list showing the premises in the Council's possession which could be adapted for the purpose and the time which it would take to render them fit for occupation. We have also stated that, in addition to the premises mentioned in the list, the Council has other buildings which could in case of great emergency be adapted as isolation homes, and that should these eventually prove inadequate the Council would provide or obtain any further accommodation that might be necessary.
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> We have instructed the valuer, as soon as the Board intimate their acceptance of the Council's offer, to have one of the properties made ready for habitation and the necessary furniture stored therein, to repair two or three of the other properties, and generally to complete lists of furniture, provisional arrangements with contractors, arrangements as to diet, &c., so that the demand for accommodation may be kept pace with should plague appear in London.
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> We have informed the various committees of the Council which have charge of the properties above referred to, of their proposed use in case of necessity as isolation homes, in which the inmates would be under the daily supervision of the Council's medical officers. Of course the actual cases of plague would be sent to the hospitals of the Metropolitan Asylums Board, while the medical inspection of infected areas and disinfection of premises and articles after cases of plague would no doubt be undertaken by the sanitary authorities.
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> On Sept. 19th the Local Government Board issued an order requiring the immediate notification of all cases of plague to the sanitary authorities and to themselves. This order applies throughout England and Wales. Under our instructions the medical officer has sent a circular letter to the various medical officers of health in London inviting them to give him immediate notice of cases or suspected cases of plague, with a view to these cases being inquired into by a medical man familiar with the disease, and also with a view to material, if necessary, being sent for bacteriological examination at the cost of the Council. Mr. James Cantlie, M.B., F.R.C.S., formerly medical officer in one of the plague hospitals in Hong Kong, has had large experience of the disease, and we have retained him to examine and report upon any suspected cases of plague in London in which there is any doubt as to the diagnosis, and to make post-mortem examinations when necessary. An arrangement has also been made with Dr. Klein for the bacteriological examination of material from suspected cases.
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> During the recess the medical officer, under the authority of our chairman, asked Mr. Cantlie to prepare a memorandum giving an account of the clinical characteristics of plague, and we have given instructions for a printed copy of this memorandum to be sent to each medical practitioner in London.
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> The Council may like to know that in 1898, certain cases of plague having occurred among the members of a ship's company in the Albert Docks, the medical officer caused inquiry to be made by the Council's inspectors in all common lodging-houses, shelters, and seamen's lodging-houses in sanitary districts in the eastern half of London on both sides of the Thames for cases of sickness which might possibly prove to be plague, and all cases of sickness of a doubtful nature were inquired into by one of the Council's medical officers. In July of this year this inquiry was repeated, and it was again repeated in the middle of September. No single case can be found that raises suspicion of plague. All the premises referred to are now being periodically visited for the same purpose, the seamen's lodging-houses [illegible] have not so far entailed much [illegible] me prevalent in London—which we hope will not be the case—of course the Council may have to incur considerable expense for the repair and furnishing of premises as isolation homes and for the food of persons sent to these homes. We propose at our next meeting to consider the question of expenditure and to submit an estimate to the Finance Committee.

LUNACY IN IRELAND.

IN the Forty-ninth Annual Report of the Inspectors of Lunatics (Ireland), just published, the number of the insane in the various institutions in Ireland on Jan. 1st, 1900, was 20,863, as compared with 20,304 patients on Jan. 1st, 1899, or a total increase of 559 patients during the year. The increase has taken place entirely in the district asylums, a decrease being noted in private asylums and workhouses. The increase during 1899 was less than that for the preceding year, which reached the exceptional figure of 714 but was greater than the average increase for the previous 10 years—viz., 475. No provision exists in Ireland by which any returns can be obtained of pauper lunatics wandering at large or residing with relatives except through the decennial census. The number of patients discharged as recovered during the year was 1338 (745 men and 593 women), an increase of 59 over that of the previous year, or 8·5 per cent. of the total average number resident. The number of deaths during the year amounted to 1132, of whom 631 were males and 501 were females. This number exceeded by 27 the mortality of the preceding year and showed a percentage of 7·2 on the average number resident during the year—that for the preceding year being 74. One of the deaths was by suicide and four resulted from misadventure. In 311 cases the cause of death was verified by post-mortem examination, as against 298 for the previous year. The causes of death vary in different localities and are affected by the position of the district from which the patients are received, whether urban or rural, as well as the other manifold conditions which influence the general health, such, for instance, as whether the district is poor or comparatively prosperous. In some instances the causes appear to affect the patients after admission, such as overcrowding. "It is not difficult to understand how such a disease as consumption, which is so common a cause of death in the general population, should be a potent factor in the mortality of asylums; but it is not so easy to explain how other diseases, such as dysentery, not so commonly met with in the outside community, should be found as the cause of death in certain asylums." The number of deaths in district asylums during the year was 1132 and the deaths from general paralysis of the insane amounted to 50, thus showing the progress of this disease amongst the urban population of Ireland. The deaths from consumption amounted to 321, or 28·4 per cent. of the total number. In the Richmond District Asylum the mortality from phthisis was 36·5 per cent., in Cork it was 37 per cent, in Limerick it was 39 per cent., and in Ennis Asylum it was 60 per cent. General paralysis was returned as the cause of 9·7 per cent. of deaths in Waterford Asylum, and 10 6 per cent. in Downpatrick, 13·5 per cent. in Richmond, and 15·7 per cent. in Belfast Asylums. The expenditure incurred in maintaining an average number of

15 785 lunatics in district asylums was £386,306. To meet this expenditure a sum of £211,902 10s. was paid out of the local rates (in pursuance of the 58th section of the Local Government Act of 1898), £153,467 5s. was received by way of Government capitation grant, and £7342 12s. was contributed by the relatives of patients. The average cost per head for all district asylums was £33 9s. 8d. per annum, or 9s. 5d. per head per week.

LEICESTER NEW ISOLATION HOSPITAL.

THE formal opening of the Leicester New Isolation Hospital, the ultimate cost of which will be nearly £60,000, took place on Sept. 28th. There is still a good deal of work to do before the buildings leave the contractors' hands but when finished it is believed that Leicester will possess the finest equipped and most up-to-date institution of the kind in the United Kingdom The Sanitary Committee promoted a competition for the best design, and Messrs. Blackwell and Thomson, architects, of Leicester, gained the first award, and from these designs the hospital has been built. The site comprises about 14 acres. The hospital proper consists of four separate one-storey pavilions for the treatment of scarlet fever, giving accommodation for 26 beds each; a similar pavilion for typhoid fever containing 28 beds; two isolation pavilions—one a two-storey building—containing 28 beds, giving a total accommodation for 160 adult patients. The buildings have been so arranged that two additional scarlet fever pavilions can be easily added and also one additional isolation pavilion. It is suggested that the separate rooms in the isolation blocks can be conveniently used for typhoid fever patients should occasion arise, hence an additional typhoid fever block is not projected. The other buildings comprise the administration block, discharging block, and mortuary. The total number of beds if the full extension were carried out would be 240. The several buildings are connected by macadam roads without covered ways, the ambulance vans thus being able to drive up to the door of each block. The site has an average elevation of about 280 feet above ordnance datum. The four scarlet fever pav t of two main wards, 72 12 beds each. In the ce *or observation* ward of two beds. The nurses' kitchen is centrally placed and can overlook the beds in the two main wards by means of observation windows. At the end of each main ward is placed on one side the sanitary tower containing the water-closets, slop and scalding sinks, which are disconnected by a ventilated lobby, and on the other side the bath-room, containing two baths and two lavatories. The baths are of porcelain with the latest kind of fittings. In connexion with the w has b flushi

The typhoid fever pavilion is very similar to the scarlet fever pavilions with the exception that there are two separate wards instead of one. The one-storey isolation hospital is based on the lines of the Local Government Board's suggestion and provides for a total of 12 beds.

The administration block contains on the right of the front main entrance: committee-room, resident medical officer's sitting room, lavatory, &c., dispensary, laboratory store, waiting-room, and telephone inclosure; and on the left of the entrance matron's sitting-room, office, nurses' mess-room, sitting-room, sewing-room, household linen-room, dry-goods store, lavatory, and servants' hall. The main corridor is seven feet wide. At the west end of the administration block and at right angles to the main corridor is another corridor out of which lead the kitchen and stores. It is proposed to do most of the cooking by gas and by steam. The floors of the corridors, kitchens, &c., are of terazzio, an Italian process by which small pieces of marble are mixed with concrete and a smooth surface is obtained. The first floor contains the nurses' and matron's bedrooms, with bath-rooms, water-closets, and linen store The medical officer's bedroom and bath-room are also on this floor and are approached by a separate staircase. 20 bedrooms for nurses are provided on this floor. The second floor contains 10 bedrooms for servants, a bath-room, &c. The front elevation of the administration block is a neat example of eighteenth century English work. There is nothing in the shape of ornamentation, but in the face of the wall over the portico the name and date of the erection of the hospital are set out in stucco. The porter's lodge is situated on the right-hand side of the main entrance and stands 15 feet back. At the rear of the porter's lodge is the discharging block, arranged in duplicate for male and female patients. The discharged patients will enter the building at one end in hospital garments, will undress and bathe, and will leave by an opposite door, a waiting-room being provided for their friends who come to meet them. The mortuary consists of a post-mortem room, mortuary, and viewing chamber.

The hospital is heated by low-pressure steam, with auxiliary stoves and grates. Ventilating radiators are placed in the wards under some of the windows and extraction flues are built in the outside walls for carrying away the vitiated air of the wards The foul drains from the scarlet fever pavilions, the typhoid fever pavilion, the isolation block, and the administration block are kept quite distinct and are properly disconnected at a manhole before entering the ejector house. The sewage is then pumped up into one of the main carriers on the sewage farm by means of a here is telephonic communication and the hospital is lighted by laundry is fitted with the most modern requisites, the drying chambers being heated with hot air. The laundry is also provided with a large steam disinfector.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6087 births and 3964 deaths were registered during the week ending Oct. 6th. The annual rate of mortality in these towns, which had been 18 1 and 18 5 per 1000 in the two preceding weeks, declined again to 17 8 last week. In London the death-rate was 15 8 per 1000, while it averaged 19·1 in the 32 provincial towns. The lowest death-rates in these towns were 8 7 in Croydon, 13·8 in Nottingham, 14·2 in Cardiff, and 14 3 in Brighton; the highest rates were 24·1 in Norwich, 24 8 in Salford, 25·1 in Sunderland, and 26 0 in Manchester. The 3954 deaths in these towns included 673 which were referred to the principal zymotic diseases, against 771 and 776 in the two preceding weeks; of these 406 resulted from diarrhœa, 92 from diphtheria, 66 from "fever" (principally enteric), 49 from whooping-cough, 32 from scarlet fever, and 28 from measles. The lowest death-rates last week from these diseases occurred in Croydon, Plymouth, Cardiff, Halifax, and Bradford; and the highest rates in Norwich, Leicester, Burnley, Sheffield, Sunderland, and Gateshead. The greatest mortality from measles occurred in Swansea, Huddersfield, and Newcastle; from whooping-cough in Preston and Gateshead; from "fever" in Portsmouth, Swansea, Sheffield, and Sunderland; and from diarrhœa in Norwich, Burnley, Sunderland, and Gateshead. The mortality from scarlet fever showed no marked excess in any of the large towns. The 92 deaths from diphtheria included 29 in London, 11 in Leicester, nine in Leeds, seven in Liverpool, and seven in Sheffield. No fatal case of small-pox was registered last week in any of the 33 towns; and only one small-pox patient remained under treatment in the Metropolitan Asylums Hospitals on Saturday last, Oct. 6th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2071, against numbers increasing from 1703 to 1938 on the five preceding Saturdays; 313 new cases were admitted during the week, against 243, 269, and 318 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 203 and 187 in the two preceding weeks, further declined last week to 164 and were 53 below the corrected average. The causes of 45, or 1·1 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Salford, Bradford, and in 11 other smaller towns; the largest proportions of uncertified deaths were registered in Portsmouth, Liverpool, Manchester, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·9 per 1000 in each of the three preceding weeks, rose to 19·3 per 1000 during the week ending Oct. 6th, and was 1·5 per 1000 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 13·5 in Perth and 15·3 in Paisley to 21·2 in Aberdeen and 23·2 in Greenock. The 595 deaths in these towns included 53 which were referred to diarrhœa, 18 to whooping-cough, 13 to "fever," 10 to measles, seven to scarlet fever, five to diphtheria, and one to small-pox. In all, 107 deaths resulted from these principal zymotic diseases, against 112 and 91 in the two preceding weeks. These 107 deaths were equal to an annual rate of 3·5 per 1000, which was 0·5 above the mean rate last week from the same diseases in the 33 large English towns. The deaths from diarrhœa, which had been 62 and 49 in the two preceding weeks, rose again last week to 53, of which 26 occurred in Glasgow, 10 in Dundee, six in Edinburgh, five in Paisley, and four in Aberdeen. The fatal cases of whooping-cough, which had declined from 25 to 12 in the five preceding weeks, rose again to 18 last week, and included nine in Greenock, seven in Glasgow, and two in Edinburgh. The deaths referred to different forms of "fever," which had increased from four to 12 in the four preceding weeks, further rose last week to 13, of which 11 (including one fatal case of bubonic plague), were registered in Glasgow and two in Dundee. The deaths from measles, which had been five in each of the two preceding weeks, increased to 10 last week, and included six in Glasgow and three in Edinburgh. The fatal cases of scarlet fever, which had been four and six in the two preceding weeks, further rose last week to seven, of which five occurred in Glasgow. The five deaths from diphtheria showed a decline from recent weekly numbers and included three in Edinburgh and two in Glasgow, where the fatal case of small-pox was also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 101 and 100 in the two preceding weeks, decreased to 98 last week, but were 27 above the number in the corresponding period of last year. The causes of 27, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·5 per 1000 in each of the two preceding weeks, rose to 26·0 during the week ending Oct. 6th. During the past four weeks the death-rate in the city has averaged 25·0 per 1000, the rate during the same period being 16·4 in London and 18·7 in Edinburgh. The 174 deaths belonging to Dublin registered during the week under notice showed an excess of 10 over the number in the preceding week, and included 36 which were referred to the principal zymotic diseases, against 31 and 25 in the two preceding weeks; of these 27 resulted from diarrhœa, five from whooping-cough, three from "fever," and one from measles. These 36 deaths were equal to an annual rate of 5·4 per 1000. the zymotic death-rate during the same period being 2·2 in London and 2·4 in Edinburgh. The fatal cases of diarrhœa, which had declined from 27 to 18 in the three preceding weeks, rose again to 27 last week. The deaths from whooping-cough, which had been three in each of the two preceding weeks, increased last week to five. The fatal cases of "fever," which had been seven, three, and four in the three preceding weeks, declined again to three last week. The 174 deaths in Dublin last week included 66 of infants under one year of age and 28 of persons aged upwards of 60 years; the deaths of infants considerably exceeded the number in the preceding week, while those of elderly persons showed a slight decline. Eight inquest cases and seven deaths from violence were registered, and 54, or nearly a third, of the deaths occurred in public institutions. The causes of 16, or more than 9 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING SEPTEMBER, 1900.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the 43 sanitary areas of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 8·7 per 1000 of the population, estimated at 4,589,129 persons in the middle of the year. In the three preceding months the rates had been 6·9, 7·0 and 6·0 per 1000 respectively. The rates were considerably below the average in Paddington, St George Hanover-square, St. James Westminster, St. Martin-in-the-Fields, Strand, and Woolwich; while they showed the largest excess in Fulham, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, Rotherhithe, and Lee sanitary areas. One small-pox case was notified during September, and was that of a person belonging to Wandsworth sanitary area; one small-pox patient was admitted into the Metropolitan Asylums Hospitals during the month, and two remained under treatment on Saturday, Sept. 29th. The prevalence of scarlet fever showed a marked increase over that recorded in the preceding month; among the various sanitary areas this disease was proportionally most prevalent in Hammersmith, St. Giles, St. Saviour Southwark, St. George Southwark, Lee, and Plumstead. The Metropolitan Asylums Hospitals contained 1899 scarlet fever patients at the end of September, against 1788, 1804, and 1657 at the end of the three preceding months; the weekly admissions averaged 255, against 202, 210, and 152 in the three preceding months. The prevalence of diphtheria showed a considerable increase over that recorded in the preceding month; the greatest proportional prevalence of this disease occurred in Fulham, Mile End Old Town, Poplar, Newington, Bermondsey, and Lee sanitary areas. There were 1231 diphtheria patients in the Metropolitan Asylums Hospitals at the end of September, against 1212, 1256, and 1171 at the end of the three preceding months; the weekly admissions averaged 185, against 151, 183, and 142 in the three preceding months. The prevalence of enteric fever was considerably in excess of that recorded in recent months; among the various sanitary areas this disease was proportionally most prevalent in Chelsea, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, Bermondsey, and Rotherhithe. The Metropolitan Asylums Hospitals contained 329 enteric fever patients at the end of September, against 148, 129, and 170 at the end of the three preceding months; the weekly admissions averaged 69, against 21, 20, and 32 in the three preceding months. Erysipelas was proportionally most prevalent in St. Giles, St Luke, Whitechapel, St. George-in-the-East, Mile End Old Town, and St. Olave Southwark sanitary areas. The 15 cases of puerperal fever included three in St. Pancras, three in Battersea, and two in Greenwich sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the public institutions of London having been distributed among the sanitary areas in which the patients had previously resided. During the four weeks ending Sept. 29th the deaths of 5793 persons belonging to London were registered, equal to an annual rate of 16·5 per 1000, against 14·8, 15·7, and 19·4 per 1000 in the three preceding months. The lowest death-rates last month in the various sanitary areas were 9·1 in Stoke Newington, 9·5 in St. George Hanover-square, 9·9 in St. Martin-in-the-Fields, 10·0 in Hampstead, 12·0 in Paddington, and 12·2 in Kensington; the highest rates were 21·9 in Clerkenwell, 22·8 in Bermondsey and in Rotherhithe, 23·0 in Poplar, 24·8 in Woolwich. 25·0 in St. George Southwark, and 27·7 in St. George-in-the-East. During the four weeks of September 1078 deaths were referred to the principal zymotic diseases in London; of these, 61 resulted from measles, 15 from scarlet fever, 105 from diphtheria, 163 from whooping-cough, 64 from enteric fever, and 670 from diarrhœa. No death from any of these diseases occurred last month in St. Martin-in-the-Fields; in the other sanitary areas they caused the lowest death-rates in Paddington. Kensington, St. George Hanover-square, Strand, City of London, and St. Olave Southwark; and the highest rates in Fulham. St. George-in-the-East, Poplar, St. George Southwark Bermondsey, and Woolwich. The 61 deaths from measles were 16 below the average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Clerkenwell, Bethnal Green, St. George-in-the-East, Limehouse Poplar, and St. George Southwark sanitary areas. The 15 fatal cases of scarlet fever were only one-fifth of the corrected average number; the greatest proportional mortality from this disease occurred in Fulham, Holborn, Clerkenwell, Whitechapel, Limehouse, and St. George Southwark. The 105 deaths from diphtheria showed a decline of 75 from

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING SEPTEMBER, 1900.

(Specially compiled for THE LANCET.*)*

SANITARY AREAS.	Estimated population in the middle of 1900.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,589,129	1	1236	959	1	496	8	15	349	3	3068	8·7	—	61	15	105	163	—	64	—	670	1078	3·1	5793	16·5	196
West Districts.																										
Paddington	130,104	—	21	7	—	5	—	—	6	—	39	3·9	—	—	—	2	2	—	—	—	10	14	1·4	120	12·0	138
Kensington	173,603	—	29	24	—	11	1	—	7	—	72	5·4	—	1	—		3	—	2	—	13	19	1·4	162	12·2	228
Hammersmith	110,203	—	46	22	—	5	—	1	10	—	84	9·9	—	3	1	4	—	—	—	—	16	24	2·8	152	18·0	221
Fulham	136,383	—	44	57	—	15	—	—	10	—	126	12·0	—	1	2	7	8	—	1	—	28	47	4·5	169	16·2	193
Chelsea	96,715	—	24	23	1	22	2	—	7	1	80	10·8	—	—	1	2	—	—	4	—	13	20	2·7	116	15·6	194
St. George Hanover-square	81,133	—	6	4	—	5	—	—	2	—	17	2·7	—	—	—	—	2	—	—	—	3	5	0·8	59	9·5	95
Westminster	51,657	—	12	4	—	3	—	—	2	—	21	5·3	—	1	—	—	2	—	1	—	6	10	2·5	79	19·9	253
St. James Westminster	21,457	—	4	1	—	—	—	—	3	—	8	4·9	—	—	—	—	1	—	—	—	2	3	1·8	26	15·8	152
North Districts																										
Marylebone	139,777	—	31	23	—	3	—	1	15	—	73	6·8	—	1	—	5	6	—	1	—	18	31	2·9	170	15·9	126
Hampstead	81,766	—	22	12	—	3	—	—	7	—	44	7·0	—	—	—	6	—	—	—	—	5	11	1·8	63	10·0	103
St. Pancras	245,551	—	74	63	—	19	—	3	20	—	179	9·5	—	2	—	9	11	—	4	—	33	59	3·1	301	16·0	186
Islington	351,541	—	89	62	—	31	—	1	18	—	201	7·5	—	1	1	6	12	—	3	—	42	65	2·4	348	12·9	162
Stoke Newington	35,718	—	9	8	—	2	—	—	1	—	20	7·3	—	—	—	—	—	—	—	—	5	5	1·8	25	9·1	119
Hackney	225,519	—	55	54	—	23	—	—	13	—	145	8·4	—	2	—	—	2	—	5	—	35	44	2·5	256	14·8	200
Central Districts.																										
St Giles	36,870	—	16	6	—	1	—	—	7	—	30	10·6	—	1	—	—	2	—	—	—	3	6	2·1	52	18·4	226
St. Martin in the-Fields	11,855	—	2	—	—	1	—	—	—	—	3	3·3	—	—	—	—	—	—	—	—	—	—	—	9	9·9	83
Strand	22,748	—	2	1	—	2	1	—	—	—	6	3·4	—	—	—	—	—	—	—	—	1	1	0·6	25	14·3	214
Holborn	29,183	—	15	—	—	1	—	—	2	—	18	8·0	—	—	1	1	—	—	—	—	2	4	1·8	28	12·5	160
Clerkenwell	66,007	—	12	9	—	5	1	—	6	—	33	6·5	—	2	1	—	2	—	—	—	9	14	2·8	111	21·9	250
St. Luke	40,655	—	13	6	—	1	—	—	9	—	29	9·3	—	—	—	1	—	—	—	—	9	10	3·2	63	20·2	134
City of London	26,922	—	10	8	—	2	—	—	1	—	21	10·2	—	—	—	—	—	—	1	—	1	2	1·0	37	17·9	222
East Districts																										
Shoreditch	120,641	—	32	21	—	6	—	—	13	—	72	7·8	—	—	—	3	1	—	1	—	16	21	2·3	156	16·9	205
Bethnal Green	128,831	—	39	30	—	13	—	—	16	—	98	9·9	—	7	1	6	6	—	1	—	20	41	4·1	196	19·8	168
Whitechapel . ..	82,220	—	25	14	—	3	—	—	14	—	56	8·9	—	1	1	1	2	—	—	—	10	15	2·4	109	17·3	229
St George in the East	48,875	—	10	13	—	12	—	—	13	—	48	12·8	—	3	—	2	5	—	2	—	7	19	5·1	104	27·7	241
Limehouse .	53,944	—	17	16	—	9	—	1	7	—	50	11·1	—	6	1	2	2	—	1	—	7	19	4·2	96	21·2	216
Mile End Old Town	113,781	—	24	36	—	14	—	—	17	—	91	10·4	—	3	—	4	—	—	1	—	15	23	2·6	160	18·3	152
Poplar	170,958	—	46	66	—	19	—	—	11	—	142	10·8	—	7	—	13	3	—	7	—	35	65	5·0	301	23·0	254
South Districts																										
St. Saviour Southwark . . .	23,854	—	10	3	—	5	—	—	3	—	21	11·5	—	1	—	—	1	—	—	—	5	7	3·8	36	19·7	145
St. George Southwark	60,597	—	33	17	—	79	—	1	3	—	133	28·6	—	2	1	2	6	—	—	—	18	29	6·2	116	25·0	244
Newington	125,138	—	30	39	—	11	—	—	10	—	90	9·4	—	1	—	3	7	—	3	—	20	34	3·5	204	21·3	204
St. Olave Southwark	10,909	—	3	—	—	1	—	—	2	—	6	7·2	—	—	—	—	—	—	—	—	1	1	1·2	11	13·1	206
Bermondsey	85,930	—	15	28	—	19	—	—	4	—	66	10·0	—	1	—	4	3	—	6	—	23	37	5·6	150	22·8	242
Rotherhithe	41,246	—	15	8	—	13	—	1	4	—	41	13·0	—	1	—	2	1	—	2	—	7	13	4·1	72	22·8	277
Lambeth	312,152	—	80	64	—	52	2	—	14	2	214	8·9	—	4	—	5	8	—	5	—	41	63	2·6	403	16·8	183
Battersea	178,100	—	58	27	—	16	—	3	13	—	117	8·6	—	—	—	—	12	—	1	—	29	42	3·1	197	14·4	207
Wandsworth	217,004	1	57	22	—	20	—	1	9	—	110	6·6	—	1	1	2	8	—	2	—	25	39	2·3	205	12·3	177
Camberwell	268,457	—	72	63	—	12	—	—	16	—	163	7·9	—	—	2	4	25	—	4	—	48	83	4·0	332	16·1	227
Greenwich	184,582	—	50	35	—	20	1	2	20	—	128	9·0	—	3	1	3	12	—	1	—	31	51	3·6	260	18·4	218
Lewisham (excluding Penge)	93,548	—	31	23	—	5	—	—	3	—	62	8·6	—	2	—	—	4	—	4	—	22	32	4·5	112	15·6	215
Woolwich...	41,600	—	5	4	—	2	—	—	3	—	14	4·4	—	1	—	1	1	—	—	—	17	20	6·3	79	24·8	321
Lee	40,722	—	18	19	—	1	—	—	1	—	39	12·5	—	1	—	1	—	—	—	—	6	8	2·6	55	17·6	275
Plumstead	65,563	—	29	13	—	1	—	—	7	—	50	9·9	—	1	—	4	3	—	1	—	13	22	4·4	68	13·5	133
Port of London	—	—	1	4	—	3	—	—	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 13 cases of membranous croup.

† Including deaths from membranous croup.

the average number in the corresponding periods of the ten preceding years; among the various sanitary areas this disease was proportionally most fatal in Fulham, Hampstead, Bethnal Green, Poplar, Rotherhithe, and Plumstead. The 163 fatal cases of whooping-cough were 45 in excess of the corrected average; this disease showed the highest proportional fatality in Fulham, St. George-in-the-East, St. George Southwark, Newington, Camberwell, and Greenwich sanitary areas. The 64 deaths referred to enteric fever almost corresponded with the average number; among the various sanitary areas the death-rate from this disease was highest in Chelsea, St. George-in-the-East, Poplar, Bermondsny, Rotherhithe, and Lewisham (excluding Penge). The 670 deaths from diarrhœa were 153 in excess of the corrected average; this disease was proportionally most fatal in St. Luke, St. George Southwark, St. Saviour Southwark, Bermondsey, Lewisham, and Woolwich sanitary areas. In conclusion, it may be stated that the aggregate mortality from these principal zymotic diseases in London during September was nearly 5 per cent. above the average.

Infant mortality in London last month, measured by the proportion of deaths of children under one year of age to registered births, was equal to 196 per 1000. The lowest rates of infant mortality were recorded in St. George Hanover-square, Marylebone, Hampstead, Stoke Newington, St. Martin-in-the-Fields, and Plumstead; and the highest rates in Westminster, Clerkenwell, Poplar, Rotherhithe, Woolwich, and Lee sanitary areas.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon E. H. Williams is placed on the retired list. Staff Surgeons J. J. Dinnis and G. F. Wales to be Fleet Surgeons.

ROYAL ARMY MEDICAL CORPS.

Major A. E. Morris is granted 90 days' privilege leave from India to Australia.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Harry Munyard Brownfield, 3rd Volunteer Battalion the Hampshire Regiment, to be Surgeon-Lieutenant. Surgeon-Lieutenant James Steel Swain, 2nd Tower Hamlets Volunteer Rifle Corps, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the East Yorkshire Regiment: Samuel Harvard Johnson to be Surgeon-Lieutenant. 4th (Perthshire) Volunteer Battalion the Black Watch (Royal Highlanders): William Haig to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Essex Regiment: John Elsdale Molson to be Surgeon-Lieutenant. 1st (Cumberland) Volunteer Battalion the Border Regiment: Surgeon-Lieutenant S. Maclean resigns his commission. 4th London: Frederick James Purcell Daly to be Surgeon-Lieutenant.

TRANSVAAL WAR NOTES.

Civil Surgeon Barras and Civil Surgeon McKitchen are returning to England in the *Bulawayo*, which also has on board among the sick and wounded Civil Surgeon Miller.

TRANSVAAL WAR CASUALTIES.

Lieutenant L. E. L. Parker, R.A.M.C., is reported to have received a slight gunshot wound in the right hand.

MENTIONED IN DESPATCHES.

The despatches from Admiral Seymour relative to the recent attempted relief of Pekin contain the following paragraphs:—"Fleet Surgeon Thomas M Sibbald, H.M.S. *Centurion*, has had charge of the hospital arrangements throughout, and has also been much under fire. His activity, attention, and constant cheerfulness have gone far to mitigate the sufferings of the wounded and have met with my entire approval."

"Surgeon J. Falconer Hall of H.M S. *Barfleur*, whose devoted care and attention to his patients (as well as his professional skill) during a most trying time have been the admiration of all."

THE NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the Directors of the Naval Medical Supplemental Fund, held on Oct. 9th, Sir J. N. Dick, K.C.B., being in the chair, the sum of £28 was distributed among the several applicants.

The *Army and Navy Gazette* of Oct. 6th says: "It will interest Mr. Burdett-Coutts and others, no doubt, to learn that in China every attempt is being made to provide for all contingencies, so far as hospital arrangements are concerned, the establishment having been fixed on the most liberal terms. For the European portion, numbering in all about 1000, ten beds for officers and 200 for men in the field and general hospital have been provided. This is in addition to the hospital ship *Maine*, containing 175 beds. For the native portion of the force, numbering in all, including non-combatants, about 30,000, there are 1300 beds in native field hospitals, 1500 in the general hospitals, 200 on the line of communications; also two hospital ships containing about 365 beds, and 500 beds in the General Hospital, Calcutta. The *personnel* sent to China comprises 135 medical officers, 35 assistant surgeons, 25 native hospital assistants, and 224 nurses. All the hospitals are fully equipped, the ambulance includes 180 bearers to each field hospital and nine ambulance tongas. A complete conservancy establishment accompanies each hospital. We are assured by a correspondent, a medical officer, that 'the utmost care was taken by the military authorities in India to prevent any failure of system, it being recognised that the difficulties of the campaign may be great, and with a trying climate to face the native troops might feel the strain greatly. But the care with which every detail is worked out ought to be a guarantee that the troops will be well cared for.'"

Major R. H. Firth, R.A.M.C., has been selected to succeed Colonel J Lane Notter, R.A.M.C., as Professor of Military Hygiene at the Army Military School, Netley.

Correspondence.

"Audi alteram partem."

"THE NOTIFICATION OF PLAGUE."

To the Editors of THE LANCET.

SIRS,—The letter of Dr. Colvin in THE LANCET of Oct. 6th (p. 1040), under this title, revives in my mind an impression which has been present to me ever since the Notification Act has been in operation—viz., that it is most unfortunately constructed in respect of the *name* of the disease being required as an almost essential element in the notification. What is desirable in the public interest is the earliest possible communication to the sanitary authority, not of a fully formed diagnosis, but of even a reasonable suspicion, founded on stateable facts, of infection. In the early cases of plague in Glasgow, for example, no one (medical or otherwise) was concerned in any of them who had ever seen a case of plague, and much credit is justly due to those who even hesitatingly approximated to a correct diagnosis under these circumstances. Yet here is a case (as indicated by Dr. Colvin) which, though plainly one of bubonic plague and arising, moreover, in distinctly traceable association with other cases, was 18 days suffering under acute symptoms before Dr. Colvin was called and from his previous experience was able to give the disease a name. It is quite true that there was "no regular medical attendance," and perhaps no one was to blame for this. But is it not quite obvious now that a woman who had a temperature of 104° F. when first casually seen, who was "raving" even at the commencement of her disease, and who "had been to the wake in Rose-street" and otherwise in association with other cases removed to hospital as being cases of an infectious disease, ought to have been at once reported to the authorities whether with or without a diagnosis? It is a matter of notoriety that the reporting of cases under the Act is often deferred for days (if not for weeks) till the diagnosis is made perfectly clear, and medical men have even been blamed for reporting cases which have not turned out to be what at first it was supposed they might be. In my opinion the Act ought to have been so constructed that every case, not only of fully-formed infectious disease, but every case in which a reasonable presumption of infection exists (as of even indefinite illness in an infected locality) should be at once reported, leaving the diagnosis in some cases to follow the notification; and, further, some inducements ought to be held out to make such notifications (not necessarily by medical r [illegible] medical language) to all persons [illegible] the sick, or even living in the [illegible] interested in checking the spread [illegible] No doubt this would lead to a nu [illegible] perhaps even to some designedly false or merely alarmist notifications, but in cases having "no regular medical attendance" the advantage of so notifying is obvious; and even when a medical man is in regular attendance he ought to be stimulated to make the earliest possible notification by the knowledge that if he failed in communicating his partially formed suspicions someone else might do it before him.

I am, Sirs, yours faithfully,

Edinburgh, Oct. 8th, 1900. W. T. GAIRDNER.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY AND THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—In April of this year I received as a circular the annual report of the London and Counties Medical Protection Society in which some severe strictures upon the action of the General Medical Council were introduced. In THE LANCET of March 31st you published a leading article upon those strictures, having evidently assumed that they were well founded. As a member of the Penal Cases Committee of the General Medical Council I was subsequently led to ask the secretary of the London and Counties Medical Protection Society to supply me with the facts of the cases upon which his society had formulated the charge referred to, and on their receipt I re-investigated the three cases with every care.

On May 5th I reported the result of my investigation to Dr. Hugh Woods and his council, and after waiting for an answer more than 20 weeks I received in response to a note of Sept 26th, the following from Dr. Woods "that neither my council nor I considered that a reply was required." I now inclose you my letter of May 5th for publication and you will judge whether it is worthy of an answer or is unanswerable. At any rate, it is to be regretted that a medical protection society should circulate freely an accusation against the General Medical Council—which has only done its duty—based upon such slender material as has been adduced.

I am, Sirs, yours faithfully,

Grosvenor-street, W., Oct. 9th, 1900. THOMAS BRYANT.

[INCLOSURE.]

Letter to Dr. Hugh Woods, Honorary Secretary to London and Counties Medical Protection Society, 12, New-court, Lincoln's-Inn, W.C.

65, Grosvenor-street, Grosvenor-square,
May 5th.

DEAR SI[illegible] 'th thanks the final instal[illegible] I asked for in my letter c[illegible] merits of the cases upon [illegible] Committee of the Gener[illegible] licly founded against th[illegible] e which I now quote from [illegible] ited and freely circulated, *of your society.*

"Your council have reported to the General Medical Council several cases of alleged 'infamous conduct' on the part of professional men. Before reporting such cases your council have *made most careful* [illegible] *of the complaints which have been* [illegible] as reported, some did not go beyond [illegible] ugh supported *by sworn statutory* [illegible] prove conduct usually deemed [illegible] ect, not merely by medical men [illegible] ical Council itself. The grounds on which these cases were refused a hearing by the General Medical Council are not known to the council of your society. And your council *feel bound to further express their opinion that the existing* arrangements of the General Medical Council do not deal adequately with matters of this sort, which [illegible]

[illegible]

cases as furnished by you fr[illegible] answers as supplied to the Gen[illegible] the profession accused of unprofessional conduct by your society—that is, after studying both sides of the questions raised—I have no hesitation in asserting that the conclusions of the Penal Cases Committee in each of the three [illegible]

[illegible]

at the end of this month. In the case of W—— the case was dropped, [illegible]

[illegible] that the accusation was "clearly proved," but you do not state by what [illegible] rge against the General Medical [illegible] le most careful inquiry into the [illegible] "; and then you go on to assert [illegible] *ondoned a clearly proved case."* Might I ask upon what grounds you make such a grave and unjustifiable charge?

In the *second* case "you affirm that an unqualified person employed by a medical man and under his cover was habitually undertaking the [illegible] ou [illegible] a [illegible] a charge against a qualified medical man of having given a death *certificate in the case of* a person *who had not been attended by him* during her last illness, and you add "that the truth of this charge must be assumed, as it was supported by a statutory declaration," and when you heard from the Registrar of the General Medical Council that the committee of the Council was not prepared to recommend the Council to proceed further with the case you calmly claim that you are entitled to see and examine the evidence the Council may have [illegible] it would be interesting to know if this be your custom, for, if so, it is somewhat alarming. The General Medical Council does not follow this line of action; it receives the statutory evidence you or others may supply it with, but does not assume its truth, and before it gives a decision it makes most careful inquiry into the justice and validity of [illegible]

[illegible] consciences can give.

In conclusion, allow me to ask (through you) your council to point out in what way justice has been frustrated in these cases through any action of the General Medical Council, and to state upon what grounds they can justify their unanimous vote for the adoption of the charge against *the General Medical Council* with its *publication* and circulation in the annual report of April 3rd upon such materials as you tell me it has been based? It seems to me, Mr. Secretary, that in your wish "to explain to the members of your society that its action was not in fault in the matter"—and here I quote your words—and in your anxiety to run a tilt against a public body composed of men with some slight intelligence, business capacity, and honesty, you have possibly unintentionally misled your council to adopt unanimously a resolution for publication which is absolutely unjustifiable upon the grounds stated. For had any one member *of your council taken the least trouble to sift* for himself the value of the evidence of unprofessional conduct as advanced in the three now famous cases upon which alone your charges against the Medical Council have been based, and not assumed the truth of the evidence of the accusers, even when put into the form [illegible] unjustifiable charge against a public body upon such trumpery material. You tell me likewise "that you have been authorised by your council to publish detailed accounts of these cases *for* the information *of* the profession." Should you *deem it wise to do so I must ask you to let* me know when you do, as I should wish this correspondence to be published with such details. Should you decide not to give details I still hold myself at liberty to send this correspondence or rather this letter, to the journals, for as your charge against the General Medical Council has been widely distributed it is certainly well that the profession should know upon what grounds it has been made by your society.

Yours faithfully,

THOMAS BRYANT.

AUTO-INFECTION THROUGH THE MOUTH A POSSIBLE CAUSE FOR RELAPSES IN ENTERIC FEVER.

To the Editors of THE LANCET.

SIRS,—Do we ever warn an enteric fever patient not to put his fingers in or near his mouth? I think not. Neither do we instruct his nurse to disinfect his hands and nails as a matter of routine. Amongst the several theories as to the cause of relapse I do not find mention or suggestion of auto-infection through the mouth. The patient is, speaking generally, apathetic and lies without movement for days together; his sordes and his nasal mucous accumulations do not trouble him, and, as Dr. James Barr remarks, "he makes no attempt to remove them." But there are exceptions and the cases of relapse (16 per cent., Shattuck) may occur in those very exceptions—men who are not always contented the average number in the corresponding periods of the ten preceding years; among the various sanitary areas this disease was proportionally most fatal in Fulham, Hampstead, Bethnal Green, Poplar, Rotherhithe, and Plumstead. The 163 fatal cases of whooping-cough were 45 in excess of the corrected average; this disease showed the highest proportional fatality in Fulham, St. George-in-the-East, St. George Southwark, Newington, Camberwell, and Greenwich sanitary areas. The 64 deaths referred to enteric fever almost corresponded with the average number; among the various sanitary areas the death-rate from this disease was highest in Chelsea, St. George-in-the-East, Poplar, Bermondsey, Rotherhithe, and Lewisham (excluding Penge). The 670 deaths from diarrhœa were 153 in excess of the corrected average; this disease was proportionally most fatal in St. Luke, St. George Southwark, St. Saviour Southwark, Bermondsey, Lewisham, and Woolwich sanitary areas. In conclusion, it may be stated that the aggregate mortality from these principal zymotic diseases in London during September was nearly 5 per cent. above the average.

Infant mortality in London last month, measured by the proportion of deaths of children under one year of age to registered births, was equal to 196 per 1000. The lowest rates of infant mortality were recorded in St. George Hanover-square, Marylebone, Hampstead, Stoke Newington, St. Martin-in-the-Fields, and Plumstead; and the highest rates in Westminster, Clerkenwell, Poplar, Rotherhithe, Woolwich, and Lee sanitary areas.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon E. H. Williams is placed on the retired list. Staff Surgeons J. J. Dinnis and G. F. Wales to be Fleet Surgeons.

ROYAL ARMY MEDICAL CORPS.

Major A. E. Morris is granted 90 days' privilege leave from India to Australia.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Harry Munyard Brownfield, 3rd Volunteer Battalion the Hampshire Regiment, to be Surgeon-Lieutenant. Surgeon-Lieutenant James Steel Swain, 2nd Tower Hamlets Volunteer Rifle Corps, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the East Yorkshire Regiment: Samuel Harvard Johnson to be Surgeon-Lieutenant. 4th (Perthshire) Volunteer Battalion the Black Watch (Royal Highlanders): William Haig to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Essex Regiment: John Elsdale Molson to be Surgeon-Lieutenant. 1st (Cumberland) Volunteer Battalion the Border Regiment: Surgeon-Lieutenant S. Maclean resigns his commission. 4th London: Frederick James Purcell Daly to be Surgeon-Lieutenant.

TRANSVAAL WAR NOTES.

Civil Surgeon Barras and Civil Surgeon McKitchen are returning to England in the *Bulawayo*, which also has on board among the sick and wounded Civil Surgeon Miller.

TRANSVAAL WAR CASUALTIES.

Lieutenant L. E. L. Parker, R.A.M.C., is reported to have received a slight gunshot wound in the right hand.

MENTIONED IN DESPATCHES.

The despatches from Admiral Seymour relative to the recent attempted relief of Pekin contain the following paragraphs:—"Fleet Surgeon Thomas M. Sibbald, H.M.S. *Centurion*, has had charge of the hospital arrangements throughout, and has also been much under fire. His activity, attention, and constant cheerfulness have gone far to mitigate the sufferings of the wounded and have met with my entire approval."

"Surgeon J. Falconer Hall of H.M.S. *Barfleur*, whose devoted care and attention to his patients (as well as his professional skill) during a most trying time have been the admiration of all."

THE NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the Directors of the Naval Medical Supplemental Fund, held on Oct. 9th, Sir J. N. Dick, K.C.B., being in the chair, the sum of £28 was distributed among the several applicants.

The *Army and Navy Gazette* of Oct. 6th says: "It will interest Mr. Burdett-Coutts and others, no doubt, to learn that in China every attempt is being made to provide for all contingencies, so far as hospital arrangements are concerned, the establishment having been fixed on the most liberal terms. For the European portion, numbering in all about 1000, ten beds for officers and 200 for men in the field and general hospital have been provided. This is in addition to the hospital ship *Maine*, containing 175 beds. For the native portion of the force, numbering in all, including non-combatants, about 30,000, there are 1300 beds in native field hospitals, 1500 in the general hospitals, 200 on the line of communications; also two hospital ships containing about 365 beds, and 500 beds in the General Hospital, Calcutta. The *personnel* sent to China comprises 135 medical officers, 35 assistant surgeons, 25 native hospital assistants, and 224 nurses. All the hospitals are fully equipped, the ambulance includes 180 bearers to each field hospital and nine ambulance tongas. A complete conservancy establishment accompanies each hospital. We are assured by a correspondent, a medical officer, that 'the utmost care was taken by the military authorities in India to prevent any failure of system, it being recognised that the difficulties of the campaign may be great, and with a trying climate to face the native troops might feel the strain greatly. But the care with which every detail is worked out ought to be a guarantee that the troops will be well cared for.'"

Major R. H. Firth, R.A.M.C., has been selected to succeed Colonel J Lane Notter, R.A.M.C., as Professor of Military Hygiene at the Army Military School, Netley.

Correspondence.

"Audi alteram partem."

"THE NOTIFICATION OF PLAGUE."

To the Editors of THE LANCET.

SIRS,—The letter of Dr. Colvin in THE LANCET of Oct. 6th (p. 1040), under this title, revives in my mind an impression which has been present to me ever since the Notification Act has been in operation—viz., that it is most unfortunately constructed in respect of the *name* of the disease being required as an almost essential element in the notification. What is desirable in the public interest is the earliest possible communication to the sanitary authority, not of a fully formed diagnosis, but of even a reasonable suspicion, founded on stateable facts, of infection. In the early cases of plague in Glasgow, for example, no one (medical or otherwise) was concerned in any of them who had ever seen a case of plague, and much credit is justly due to those who even hesitatingly approximated to a correct diagnosis under these circumstances. Yet here is a case (as indicated by Dr. Colvin) which, though plainly one of bubonic plague and arising, moreover, in distinctly traceable association with other cases, was 18 days suffering under acute symptoms before Dr. Colvin was called and from his previous experience was able to give the disease a name. It is quite true that there was "no regular medical attendance," and perhaps no one was to blame for this. But is it not quite obvious now that a woman who had a temperature of 104° F. when first casually seen, who was "raving" even at the commencement of her disease, and who "had been to the wake in Rose-street" and otherwise in association with other cases removed to hospital as being cases of an infectious disease, ought to have been at once reported to the authorities whether with or without a diagnosis? It is a matter of notoriety that the reporting of cases under the Act is often deferred for days (if not for weeks) till the diagnosis is made perfectly clear, and medical men have even been blamed for reporting cases which have not turned out to be what at first it was supposed they might be. In my opinion the Act ought to have been so constructed that every case, not only of fully-formed infectious disease, but every case in which a reasonable presumption of infection exists (as of even indefinite illness in an infected locality) should be at once reported, leaving the diagnosis in some cases to follow the notification; and, further, some inducements ought to be held out to make such notifications (not necessarily by medical men or in medical language) to all persons having anything to do with the sick, or even living in the neighbourhood and thus interested in checking the spread of infectious disease there. No doubt this would lead to a number of ill-considered and perhaps even to some designedly false or merely alarmist notifications, but in cases having "no regular medical attendance" the advantage of so notifying is obvious; and even when a medical man is in regular attendance he ought to be stimulated to make the earliest possible notification by the knowledge that if he failed in communicating his partially formed suspicions someone else might do it before him.

I am, Sirs, yours faithfully,

Edinburgh, Oct. 8th, 1900. W. T. GAIRDNER.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY AND THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—In April of this year I received as a circular the annual report of the London and Counties Medical Protection Society in which some severe strictures upon the action of the General Medical Council were introduced. In THE LANCET of March 31st you published a leading article upon those strictures, having evidently assumed that they were well founded. As a member of the Penal Cases Committee of the General Medical Council I was subsequently led to ask the secretary of the London and Counties Medical Protection Society to supply me with the facts of the cases upon which his society had formulated the charge referred to, and on their receipt I re-investigated the three cases with every care.

On May 5th I reported the result of my investigation to Dr. Hugh Woods and his council, and after waiting for an answer more than 20 weeks I received in response to a note of Sept 26th, the following from Dr. Woods "that neither my council nor I considered that a reply was required." I now inclose you my letter of May 5th for publication and you will judge whether it is worthy of an answer or is unanswerable. At any rate, it is to be regretted that a medical protection society should circulate freely an accusation against the General Medical Council—which has only done its duty—based upon such slender material as has been adduced. I am, Sirs, yours faithfully,

Grosvenor street, W., Oct. 9th, 1900. THOMAS BRYANT.

[INCLOSURE.]

Letter to Dr. Hugh Woods, Honorary Secretary to London and Counties Medical Protection Society, 12, New-court, Lincoln's-Inn, W.C.

65, Grosvenor-street, Grosvenor-square,
May 5th.

DEAR SIR,—I [illegible] with thanks the final instalm[illegible] I asked for in my letter of [illegible] merits of the cases upon t[illegible] Committee of the General Medical Council your society has publicly founded against the General Medical Council the serious charge which I now quote from the last year's report, which has been printed and freely circulated [illegible]

[illegible]

infamous' in a professional respect, not merely by medical men generally, but by the General Medical Council itself. The grounds on which these cases were refused a hearing by the General Medical Council are not known to the council of your society. And your council feel bound to further express their opinion that the existing arrangements of the General Medical Council do not deal adequately with matters of this sort, wh[illegible] medical profession, but also the [illegible]

I now as one of the members [illegible] well to inform you, and throug[illegible] after carefully going over the [illegible] cases as furnished by you fr[illegible] answers as supplied to the Gen[illegible] the profession accused of unprofessional conduct by your society—that is, after studying both sides of the questions raised—I have no hesitation [illegible]

[illegible]

at the end of this mon[illegible]

[illegible]

that the accusation was "clearly proved," but you do not state by what [illegible]rge against the General Medical [illegible]e most careful inquiry into the [illegible]"; and then you go on to assert [illegible]*ondoned a clearly proved case*" Might I ask upon what grounds you make such a grave and unjustifiable charge?

[illegible]

statutory declaration and copy of a death certificate in support of a charge against a qualified medical man of having given a death [illegible] him [illegible]arge [illegible] and [illegible]ncil [illegible] the Council to proceed further with the case you calmly claim that you are entitled to see and examine the evidence the Council may have obtained to enable it to come to a decision when you ought to know that such evidence is confidential and cannot be made public.

It would seem that in the cases you bring before the Medical Council you are satisfied with the statements of the accuser if he be a member of your society, and that you do not trouble to find out from the accused what amount of truth there may be in the accusation. It would be interesting to know if this be your custom, for, if so, it is somewhat alarmin[illegible] not follow this line of action; it [illegible] or others may supply it with, bu[illegible]efore it gives a decision it makes r[illegible] and validity of the complaints which have been submitted to it, and even goes so far—which, I trust, you will not think unfair—as to ask the accused what he has to say upon the charge before judgment is given. In the three cases n[illegible] your charge has been based, [illegible] parties were at once acquitte[illegible]against them, whilst their ac[illegible]ishment than their consciences can give.

In conclusion, allow me to ask (through you) your council to point out in what way justice has been frustrated in these cases through any action of the General Medical Council, and to state upon what grounds they can justify their unanimous vote for the adoption of the charge against the General Medical Council with its publication and circulation in the annual report of April 3rd upon such materials as you tell me it has been based? It seems to me, Mr. Secretary, that in your wish "to explain to the members of your society that its action was not in fault in the matter"—and here I quote your words—and in your anxiety to run a tilt against a public body composed of men with some slight intelligence, business capacity, and hone[illegible]ally misled your council to ac[illegible] publication which is absolutely [illegible]d. For had any one member o[illegible]uble to sift for himself the val[illegible] conduct as advanced in the three now famous cases upon which alone your charges against the Medical Council have been based, and not assumed the truth of the evidence of the accusers, even when put into the form of a statutory declaration, and had he, moreover, sought for some explanation from the accused, his decision would doubtless have been [illegible]

[illegible]

profession. Should you [illegible] me know when you do, as I should wish this correspondence to be published with such details. Should you decide not to give details [illegible] or rather this [illegible]neral Medical [illegible] that the pro[illegible]nade by your society.

Yours faithfully,
THOMAS BRYANT.

AUTO-INFECTION THROUGH THE MOUTH A POSSIBLE CAUSE FOR RELAPSES IN ENTERIC FEVER.

To the Editors of THE LANCET.

SIRS,—Do we ever warn an enteric fever patient not to put his fingers in or near his mouth? I think not. Neither do we instruct his nurse to disinfect his hands and nails as a matter of routine. Amongst the several theories as to the cause of relapse I do not find mention or suggestion of auto-infection through the mouth. The patient is, speaking generally, apathetic and lies without movement for days together; his sordes and his nasal mucous accumulations do not trouble him, and, as Dr. James Barr remarks, "he makes no attempt to remove them." But there are exceptions and the cases of relapse (16 per cent., Shattuck) may occur in those very exceptions—men who are not always contented to lie still and allow their noses to become blocked and not to move a finger to put matters right. The patient's hands, as a rule, lie by the side of his body; would it be a great wonder if not his hands alone but his nails especially became infected with his own dejecta? Surely not; in spite of the best nursing it must frequently, if not always, occur. In those more restless cases up goes the hand to the mouth or nose and bacillary re entry takes place.

When enteric fever is at its height during the second or third week the bacillus presumably is most poisonous, and it is probably at that period (judging from temperature charts) when, if the patient is of a "picking" nature, the re-infection is brought about.

In Allbutt's "System of Medicine" the writer remarks in speaking of a relapse that "in most cases it occurs within the first fortnight of convalescence." This observation, estimating the incubative period at from 10 to 14 days, carries us back to the time of high fever. Therefore, if a relapse is going to occur, the re-infection takes place when the patient is half way through his illness. If my theory be correct that the patient's hands are the cause of the relapse, the usual apathy of the sufferer in enteric fever is a potent factor in preventing its occurrence. But we have a safeguard against re-infection if only we take advantage of it—I mean *time*. Fresh typhoid stools are *not* infectious and only become so after one or more days (Murchison, Cayley). The bacilli are anaerobic when first passed (Huppe) and apparently must have time to become aerobic to be infectious.

Theoretically, then, we ought to be on the safe side if we order disinfection of the hands, &c., once in 24 hours, for where is the most likely place for the bacillus to pass the waiting period before returning to the bosom of his family if not the nails? I suggest, therefore: 1. A relapse is caused by the unclean hands or nails of the patient himself. 2. That the re-admission of the bacillus takes place at the period of high fever. 3. That the incubation period of the relapse is probably as lengthy as that of the initial attack. 4. That his hands, &c., should be disinfected at least every 24 hours and his bed-gear changed as frequently. (Carbolic acid from 2 to 3 per cent. or corrosive sublimate 1 in 5000 kills the bacillus quickly.)

Since writing the above I find that Dr. Horton-Smith in his Goulstonian Lectures (p. 30) remarks upon the difficulty of finding the typhoid bacillus in alvine discharges after the third week, and in Allbutt's "System of Medicine" (p. 822) occur the words: "The typhoid bacillus has not been found in alvine discharges before the ninth day." These two references agree with my suggestion of the probability of reinfection at the period of high fever and it seems to me, therefore, that we ought to be particularly careful in disinfecting between the ninth and the twenty-first days.

It is only by routine disinfection of cases in hospitals that any reliable statistics can be obtained, and I trust that others will follow the lead of St. Thomas's Hospital, where at my suggestion disinfection of the hands, &c., is now practised. I do hope this theory will not be held to be too "sweetly simple" for belief or rather for a trial of the effect of disinfection. Who knows but that by this means we may be able to banish relapse from our practices and text-books?

I am, Sirs, yours faithfully,
George W. Ord, M.R.C.S. Eng., L.R.C.P. Lond.
Queen's-road, Richmond, Oct. 9th, 1900.

"THE ETIOLOGY OF RHEUMATIC FEVER."

To the Editors of THE LANCET.

Sirs,—The valuable observations of Dr. F. J. Poynton and Dr. Alexander Paine[1] have at length corroborated those recorded by myself in your journal with regard to the invariable presence in the blood of patients suffering from rheumatic fever of a specific organism, which as long ago as 1892[2] you can by reference to your files ascertain that I described as a minute coccus, and concerning which last March[3] I specifically expressed my ability to demonstrate in any selected case of rheumatic fever. My method of demonstration is somewhat different to that described by Dr. Poynton and Dr. Paine and in the hope of assisting those gentlemen I venture to publish the fact that if the cover-glass preparation is immersed for a few minutes in a solution of bicarbonate of potash the organism can then be most effectively stained with methylene blue. In dealing with rheumatic fever this affords a most practical means of prognosis, as frequently, after all fever has abated, the micrococci present in the blood convey an intimation for the necessity of continued treatment; therefore it has been my custom to administer salicylate of soda until all micrococci have disappeared. With regard to the large bacillus of Achalme I described that also in 1892,[4] but in association with acute gout, of which disease I believe it to be the cause, more especially as I have grown the organism upon nutrient agar agar with the production of uric acid in the test-tube. I am not in a position to continue the necessary experiments, but possibly my investigations may assist others better able to inquire further. My observations were published in The Lancet and reference to the old files will, I believe, establish the fact that they were prior to the continental discoveries quoted by Dr. Poynton and Dr. Paine. At the time that I made the statements I felt that my own unaided and unsupported records were hardly of sufficient weight to be of much importance. I made several attempts to get more senior authorities to interest themselves in the question, but in 1893 the position of bacteriology was rather uncertain; at last, however, the work of Dr. Poynton and Dr. Paine will, I trust, meet with that appreciation which it deserves and will help to rid this country of, or at any rate to mitigate, one of the most destructive ailments to which the human race is liable. Dr. Poynton and Dr. Paine have made a grand series of investigations which will probably be better appreciated in 10 years' time than at the present moment.—I am, Sirs, yours faithfully,

Edward F. Grun, M.R.C.S. Eng., L.R.C.P. Lond.
Southwick, Brighton, Oct. 4th, 1900.

"THE SMOKE NUISANCE."

To the Editors of THE LANCET.

Sirs,—As health officer of a local authority the members of which are only too anxious to put down the smoke nuisance in their district may I point out to your correspondents "W. B. Richmond" and "L. R." certain facts which I think may be of great interest to them and to the public at large.

I inclose a copy of a report to my Sanitary Committee, presented to my Board last night, and upon p. 37 you will find the following extract upon smoke consumption.

> *Smoke Consumption.*
>
> The smoke consumption in a district such as Poplar forms a very important item in conserving the health of the inhabitants, and there can be no doubt that the smoke consumption being watched by all the sanitary officers on their respective areas, the nuisance arising from the neglect of such consumption will be more quickly abated.
>
> As explained to the Sanitary Committee at their last meeting great care will have to be observed before instituting legal proceedings for obtaining penalties in respect of smoke nuisances, as it must be ascertained at the time of the nuisance who is the person guilty—the master, under Section 23 (1) of the Public Health (London) Act, 1891, in not having proper appliances, or the servant under Section 23 (2)[1] of the Public Health (London) Act, 1891, for not using such appliances. Of course, the fuel used will have to be taken into consideration. Section 23 deals with smoke consumption as a specific offence, but Section 24[2] deems smoke to be a nuisance requiring the service of statutory documents, and the master is held to be responsible even if his servant be negligent.

By Section 23 (5) of the Public Health (London) Act, 1891:—

> It shall be the duty of every sanitary authority to enforce the provisions of this section and an information shall not be laid for the recovery of any fine under this section except under the direction of a sanitary authority.

But by Section 24 of the same Act smoke nuisances

> Shall be nuisances liable to be dealt with summarily under this Act and the provisions of this Act relating to those nuisances shall apply accordingly.

Now it appears to me that by Section 12 (1) of the Public Health (London) Act, 1891, *any person* can take action for proceedings in respect of nuisances under Section 24 of the Public Health (London) Act 1891.

> Section 12.—(1) Complaint of the existence of a nuisance liable to be dealt with summarily under this Act on any premises within the district of any sanitary authority may be made by any person, and thereupon the like proceedings shall be had with the like incidents and

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[1] The Lancet, Sept. 22nd (p. 861) and 29th (p. 932), 1900.

[2] The Lancet, May 7th, 1892, p. 1063

[3] The Lancet, March 31st, 1900, p. 964.

[4] The Lancet, Jan 23rd, 1892, p. 235.

[1] Chisholm *v.* Doulton, 22 Q. B. D., 736.

Barnes *v.* Akroyd, 7 Q B., 474; and Niven *v.* Greaves, 54 J. P., 548.

consequences as to making of orders, fines for disobedience of orders, appeal, and otherwise, as in the case of a like complaint by the sanitary authority.

So that the Coal Smoke Abatement Society can take action for smoke nuisances in the same manner under Section 12 (1) of the Public Health (London) Act, 1891, as the Mansion House Council take action in the case of other nuisances—viz., by applying for summonses in order to procure abatement or prohibitory orders.

I am, Sirs, yours faithfully,
FREDERICK WM. ALEXANDER,
Medical Officer of Health, Poplar and
Bow road, Bow, E., Oct. 10th, 1900. Bromley.

THE POSITION OF COLONIAL MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—Now that we read and hear so much of the grievances of the medical departments of the army and navy it may not be out of place to bring forward the conditions under which colonial medical officers are required to serve on the west coast of Africa, most of whom, it is well to remember, have had "war experience" in the many punitive expeditions which are so frequent in that unknown and benighted country. With the exception of Nigeria, which may be said to be in a state of evolution at present, the following conditions apply to the other British possessions (I cannot call them colonies) on the west coast.

1. *Pay.*—From £300 to £500 by varying increments annually, biennially, triennially, as the case may be.

2. *Pension.*—There are only two conditions under which a pension can be drawn: (*a*) old age (one man alone draws a pension under this head); and (*b*) bad health; if an officer is permanently invalided out of the service and has already served seven years he is al
multiplied by the number of
I should mention the existe
having served 10 years is allowed to add five years to the time served, but nobody seems to benefit by it. The fact remains that when the invalid comes home he is allowed nothing in proportion to his service.

3. *Quarters.*—Most, if not all, of the quarters supplied are not fit to put Europeans to live in in the tropics.

4. *Allowances.*—10*s.* per diem may be said, generally speaking, to be the allowance, whether travelling or fighting, it does not matter which.

5. *Messing.*—No provision whatever is made in this most important branch of tropical hygiene.

6. *Leave.*—Six months' leave for every 12 months' service. This is as it should be.

The above, with the exception of No. 6, are not enticing and can only be considered repellent when applied to such an unhealthy climate. It is notorious that service under the Colonial Office is unpopular, and now that candidates are scarce it is impossible to fill any vacancies. Here, by the way, I may draw attention to the fact that a lady doctor has just been appointed to the Ashantee Expeditionary Force The Ashantee revolt which is now raging, though overshadowed by events in South Africa and China, has been the means of bringing to notice several medical men who, though nominally "civilian," have done their share of fighting which has caused them to be mentioned for their bravery and devotion under the most trying circumstances it is possible to imagine. The rules governing employment under the Colonial Office are out of date and should at once be redrafted to meet the requirements of a rapidly growing department. There are at the present time over 100 colonial surgeons on the west coast of Africa It is easy as a rule to complain, but not always easy to suggest a remedy; fortunately in this case the treatment is obvious.

1. *Pay.*—From £400 to £800, rising by yearly increments of £50. Private practice to be allowed wherever expedient.

2. *Pension.*—After 15 years' service at the rate of £1 a day.

3. *Quarte* [illegible] cal quarters in accordance [illegible] ence.

4. *Messin* [illegible] organised mess should be established.

5. *Recognition* to be granted for any work outside medical duty.

6 —*A medical service* for the whole West Coast might be easily constituted whereby all might serve under the same conditions and one principal medical officer, &c.

This suggestion I have placed last, though it is really the most important, but one feels shy in throwing out practical hints lest there might be an epidemic of "fits" should this letter find its way to Downing-street. A system on these lines would be bound to attract young men of the right sort, for not only would the pay be adequate, but the chance of "seeing service" combined with pleasurable excitement would appeal strongly to the manly instincts of junior medicos. I apologise, Sirs, for taking up so much of your valuable space, but if you can succeed in improving a worthy branch of the service you will deserve the thanks of the community. I am, Sirs, yours faithfully,
Oct. 8th, 1900 M.D.

THE QUESTION OF THE COMMUNION CUP.

To the Editors of THE LANCET.

SIRS,—It is surely high time that some steps were taken to enlighten the general public on the dangers in connexion with the "one cup" mode of administering the Holy Sacrament. I have just lately heard from a lady friend who *says she knows of one church* at which a man with cancer of the tongue, and another suffering from some chronic throat affection (probably laryngeal phthisis) attend regularly the Communion Service and partake of the bread and wine. For myself I have long since given up going, for with my eyes open to its dangers and uncleanness I cannot bring myself to attend. Why cannot small glasses or cups be used, to be provided either by the church authorities (this I am pleased to hear some few churches have adopted) or by each communicant? This source of danger and means of communicating disease might easily be avoided Unobtrusively wiping the lip of the cup after each communicant has used it—also, I believe, done in some churches—is some improvement as regards cleanliness but is not altogether devoid of danger. It was a great comfort when, after much agitation, the Scotch form of taking the oath by uplifted hand took the place of "kissing the book" in courts of law. Why cannot the medical profession in these enlightened times also agitate over this more dangerous practice?

I am, Sirs, yours faithfully,
Oct. 7th, 1900 MEDICUS.

*** We refer to this question in another column.—ED. L.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Report of the Health Officer of Calcutta for 1899.—The Continued Rise in the Plague Mortality throughout India.—The Success of the Pasteur Institute at Kasauli.

MR. NIELD COOK in his report to the chairman of the Corporation of Calcutta refers to the drawbacks attending the system of having separate staffs from that of the Health Department for plague administration He draws attention to the unreliability of the mortality ratios and to the practically valueless information as regards mortality from special diseases The low birth-rate in Calcutta is probably due to the small female population It is interesting to note that the Christian population is the most prolific, then the Hindus, and lastly the Mohamedans, but it is admitted that the registration of births depending largely on the midwives is defective. The death rate for the year was 37 8 against 31·9, the average, the excess being fully accounted for by the plague. The mortality in the suburbs was higher than in the town. The infantile mortality was very high, giving a ratio of 366 8 to every 1000 children born during the year, the Mohamedan ratio being 504 3, the Hindu ratio 334 7, while the Christian was only 174 4. It is probable that the marriage customs largely account for these differences. The figures recorded appear to show that the female mortality was far heavier than amongst male, but there is no reason to explain this, and it is suggested that the female population is under-estimated Mr. Nield Cook's inquiries concerning the habitats of mosquitoes have been previously recorded He confirms previous observations that anopheles larvæ are not generally found in clean water, but that many of the anopheles tanks contained quantities of fish and tadpoles. On the other hand, they are not found in the filthiest tanks reeking with sewage. Cholera and small-pox were below the average of previous years. With regard to vaccination he records that 84·97 per cent. were successful. While the animal lymph gave over 95 per cent. results the humanised was only successful in 58·9 per cent. The protection from small-pox is not very satisfactory as the case-mortality among the vaccinated is recorded as 33 33 per cent., while among the unprotected it was 54·41 per cent. One of the numerous difficulties of the health officer of Calcutta is shown by the returns concerning the slaughter-houses. Mr. Nield Cook says: "The reason for the falling off in the number of animals slaughtered is that a great deal of slaughtering is done in unlicensed houses in the town which we are powerless to prevent, as the courts will not convict unless our officers have actually seen the animals slaughtered." Another consists in prosecuting for keeping animals for profit without a licence—the average fine being under Rs. 5. As Mr. Nield Cook says, "It paid better to keep a large number of cattle in an unlicensed and insanitary shed and adulterate the products than to spend money on well-constructed stalls, taking out a licence and selling only pure milk and ghee." In 1898 he also showed that the milk supplied was for the most part adulterated with sewage-contaminated water from shallow wells close to the sheds, and he now says that "no appreciable improvement has been effected." The conservancy troubles and difficulties in Calcutta are perennial and the insanitary state of the buildings appears hopeless. The report of one year on these subjects is very much like others. In the course of his report Mr. Nield Cook refers to several points upon which he has previously made suggestions but in which no change has been effected. It is hoped that with the new Act a better day is in store for Calcutta. The previous Commissioners were numerous and chiefly native but the present board is much smaller and has a larger European element. The disgraceful condition of the city is patent to the most casual observer. As the metropolis of India it is an unpleasant wonder to all new-comers.

The plague mortality continues to rise, especially in the Mysore State and the Bombay district. The total deaths in India last week were 1049, against 691 in the preceding seven days. Calcutta reports 78 deaths and Bombay city 52. The plague is slowly increasing in the city of Poona and the death-rate is more than treble the normal. Part of this, however, is due to cholera. Cholera still continues in the military cantonments and now enteric fever has broken out in an epidemic form amongst the European troops at Quetta. 17 deaths have so far occurred. It is still prevalent in Kashmir. At the present time plague seems to be quiescent in the cities of Calcutta and Bombay. The indications for a recrudescence must be carefully sought for. The present weekly minimum returns of plague deaths seem about the same for the two places, but in Calcutta suspicious deaths are included in the figures. An examination of the Calcutta returns brings out the following. After the decline of an outbreak and during the quiescent period (such as the present) the number of deaths returned as suspicious is about half the amount of the deaths from plague, but for a month or two before the active development of an outbreak such as occurred last spring the suspicious deaths rise so as to equal in number those from plague. With the rapid onset of the outbreak the deaths from plague increase in proportion so fast that during the worst stage they may exceed ten times the number of suspicious deaths. This comparison is not possible in the case of Bombay. All that can be inferred is that the number of deaths from plague is double that recorded The general mortality in Bombay is twice as great as its normal amount. Famine is rapidly decreasing, the numbers now on relief having sunk to less than 4,500,000.

The new Pasteur Institute has been quite busy. 26 out of the 39 patients who have been admitted since August 9th have completed the course of treatment. The effect has been quite normal in all cases. Five new cases, all natives, have entered during the week and 13 patients are now attending the institute. The Government can well afford to ignore the petitions and indignation meetings of a few energetic anti-vivisectionists.

Sept. 13th.

Mr. George Sanders, a former mayor of Taunton, has presented the Taunton District Nursing Association with a large house as a memorial to his wife.

THE PARIS CONGRESSES AND COLONIAL SANITATION.

(From our Special Correspondent.)

Forced Labour and Public Health.

The International Congress of Colonial Sociology which met in August and the International Peace Congress which has just concluded its sittings discussed colonial questions at great length and in doing so devoted some time to the consideration of measures calculated to protect and improve the health of the native populations. In such matters sociology is intimately connected with hygiene and it is difficult to draw a line of demarcation between the two. For instance, there is the question of the *corvée* or forced labour. In some French colonies this is allowed for a period of 30 days in the year; but it almost invariably gives rise to abuses and sometimes it has been prolonged illegally to 160 and even to 200 days. The natives, also, are frequently sent great distances from their homes, where both food and shelter are insufficiently provided, and what with exposure and hard work a very high death-rate results. In the face of the evidence adduced both congresses stigmatised, by the resolutions they adopted, the system of forced labour as a cause of the diminution of the native population and as likely to foment a spirit of revolt. The measures taken to prevent the abuse of the system are never efficacious, and, after all, good work is only done by willing workers. Nor is there, as a rule, a lack of willing workers where sufficient pay is offered. The principal advocates of the *corvée* are those who wish to have work done but do not wish to pay for it. Therefore, both congresses voted against the *corvée* system, and this not only as a measure of justice and humanity towards the natives or as a matter of policy to prevent disturbances and risings, but also as a sanitary necessity to check the high death-rate and the epidemics that accompany the application of the *corvée* system. What stood out prominently in the discussion of this and other questions was the mistrust felt in regard to colonial officials. Perhaps this mistrust is more justifiable with regard to the French than to the British colonies. Not that I would for a moment make any disparaging comparison between the two nations, but it is an undoubted fact that Frenchmen do not so readily expatriate themselves as Englishmen, consequently it often happens that a Frenchman only resigns himself to emigration when he has such a stain on his character that life at home becomes intolerable. The same may be said of some British emigrants, but the proportion of black sheep is not so great because many more Englishmen emigrate from choice and not from necessity. More particularly in Africa one of the greatest difficulties in dealing with the native tribes is their utter want of forethought—they live without the slightest care for the morrow. Then if there is a bad harvest, a flood, or any other untoward occurrence, great distress prevails, accompanied with much sickness and a high death-rate. Since 1893 societies have been started among the natives of Algeria so as to create funds for the purpose of granting loans for the purchase of seed and for help in sickness, &c. These sort of mutual benefit societies and agricultural banks have helped many natives to tide over an evil hour, thus contributing to maintain the prosperity and health of the colony, and the Congress of Colonial Sociology passed a resolution recommending that such institutions should be established wherever local circumstances seemed favourable to similar endeavours. When, however, this same proposal was brought before the Peace Congress as tending to the pacification of the populations concerned M. Laroche, who is an eminent authority on colonial questions, rose and protested Some measure of success, he said, might have been achieved in Algeria, but that was an old colony; it had been occupied by the French for 60 years and was only a few hours from Marseilles. In the more recently acquired and more distant colonies the European functionaries were not to be relied upon. Instead of teaching thrift they would utilise such institutions to practise still greater extortions and robberies upon the natives. So it comes to this—that whether the question be considered only from the sanitary or else from the general point *of view the first difficulty* and the first necessity is to obtain honest and reliable functionaries.

THE SANITARY MEASURES PROPOSED.

Needless to say, the alcohol and the opium traffic came in for a large share of abuse. Resolutions were passed urging that the agreement embodied in the Acts drawn up at Brussels in 1890 and 1899 so as to restrict the liquor trade in certain parts of Africa should be generalised and that by diplomatic agreement such restric- [illegible] he colonies where there was a [illegible] was urged that there should [illegible] r administrative department established in all colonies to deal with health questions as affecting the native populations. This would be, it was *affirmed, the most effective means of preventing* the physical degeneration of the natives. Unfortunately the tendency has been to study colonial sanitation only in so far as it affects the European troops and settlers; but it is now urged that the only moral justification for acquiring colonies is that the superior and conquering race shall confer on the natives greater security of existence and a higher moral and material standard of life. Thus at the International Congress of Hygiene the sixth section was devoted to military, naval, and colonial hygiene, but the papers read on the latter subject discussed the outfit to be given [illegible] expeditions, the filtration [illegible] ch the Europeans drink, [illegible] stations for the sick and [illegible] as said about the natives. [illegible] it very properly declared [illegible] with the technicalities of sanitation, enthusiastically re-affirmed and endorsed the resolution carried by the Congress of Colonial Sociology to the effect that sanitary-measures and reforms should not be limited to the European populations of the colonies. Good sanitation is as necessary for the natives as for the colonists and the Congress of Colonial Sociology by a series of resolutions indicated what measures of this description seemed most urgent. Firstly, they were in favour of segregation for cases of leprosy but proposed that the lepers should be placed within domains situated at considerable distances from towns and sufficiently large to enable the lepers to enjoy a fair amount of liberty within the [illegible] district. The public authorities should t[illegible] matter in hand and see that all that is ne[illegible] *provided. Lepers should also* be *registered* and *notices* sent to the local authorities whenever they changed their domicile. Then the Congress was very emphatic on the need of adopting effective measures to check the spread of syphilis among natives. It urged that more care should be taken to explain the nature and the dangers of this disease and to provide the necessary medical aid so that natives should have no difficulty in obtaining gratuitously efficient treatment. In those colonies where prostitution is placed under police and medical surveillance the best rather than the worst European methods and regulations should be imitated With regard to small-pox there should be public vaccination stations established in as many localities as possible for the benefit of the natives. Then wherever possible native schools of medicine should be created and, above all, it was considered urgent to train as midwives a large number of native women. After this complaints were made that in organising the scavenging and the drainage of towns in the colonies there was a tendency to neglect the native quarters though they really require more care and attention than the quarters inhabited by Europeans.

For [illegible] ployed and n[illegible] In a word, [illegible] ould be extenc[illegible] nly can [illegible] ous; and to appreciate [illegible] the natives should be [illegible] n Europe. Nor should all these measures be left to the colonists themselves, who, too often, are the worst enemies of the natives. There should be some method of inspection and control, either from the metropolis or at least from some large centre, so that the inspectors should be quite independent of all local interests and influences and able to act with impartiality.

Such were the desiderata of a large number of delegates who belong to various colonising nationalities and who have made a special study of all that relates to colonial expansion. There is little or nothing in this with which the sanitary reformer is likely to disagree, but its realisation will be a matter of great difficulty. Instead of emigrating with the fixed purpose of helping in every way to establish a well-administered and prosperous colony the emigrant is too often animated with the sole desire of making "his pile" rapidly and then returning home Hence the neglect and the abuses that are a discredit to Europeans, that cause insurrections, and too often result in both the moral and physical degradation of the natives. The Paris Exhibition, in bringing together from all parts of the world men who have personal experience of colonial life, has enabled them to place on record what should be done; and though there is nothing very novel in all these proposals, yet the fact that they have thus been authoritatively brought forward should be of use and should serve to stimulate the desire for colonial reform and for better administration. Above all, it is a wholesome sign to find that the natives have now met with a large amount of public attention. It is just as necessary to secure good sanitation for the natives in the colonies as to watch over the sanitary condition of the poor at home.

Paris, Oct. 8th.

MEDICAL TITLES IN GERMANY.

(FROM OUR BERLIN CORRESPONDENT.)

ENGLISH visitors to Germany are often surprised at the great number and variety of titles existing in that country. In ordinary conversation they hear the terms "Herr Geheimrath," "Frau Regierungsrath," &c., lavishly used, and they soon become aware that Germans in general are very fond of titles and attach a great importance to those distinctive appellations. A short article on German titles, and especially on such as are conferred on medical men, may therefore be not without interest to the readers of THE LANCET. But before entering on the subject I must explain that in the space at my disposal it would be impossible to do more than touch upon a small portion of the extensive question of German titles, for the regulations defining the rank and dignity conferred by the several [illegible] tremely elaborate and there are well- [illegible] usage in the various states of the [illegible] fact, but very few men who have a *complete* understanding of the subject, and they have only succeeded in this by m[illegible].

There are two points [illegible] German practices with respect [illegible] In the first place, a German who has received a title or an official position of any kind expects to be always addressed accordingly, not only in epistolary correspondence, but also in conversation. For instance, in speaking to a town councillor (Stadtrath) *whose* actual family name is Schmidt it is essential to call him only "Herr Stadtrath," and a letter intended for him must be addressed "Herrn Stadtrath Schmidt." Another peculiarity is that the wives of possessors of titles, officers, or public officials usually assume their husbands' titles, so that the wife of a colonel (Oberst) mus[illegible] addressed as "Frau Oberst." Some writers not of [illegible] have asserted [illegible] possessors of titles have a right to be addressed in a corresponding manner, so that the daughter of a Government councillor (Regierungsrath) ought to be "Fräulein Regierungsrath," but this is quite erroneous and a mere flight of fancy. Passing now to the strictly medical side of the question it must be explained that the proper official designation of a qualified practitioner is "Praktischer Arzt," but this title is only used in *communications of* the nature of letters and never in conversation. It would, in fact, be quite unusual in speaking to a medical man to say "Herr Arzt." The great majority of medical men having also taken the degree of M D. they are addressed in conversation as "Herr Doctor," this title being used indiscriminately by the public in speaking to every medical man although he may not be M.D. After having been in practice for a certain time, perhaps from 20 to 25 years, *medical men who are* of good professional standing and have not made themselves too prominent as opponents of the Government may, on the recommendation of the Minister, be favoured by the Sovereign with the title of "Sanitätsrath" (sanitary councillor). The usual procedure is that patients or friends of the medical man in question present a petition to the Government asking that he may be promoted to that honour. Sometimes the promotion is granted spontaneously for exceptional services to the town and the State and also on special occasions, such as a jubilee. On account of a rather high stamp duty being required for the diploma by the new Stamp Laws and also on account of a medical man so promoted having declined to pay this duty[1] the Minister of Public Instruction, as chief of the medical department, has ordered that medical men must beforehand declare expressly that they will accept their title. Medical men having this title are addressed in conversation as "Herr Sanitätsrath," the title of "Dr." being omitted, whilst on letters the proper address is "Herrn Sanitätsrath Dr. X." After a certain time the "Sanitätsrath" may be promoted to the rank of "Geheimer Sanitätsrath" (privy sanitary councillor). This title is used in the same way as "Sanitätsrath," but as the expression "Geheimer Sanitätsrath" is rather lengthy it is the custom in conversation to abbreviate it to "Herr Geheimrath," a word the dictionary rendering of which (privy councillor) is hardly a key to its practical application. On letters, *however*, the full *title must* be used. The same custom exists in the case of privy councillors of other classes as, for instance, privy councillors of justice, a title given to lawyers, or privy councillors of commerce, a title given to leading bankers, manufacturers, &c., who in conversation are addressed only in the abbreviated form, "Herr Geheimrath." Apart from the titles of "Sanitätsrath" and "Geheimer Sanitätsrath" there are other distinctions, the special features of which are that they are not given to medical practitioners merely as such, but are as a rule associated with a Government appointment. The chief medical officers of health of a district (Regierungsbezirk) and the members of the provincial medical boards when appointed to these offices receive at once the title of "Medicinalrath" (councillor). After a certain time passed in the Government service they are usually promoted to the rank of "Geheimer Medicinalrath" (medical privy councillor). The latter title belongs by virtue of their office to the members of the central medical department of the Government in Berlin, the senior members of this board enjoying even the title of "Geheimer Ober-Medicinalrath" (upper medical privy councillor). The title of "Geheimer Medicinalrath" is granted, moreover, as a mere personal distinction to the majority of ordinary professors of the universities and to the senior extraordinary professors as well. Professors who have received this distinction are addressed only as "Herr Geheimrath" in conversation, whilst the full title of Professor Virchow is "Herrn Geheimen Medicinalrath Professor Dr. Virchow." The highest distinction of this kind which can be conferred on anyone whomsoever is the title of "Wirklicher Geheimer Rath" (real privy councillor), which is very seldom granted to medical men, but is generally reserved for high Government and Court officials, Ambassadors, &c. A "Wirklicher Geheimer Rath" is addressed as "Excellenz" (your excellency), and the only medical man at present holding this title is Professor von Esmarch in Kiel. The term "wirklicher" (real) does not mean that the bearer has any duty to perform, the title being an honorary distinction only. The title of "professor" belonged originally to the occupants of chairs in the universities. There are ordinary and extraordinary professors, the number of the first category being strictly limited by the university statutes. Ordinary and extraordinary professors are first elected to that office by the faculty and the election has then to be sanctioned by the Sovereign.

Apart from members of the universities it became usual a few years ago to grant the title of professor to senior *privat-docenten* and also to the chief physicians and surgeons at some of the larger hospitals even though they had no connexion with a university. Whilst in the case of the members of the universities the term "professor" implies the performance of certain duties, the last-mentioned category receives the title of professor as a merely personal distinction conferred by the Government. The full title of a university professor of medicine would be in this form: "Ordentlicher [*or* ausserordentlicher] und öffentlicher Professor der Medicin" (ordinary [or extraordinary] public professor of medicine), whereas that of the second category is merely "professor" without any addition. In conversation, of course, no distinction is made, both categories being addressed as "Herr Professor."

What precedes relates only to the titles used in Prussia. The right to grant titles is a prerogative of the sovereigns of the individual states of the empire and the systems adopted by them differ widely from one another. In Bavaria, for instance, it is not usual to grant the title of "councillor" to ordinary practitioners, the title of "Hofrath" or "Geheimer Rath" (court councillor or privy councillor) being conferred only on medical men in the Government service or on the professors at the universities. The title of "Geheimer Hofrath" (privy court councillor) is used in Baden and in Wurtemberg. The title of "Sanitätsrath" used in Prussia and in several smaller states.

It is the rule to add the name of the state by which the title has been granted, for instance, Royal Prussian Medical Privy Councillor or Grand-ducal Baden Privy Court Councillor, &c. In the free cities of Hamburg, Lübeck, and Bremen no titles are conferred.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Medical Faculty of the University of Birmingham.

THE first session of the Medical Faculty of the University of Birmingham was opened on Oct. 1st by a conversazione held at the University at the invitation of the Vice-Chancellor and Council. Some 350 invitations were issued and the guests were received by Principal Lodge and the Dean of the Medical Faculty, Professor Windle. The Principal presided in the medical lecture-room and in the course of his remarks said that unity was the great principle to preach and divisions were scrupulously to be avoided. The University should be a corporate body banded together for the advancement and distribution of learning. The medical school was stated to be in a healthy and robust condition. The Dean then delivered an address on the advantages of the school and the system of training in the new University. This was listened to with much attention and interest. A vote of thanks was passed to the Dean, after which the Principal announced (amid applause) that the Council had that afternoon unanimously elected Professor Windle to represent the University on the General Medical Council.

The Clinical Board.

The prizes awarded by the Clinical Board were distributed on Oct. 8th in the lecture theatre of the General Hospital by Sir Henry Littlejohn, Professor of Forensic Medicine in the University of Edinburgh. At the invitation of the President, Mr. T. F. Chavasse, a large number of medical men and their friends assembled. Sir Henry Littlejohn dwelt upon the advantages of the practical side of professional education, stating that the system was due to the continental schools in the first instance, whose initiative had been wisely followed. Every department of medical study, with one exception, had its corresponding practical course, the exception being the important subject of medical jurisprudence. Every professor and lecturer of forensic medicine should in his opinion hold such an official connexion with the criminal authorities as would enable them to give a practical character to their prelections and thus to fit the students to give satisfactory evidence in the witness-box. He eulogised the Scottish system of medico-legal procedure which would ultimately, he thought, be adopted south of the Tweed. The small end of the wedge had been introduced by the establishment of the office of director of criminal prosecutions. Sir Henry Littlejohn proceeded to admonish the students present on various points of their professional training, his remarks meeting with hearty applause. A cordial vote of thanks was accorded to him for coming so long a distance to deliver the address and for the interesting and practical thoughts which it embodied.

The Musical Festival.

The triennial festival of music for which Birmingham has obtained so great a reputation concluded on Oct. 5th. The final meeting of the committee took place on the following morning when congratulations were interchanged on the splendid success which had been obtained. It was stated that the receipts amounted to £14,952, as against £13,722 for the previous festival, and that still there were many donations to come in. It is expected that a handsome sum

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[1] THE LANCET, March 31st, 1900, p. 970.

will accrue
festival is always held.

Exhibition of Lunatics.

Much excitement has been created in the minds of a number of good people by the perusal of the syllabus of the medical faculty of the University, where it is stated that in the lectures which are delivered by the medical superintendent of the asylum as professor "cases will be exhibited." Science and sentiment have clashed in the correspondence upon the subject and, as usual, some misunderstanding is the result. The express sanction of the Asylum Committee is demanded as a matter of public interest. The chairman, however, has stated that so far no complaint relating to the present practice has been made to them either by the friends or the patients Therefore the committee cannot well take notice of anonymous correspondents on this subject. Probably more will be heard of this in the future.

Oct. 9th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Hospitals Fund.

A MEETING of the General Committee of the Manchester Hospital Sunday and Saturday Fund was held recently, when it was reported that the funds in hand, after deducting £552 for expenses, amounted to £6647. It was decided to make the following distribution to the medical charities:—

Royal Infirmary	£1129	Hospital for Consumption ..	£235
Children's Hospital	905	Cancer Pavilion and Home	112
Sick Poor and Private Nursing Institution ...	734	Hospital for Skin Diseases .	87
Salford Royal Hospital ...	576	Hulme Dispensary	66
Hospital for Incurables ...	503	Victoria Dental Hospital ...	55
Ancoats Hospital	462	Ear Hospital	41
Clinical Hospital...	424	Chorlton on-Medlock Dispensary	37
Royal Eye Hospital	406	Homœopathic Dispensary...	9
St. Mary's Hospital	396	Homœopathic Institution...	9
Southern and Maternity Hospital	356		

Last year the amount distributed was £7000. The decrease, no doubt, is due to the War Fund and Indian Famine Fund, to which the workers in many firms have contributed. The medical charities are to be asked to supply annually a uniform analysis of their accounts so as to facilitate the preparation of the statement on which distribution is based. A deputation from the committee of the Fund, from the Royal Infirmary, and from the Ancoats Hospital has recently urged on the Watch Committee the need of providing a horse ambulance service. The deputation were told that the matter was "under consideration"—where such matters often remain—but, what is more encouraging, they were also told "that their views would probably be fully met." It is by no means a new idea that Manchester suffers from want of a horse ambulance service, but while the Manchester corporation can speedily decide as to what must be done with hundreds of thousands, or even a million or two, a comparatively small matter such as a horse ambulance service to be used for the sick and injured requires an enormous amount of consideration and must not be determined on rashly.

Sale of Drink to Children.

Probably even the staunchest supporters of the view that moderate drinking is good for the individual and is good therefore for the community, and should not be interfered with by any legislative measures, would hesitate to include children in their conception of "the public" and would not be averse to a measure which would save them from becoming familiar with the manners and the language commonly to be observed at the licensed house at the corner. A conference to inaugurate a fresh effort in aid of a Bill to prohibit the sale of drink to children under the age of 16 years was held in the Botanical Gardens in connexion with the Band of Hope Union on Sept. 26th. There can be no question that fetching beer from the public-house, and often enough sipping it on the way home, are likely to bring about a habit which may, and in numerous cases will, result in the excessive drinking which is so injurious to the physical and moral condition of the people and which is so costly in its direct and indirect results as to be a heavy burden on the nation. It was stated by Mr. Wakeley, secretary to the Band of Hope Union, that "in Manchester children." There seemed to be a general feeling that no help was to be expected from the "politicians" in Parliament and that, as Archdeacon Wilson said, "the temperance party must give Parliament to understand that opposition was useless, for they were in earnest and would not be denied."

Death of Benjamin Jones Massiah, M.D. Edin., M.R.C.S. Eng.

It is with great regret that I record the death of Dr. B. J. Massiah of Didsbury, the scene of his practice for many years. His health had been failing for some months, and about three weeks ago he went to Bournemouth for change of air and rest On Sept 29th he became alarmingly ill and died on the 30th from peritonitis. Dr. Massiah studied at Bristol, his native city, and afterwards at Edinburgh. His first association with Manchester came from his appointment as resident medical officer to the Cheadle Convalescent Hospital In 1881 he began practice in Didsbury, where he took an active part in social and public life. His remains were cremated at the Manchester Crematorium. As life [illegible]

[illegible] friends. He married about 12 months ago and has left a widow to lament his death.

Fatal Maltreatment of an Imbecile.

An inquest was held on Oct. 5th, by Mr. Sidney Smelt, the city coroner, on the body of Francis Southgate, lately an inmate of the Manchester Union Workhouse at Crumpsall. Various witnesses deposed to having seen violence used towards the deceased by an attendant named George Pescott. Mr. W. J. Heslop, police-surgeon, said that there were marks on the neck of the deceased such as could be made by a towel twistened and tightened in the manner that had been described. The larynx had been fractured, and the cause of death was asphyxia. The jury returned a verdict of wilful murder against Pescott, and he was committed for trial at the next assizes on the coroner's warrant.

Oct. 9th

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The New Sanatorium at Delamere Forest for the Open air Treatment of Phthisis: the Foundation stone laid by the Earl of Derby, K.G.

THE foundation-stone of the new sanatorium which is being erected at Delamere Forest, near Frodsham, as an accessory to the Liverpool Hospital for Consumption, was laid on Oct. 6th by the Earl of Derby, in the presence of a large and influential gathering, which included Lady Willox and Mr. W P Hartley, who jointly contributed the munificent sum of £15,000 towards the projected undertaking. The buildings in course of erection will be of a description suited to the open-air treatment of phthisis. The main block will contain medical officers' rooms, matron's rooms, and small sitting-rooms for special cases, with accommodation on the first floor for a limited number of patients. Behind this block will be the dining-hall, to which there will be no means of approach except through the open air; and behind that will be the block containing the kitchens and servants' apartments, similarly approached. The bulk of the patients will be housed in small detached blocks containing four or six bedrooms each, with the requisite baths and other accessories. These small blocks will be dotted about the estate in such positions and numbers as may be required. Attached to the main block and to each of the smaller blocks will be verandahs with a south or south-west aspect, so as to afford opportunities for rest and shelter in small companies Each bedroom in the main block will communicate with a balcony upon which the patient's bed may be placed. The construction of the building will be of the simplest character. Fire places in the rooms will not be required, as the principle of the treatment will be to keep patients as far as possible in the same temperature. Every arrangement has been made to favour the free circulation of fresh air. Mouldings and irregularities of surface will be carefully eliminated to prevent the accumulation of dust. Electricity will be largely utilised in the working of the sanatorium A pure water-supply can be obtained from various sources, including the Vyrnwy main of the Liverpool Corporation. Lord Derby, in an interesting speech, lauded the liberality of Lady Willox and Mr. W. P. Hartley and expressed the conviction that however useful such hospitals might prove to be, the scourge of consumption was to be exterminated rather by disseminating knowledge among the people as to the conditions for securing immunity from its ravages.

The Western Poor-law Conference: Meeting at Southport: Pauperism and Lunacy.

The meeting of the Western Poor-law Conference at Southport on Sept. 28th was presided over by Sir John T. Hibbert who thanked the Mayor for his kindly welcome to the conference. The Chairman remarked on the diminution of the number of paupers in Lancashire and Cheshire as compared with other English counties. 48 years ago the pauperism in England and Wales was 62·7 per 1000, while it was now only 25 4 per 1000. The number of out-door paupers had decreased from 955 000 to 580,000; child pauperism had decreased from 24·8 to 7 3 per 1000; the number of widows receiving out-door relief had decreased from 3 2 to 1·2 per 1000, and adult able-bodied pauperism had decreased from 13·2 to 3 per 1000. In spite of all the attractions of Poor-law infirmaries and improved workhouses, in-door pauperism had not increased in the same ratio as the population. When they considered that the drink bill for last year stood at £162,000,000, it could be easily understood why they still had a large army of paupers to deal with. Sir John Hibbert advocated classification in workhouses as far as possible, making the places comfortable for the old people and giving them every consideration, but not making them more comfortable than they would be outside. He made these remarks in view of the great financial difficulties in the way of providing old-age pensions. In Lancashire there was a decrease of pauperism last year, as compared with the average of five years, of 2617. In Cheshire there was a decrease of 926 for the same period. In Lancashire there were 18·5 paupers per 1000 of the estimated population, and in Cheshire 19 8, whereas in London the rate was 27 6, and in the west Midlands 27·4 per 1000. As to lunacy they had an unpleasant and difficult question to deal with. During the year the number of insane paupers had increased from 95,462 to 96 865, following a continual increase for the past 12 years. He would not say that it was due to increased lunacy; it was due largely to the removal of pauper lunatics from workhouses and other places to asylums, encouraged by the 4*s.* a week allowance made to the guardians. So far as he could gather from the reports of superintendents of asylums the increased number of lunatics to be cared for was attributable to the lower death-rate in their asylums consequent on improved surroundings, the excessive use of alcohol, the stress and competition of the age, overcrowding, and a gross neglect of hygienic conditions among the lower classes. He thought the incurable yet, perfectly harmless, cases might be cared for and treated in a less costly manner than at present. Mr. Burns, chairman of the West Derby Board of Guardians, read an interesting paper on the Proper Use of Workhouse Infirmaries, in which he advocated separating the hospital from the main body of the building, even at a considerable distance He expressed his belief that the time was approaching when all hospitals established for the relief of the sick poor should be brought under the control of the State.

Medical Faculty, University College, Liverpool.

A commission in the Royal Army Medical Corps has been placed at the disposal of the above medical faculty by the War Office. I am informed that at the date of writing no application for the appointment had been received by the dean of the medical faculty.

Death of Mr. Charles Bowman Wilson, M.R.C.S. Eng., L M. Dub.

The lamented death of Mr C B. Wilson took place to day (Oct. 9th) at his residence, Abercrombie-square, at the age of 74 years. Mr. Wilson, who obtained the Membership of the Royal College of Surgeons of England in 1847, retired from the active practice of his profession about 15 years ago. Mr. Wilson was consulting surgeon to the Ladies' Charity and Lying-in Hospital and was formerly house surgeon at the old Liverpool Infirmary and vice president of the Liverpool Medical Institution. The deceased gentleman was held in great esteem by his professional *confrères*, to whom he had endeared himself by his genial and kindly disposition and by whom his demise is greatly deplored.

Oct. 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Opening of the New Pavilion in the Edinburgh Royal Infirmary.

IT is announced that H.R.H. Princess Henry of Battenberg has consented to open the new pavilion which has just been added to the Edinburgh Royal Infirmary in commemoration of Her Majesty's Diamond Jubilee. The date of the ceremony will probably be Oct. 26th.

Opening of the Winter Session in Edinburgh.

The winter session of the medical classes in Edinburgh will open on Tuesday, Oct. 16th. Judging from appearances it looks as if clinical medicine were to be at a considerable disadvantage during the approaching session. At the end of the summer session one of the pavilions on the medical side was closed for cleaning, repairing, and re-draining, the idea being that it would be ready for re-occupation in a month. It is not ready yet and no one seems to know when it will be. Unless this can be speedily rectified it will have a most hurtful effect upon the medical school as a whole.

Lecture Hours in Edinburgh.

Six well-known lecturers on the practice of physic whose lectures are recognised as qualifying for the University of Edinburgh have united in drawing the attention of the University Court to the unsuitable hour (2 P M.) which has been fixed for the lectures on the practice of physic during the coming winter session. They point out that the lecturers who have charge of wards in the Royal Infirmary and are engaged in the teaching of clinical medicine from 12 to 1.30 P.M. will not be at their best if required to lecture at 2 P.M., and, moreover, "it has been found that many students have great difficulty in giving their attention to any lecture at 2 o'clock." 9 A.M. is the lecture hour preferred by these gentlemen, so as not to interfere with the surgery and midwifery lectures.

The Glasgow Southern Medical Society.

The opening meeting of the Glasgow Southern Medical Society was held on Oct. 4th in the rooms of the Southern Medical Club, 18, South Portland street. The following office-bearers were elected. Honorary President, Sir Hector Clare Cameron. President: Dr. William Watson. Vice-Presidents: Dr. John Stewart and Dr. William McMillan. Treasurer: Dr. Andrew S. Tindal. Secretary: Dr. John Fraser Orr. Editorial Secretary: Dr. Andrew Wauchope. Seal-keeper: Dr. John Coulson Howie. Extra Members of Council: Dr. Alex. O. McArthur, Dr. Duncan Macgilvray, and Dr. Alexander Roxburgh. Court Medical: Dr. Hugh Kelly, Mr. Robert H. Pavey, Dr. James W. Allan, Dr. Alexander Rankin, and Dr. Robert W. Forrest. Representative to Victoria Infirmary: Dr. Charles E. Robertson.

Oct. 11th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Queen's Visit to Ireland.

THE Queen has sent the following reply to the address which was presented by the Royal College of Surgeons in Ireland on the occasion of her visit to Ireland:—"I thank you heartily for the loyal and dutiful address which you presented to me during my recent stay in Ireland. It gave me a particular pleasure to receive the representatives of your distinguished profession, the reputation of which for skill and devotion to duty has lately been so conspicuously maintained under the severest tests." The reply was sent to the President of the College by Sir Matthew White Ridley, the Home Secretary.

Meath Hospital and County of Dublin Infirmary.

The medical session will open at the Meath Hospital on

Convalescent Home for the Mater Misericordiæ Hospital, Dublin.

Beaumont, Drumcondra, has recently been purchased as a convalescent home in connexion with the Mater Misericordiæ Hospital The grounds, extending over 110 acres, give ample facilities for the exercise of convalescent patients, and the house, which commands beautiful views, affords at present accommodation for about 50 patients. It is proposed later to increase the size of the buildings.

Belfast Public Health Committee.

Dr. Henry O'Neill, J.P., who was appointed by the corporation of Belfast as a delegate to represent them at some recent congresses, has just presented to the Public Health Committee a report on the inspection and sterilisation of milk as conducted by several municipal corporations. After pointing out the diseases liable to be conveyed by milk and the effect of its sterilisation, and the causes of diarrhœa (as due to unsterilised cow's milk) leading to a high infantile mortality, Dr. O'Neill quotes Dr. F. D. Harris, who says that during the past five years of the children under six months old who have died in St. Helens from diarrhœa 81 per cent. were bottle fed. A very full account is given in Dr. O'Neill's report of the method employed at St. Helens, from Dr. Harris's recent paper read at the Ipswich meeting of the British Medical Association. He also mentions that it is proposed to erect a central sterilising milk station at Batignolles, near Paris, a point on the Great Western Railway of France where 43 per cent [illegible] the capital arrives. Dr. O'Neill [illegible] on "The Improvement of the [illegible] ter," and concludes a very interesting report by recommending that the Public Health Committee of Belfast should appoint a sub committee to consider the matter and to prepare such regulations as should enable those who may desire to do so to obtain an abundant supply of pure sterilised milk at small cost. He also suggests that two properly qualified female sub-sanitary officers should be appointed whose duties should be to visit and give instruction to persons who have the charge of infants regarding the proper feeding of children the birth of whom has been registered, to visit dirty houses and to endeavour to get the occupants to keep them clean, and to visit each house where a death from diarrhœa or enteritis has occurred and to investigate the cause of the death.

The Dietary Scale at the Belfast Workhouse.

The Infirmary Committee submitted their final report on the revision of the dietary scales in the Belfast Workhouse to the guardians at their weekly meeting on Oct 2nd. It is expected that £1000 a year will be saved by the scheme which was adopted. It has yet to be approved by the Local Government Board.

The Forster Green Hospital for Consumption, Belfast.

From a recent interim report it appears that the hospital is able to deal with 120 or 130 cases per annum and that while some patients contribute to their support the financial condition of the hospital leaves much to be desired. Considering the great prevalence of phthisis in Belfast this hospital is greatly needed and should be properly supported.

Royal Victoria Hospital, Belfast.

Dr. Henry O'Neill, J P, who has been on the surgical staff of the Royal Victoria Hospital for upwards of 20 years, has just resigned, owing to pressure of public and private duties. In addition to conducting a large practice Dr. O'Neill is a member of the Belfast City Council, and he has taken a great interest in questions of public health. He finds that his time is now so occupied that he is unable to give enough attention to hospital demands. If Dr. O'Neill devotes the additional time he will now have to the Public [illegible] to the city [illegible] high ideals [illegible] id his work, and while they all regret his resignation they hope the city council will benefit by the extra opportunities which he will now have of furthering public health reforms.

Oct. 9th.

(FROM OUR OWN CORRESPONDENT.)

The Last Sign of Life.

REFERENCE was made in THE LANCET of Sept. 29th (p 978) to Mr. Augustus D. Waller's method of ascertaining whether animal or vegetable tissues retained their vitality or not The material to be tested is connected with a galvanometer; in circuit with it is a source of electro-motive force (battery) to oppose the accidental electro-motive force (current of rest) of the matter tested. This electro-motive force is adjusted exactly so as to bring the galvanometer needle to zero A stimulus (e g, induction shock) is thrown into the material under test and if it is alive it responds by an electrical disturbance (current of action). For distinct reactions with objects having a low resistance (for example, a reaction above ·0 01 volt and a resistance less than 100,000 ohms) a galvanometer showing one-millionth of an ampère is sufficient. But for more delicate reactions with objects of high resistance (for example, a reaction below 0 001 volt, and a resistance above a megohm) a more sensitive galvanometer is indispensable. Mr. Waller ordinarily employs a Thomson's galvanometer with which one-ten-thousand-millionth of an ampère causes a deviation of five or six millimetres on a scale placed at a distance of two metres A four-way key is introduced for the convenience of cutting out the galvanometer when the stimulus is applied and for cutting in the galvanometer immediately afterwards to let it feel the current of action. Dead matter gives no current of action but may show common polarisation. This is distinguished by the direction, polarisation currents being inverse to the stimulus and currents of action being direct. The *electro-motive value of the reaction varies with the* nature of the object, the intensity of the excitation, and the time which has elapsed before the establishment of the galvanometric circuit It is ordinarily measured in hundredths and thousandths of volts; it is diminished more or less rapidly with the progressive extinction of vitality; it is entirely abolished by boiling.

Professional Secrecy.

It is becoming more and more difficult in France to lay down exactly what are the limits of professional secrecy, and all [illegible] different courts of [illegible] Hitherto the rul [illegible] ute and that nothing can dispense the medical man from the obligation, not even the permission or death of the patient. Despite this the Court of Appeal of Toulouse has just allowed a remarkable exception to this law, hitherto so strictly observed. The court gave judgment in a case involving the disposition of some property. One of the witnesses summoned was the medical attendant of the deceased who was also his personal friend. Counsel for the other side objected to the admission of the medical man's evidence as being a violation of professional secrecy. In opposition to this contention the court decided to admit the evidence as good, arguing that it contained two classes of facts—the one which had been obtained by the medical man in his capacity as friend, and which, therefore, had nothing to do with professional secrecy, the other which concerned the complaint of the deceased, which was a matter of public knowledge, for everyone in the district knew that he had died from morbus cordis, while the explanations furnished by the medical man with regard to the latter class of facts were necessary to allow him to justify certain matters as to which sundry witnesses had brought charges against him This unexpected judgment provoked some very fair and just criticism on the part of Dr. Maurans, an expert in the matter, writing in the *Semaine Médicale* Mar [illegible] same time both the [illegible] their patients, personal friends [illegible] en confidences and it is very [illegible] given to the f. [illegible] l adviser, and in order to avoid the danger of a medical man being charged with violation of professional secrecy it is much better to keep absolute silence. It is extraordinary also to see the Court of Toulouse laying down that, because the illness from which a patient is suffering is universally known, therefore his medical attendant is dispensed from the obligation of secrecy. Many medical men have been found guilty by different courts for having made known the nature medical attendance and drugs to everyone in the colony of Victoria would require 550 medical men and 130 dispensing chemists and would cost the State £300,000—or on an average 18*s.* 6*d.* per adult male in taxation. Under the arrangements of the friendly societies the average cost per member would be 24*s.* 6*d.* per head.

Dinner to Sir Thomas FitzGerald.

On August 16th about 80 members of the medical profession in Victoria entertained Sir Thomas FitzGerald at dinner on his return from South Africa where he had been serving as consulting surgeon with the Imperial Army Medical Corps. His Excellency the Acting Governor presided and proposed the health of Sir Thomas FitzGerald in a highly eulogistic speech. In replying Sir Thomas FitzGerald said that he had been struck with the very friendly relations which prevailed between the civilian and army surgeons; and with reference to the arrangements he could not understand Mr. Burdett-Coutts's charges. Everywhere he went he found the arrangements admirable.

A Medical Man Convicted of Procuring Abortion.

Mr. Michael Lyons Butler was charged at the Central Criminal Court with having used unlawful means to procure abortion, was found guilty, and was sentenced to five years' penal servitude.

Sept. 1st.

Obituary.

ROBERT STRAFFORD SMITH, M.D. R.U.I.

THE utmost sorrow was felt in Belfast on Friday morning, Oct. 5th, when it was announced that one of the most promising of the younger physicians of that city had died. Since the spring of the present year Dr. Smith had been suffering from recurring attacks of carbuncles of the neck which greatly lowered his strength. Under careful surgical treatment these had been got rid of, but about two weeks ago, after having been out at his work, he was obliged to return to bed with an obscure feverish attack and pains in the left leg simulating sciatica. Afterwards the pain extended to the other leg, and a careful examination of the blood in the laboratory of Queen's College showed no signs of any enteric mischief (absence of Widal's reaction) but an extraordinarily increased leucocytosis (60,000 leucocytes in a cubic millimetre), establishing the very serious diagnosis of septicæmia. Then the nervous system became involved, and, finally, evidences of septic pneumonia appeared. On Thursday night (Oct. 4th) he became unconscious and passed away on the following forenoon. The eldest son of a most distinguished physician (Dr. J. W. T. Smith, who died 10 years ago and who had an enormous consulting practice in the north of Ireland), Dr. Strafford Smith was educated at Queen's College, Belfast, and he graduated M.D. of the Royal University in 1882. He afterwards visited London and Vienna. Commencing practice in Belfast in 1885 he was first attached to the Ulster Hospital for Women and Children, but subsequently he joined the staff of the Royal Victoria Hospital where he was one of the physicians and also secretary of the medical and surgical staff On the death of Professor Cuming he was appointed Lord Chancellor's Visitor in Lunacy. Dr. Smith was greatly liked both for his professional abilities and for his kind and sociable disposition. His death is particularly sad from the circumstance that he had been married only 18 months, and the greatest sympathy is felt for his widow who with a little son is left to deplore his premature death. The funeral took place on Sunday afternoon, when there was a large number of the members of the medical profession present to show a last token of respect. Unfortunately, owing to the University examinations in Dublin, several of the professors of Queen's College were unable to attend.

ALEXANDER STEVENSON, M.B., C.M. GLASG.

DR. STEVENSON of Ogle-terrace, South Shields, where he practised in partnership with Dr. James Drummond, died in Glasgow on Sept. 3rd after a short illness. Taken away at the early age of 31 years, almost at the commencement of what seemed a very promising career, he will be long remembered by his many friends as an earnest, skilful, and patient practitioner and an upright Christian man. His first start in life was in a lawyer's office, where he spent a year or two, and then turned his thoughts to the medical profession. He accordingly proceeded to the University of Glasgow, where he proved himself a diligent student and graduated with commendation as M.B. and C.M. in 1895. Dr. Stevenson spared no pains in qualifying himself for the practical work of his profession. He was never idle and in his native town of Dumbarton he was well known as a temperance advocate and religious worker. He has left a widow and one child.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the primary examination the following candidates passed in the subjects indicated:—

PART I.

Chemistry.—A. Bernfeld, Royal Free Hospital; A. G. Elsworthy, Charing-cross Hospital; M. S. Jevons; R. Khedkar, Bombay; and R. H. Rigby, Leeds.

Materia Medica and Pharmacy.—J. B. Bradley, Birmingham; E. C Curtis, Aberdeen; A. T. Greenhill, St. Bartholomew's Hospital, T. E. Johnson, London Hospital; R. Khedkar, Bombay; C Millauro, Westminster Hospital; and J. M. Worswick, Manchester.

PART II.

Anatomy.—H. Archer, Leeds; St. C. G. Ballenden, Birmingham; H. A. S. Gover, St. Mary's Hospital; R. V. Khedkar, Bombay; F. C. R. M. Knight, Guy's Hospital; W. Lovell, St. Mary's Hospital; E. H. McMahon, Charing-cross Hospital; H. P. Margetts, St Bartholomew's Hospital; S. Northwoc [illegible] Pegler, Leeds; A. C. Stark, Westminster [illegible] Manchester; R W. Taylor, Leeds; M. L [illegible] pital; M. G. L. Walker, Leeds; and S. H. [illegible] Hospital.

Physiology.—G. H. Almond, Cambridge; H. Archer, Westminster Hospital; St. C. G. Ballenden, Birmingham; E. W. C. Bradfield, St. Mary's Hospital; W. L. Crabtree, Leeds; H. A. S. Gover, St. Mary's Hospital; I. Griffith, London Hospital; A. F. Heald, Cambridge; H. S. Jones, Guy's Hospital; R. V. Khedkar, Bombay; F. C. R. M. Knight, Guy's Hospital; W. Lovell, St. Mary's Hospital; H. E Scoones, St. Bartholomew's Hospital; C. M. Scott, Royal Free Hospital; J. B. Stephens, St. Mary's Hospital; M. L Tyler, Royal Free Hospital; and M. G. L. Walker, Leeds.

UNIVERSITY OF GLASGOW.—The following candidates have passed the first professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B., botany; Z., zoology; P., physics; C., chemistry):—

Andrew Blair Aitken (B., P.), William Smith Allan (B., Z.), Andrew Allison (B., P.), Andrew Woodroffe Anderson (B., P.), Donald Arbuckle (P.), Robert James Arthur (B., Z.), John Bain (C.), Hugh Barr (B), Allan Robertson Barrowman (B., P.), Archibald Grainger Bisset (B). Charles Brown (P.), John Brown (C.), George Yuille Caldwell (B.), John Paterson Carmichael (Z.), Peter Carrick (B., Z.), Robert Buchanan Carslaw, M.A. (P., C), William Smith Craig (C.), Robert Wilson Dale (B., P.), Thomas Thornton Macklin Dishington (Z, C.), Allan Campbell Douglas (B., P.), Charles Milligan Drew (B., Z., C.), Walter Duffy (B.), John Shaw Dunn (B, P.), John Ferguson (B., Z., P., C.), Charles Conway Fitzgerald (Z., C), Edward John Fitzgerald (Z., C.), Hugh Harvey Fulton (B., P.), William Gilchrist (C.). William Harold Gillatt (P.), Joseph Glaister (B), James Glover (P., C.), Alexander Graham (B, P.), David Livingstone Graham (B., P.), Donald John Gollan Grant (B, P.), Alexander Robertson Forrest Hay (B., Z., P.), James Waugh Hay (B, Z.), John Cochrane Henderson (Z., P., C.), Lawrence Hislop (B.), Ralph Howell (B., Z), Alexander Hunter (C.), James Hunter (B., P.), Archibald Yuill Hutchison (B., Z., P., C.), Harry Stewart Hutchison (B., P.), Alexander Jamieson (B., C), Arnold Ernest Jones (B, P.), Douglas Robertson Kerr (B., Z.), James R [illegible] Notman Kirkwood (Z., C.), Robert Wrig [illegible] cAulay (B., Z., P., C.), Ernest Bowman [illegible] Iacaulay (B., P.), Donald [illegible] Glaister M'Cutcheon (B., C.), John Finlay [illegible] 'Dougall (C.), James Boston M'Ewan (C), [illegible] (B., P.), Duncan Macfadyen (B., P.), John M'Farlane (B., P.), Robert Macfarlane (B., P.), Alexander Stuart Murray Macgregor (B. P.), Milne M'Intyre (B, C), Charles Gordon Mackay (B., C.), David James M'Leish (B, Z., P.), Norman Alexander Macleod (P.), [illegible] Alexander Stewart M'Millan (P.), Matthew [illegible] M'Murrich (B, P.), Norman Smith [illegible] Richard Cameron Macpherson (B., C.), William Main (P., C.), James Marshall (Z., C.), William Blair Morton Martin (B, P.), Andrew Meek (B., P.), John Moffatt (P., C.), William Struthers Moore (Z., C.), Gavin Denholme Muir (P.), John Muir (Z., C.), Macdonald Munro (B), Frank Anderson Murray (B), George Clement Nielson (B., P.), Thomas Orr (B., Z., P.), Howard Henderson Patrick (B., P.), Arthur Geoghegan Paxton (Z., C.), John Pearson (B., P.), John Clegg Pickup (B., Z.), Andrew Maclean Pollock (B, P.), Henry Sherwood Ranken (B., P.), Donald Ronald Reid (B, P.), Daniel Falconer Riddell, M.A. (Z., C.), Daniel Stevenson Richmond (P., C.), James Watson Richmond (C.), Alexander Robertson (B., P.), Berkeley Hope Robertson (C.), William Rolland (B., P.), John Macdonald Ross (P., C.), Edward Louis Sieger (P.), Robert Wilfred Simpson (P., Z), Alexander Hunter Sinclair (Z), Morrison Wood Smith (B., P.), James Alexander Somerville [illegible] ald Stewart (B.), William Stewar [illegible]), William Templeton (Z., C.), [illegible] Alexander M'Millan Watson (P [illegible] Archibald

Crombie West (B., P.)
Shanks Alexander (Z
Campbell (B., Z.),
[illegible]

The following candidates have passed the second professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch B.) in the subjects indicated (A., anatomy; P., physiology; M., materia medica and therapeutics):—

William
Banks (
Campbe
William
(P., M.),
William
Kirk (A.
Lovett
Macinty
M'Kenz
(A., P.)
Martyn,
Robert Clemens James Schlomka
(M.), Malcolm Bernard Gathorne
Smith (M.), Robert Cassels Smith
M.), John Barbour Stewart (P.),
n Allan Thom (A., P., M.), John
Hesten Thomas, (A., M.), William Wagner Turner (A., P., M.),
Robert Wallace (P.) Thomas Irby Wallace (P., M.), Robert
Watson (M.) Alexander Brown Watt (M.) Peter Millar Waugh
(A.), Robert Tait
Joseph White
(M.), Watson Yo
(A., P.), Jane Ca
Macleod Lochhea
Wallace (P., M.).

The following candidates have passed the third professional examination
(M.B.) and Bachelor
indicated (P., pathol y;
public health):—

John Anderson
Stoddart Barr
Cameron (M.),
David Beattie
Hugh Grant
rrar (P., M.)
George
n Fletcher (P.), William
Gemmill
David Kyle, M.A. (M.),
Alexande
a Lochrane (M.) Joseph
Paterson
M'Glashan (P.), Hugh
Archibald
M'Gaw M'Millan (P., M.),
Allan Dixon Mitchell (P., M.), Samuel
P., M.), Janet Thomson
Agnes Binkier Sloan

At the recent professional examinations for the degrees of M.B., Ch.B., the following candidates passed with distinction in the subjects indicated:—

A MEDICAL PRACTITIONER STRUCK BY LIGHTNING.—The *Maryland Medical Journal* mentions that on August 13th Dr W. H. Ravenscroft of Oakland, Garrett County, Maryland, was struck by lightning and rendered unconscious. His horse was stunned at the same time.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.—The following scholarships have been awarded: Entrance Scholarship, £30, to Miss J. Coupland; St. Dunstan Scholarship, value £60, to Miss Nora Smith.

ICE-CREAM.—The borough analyst of Plymouth having reported to the sanitary committee of that town in reference to the ice-cream sold in the streets, the sanitary committee has decided that premises where ice cream is manufactured shall be registered and supervised by the sanitary authority.

SURGEONS AND JURIES. — The
shire) bench of magistrates on Sept. 25th,
lists for the district, struck off the name
Royal College of Veterinary Surgeons,
embers of that profession should be

T BATH.—At the meeting of the
rdians held on Oct. 3rd it was reported
eight months of this year there had been
these children 658 had been success-
cases were postponed, 67 had exemption
had died.

firmary, as had been suggested. After a discussion it was eventually decided to erect a new building.

MEDICAL STUDENTS IN ITALY.—According to the *Supplemento al Policlinico* of Sept. 15th, during the last academical year the medical and surgical faculties of the Italian universities were attended by 6648 students distributed as follows 2009 in Naples, 783 in Turin, 530 in Rome, 504 in Bologna, 496 in Pavia, 358 in Genoa, 309 in Padua, 270 in Palermo, 260 in Florence, 218 in Pisa, 152 in Modena, 167 in Catania, 175 in Parma, 128 in Messina, 81 in Siena, 75 in Cagliari, 54 in Sassari, 35 in Camerino, 29 in Perugia, and 15 in Ferrara.

SANITARY CONDITION OF DARTMOUTH.—At the meeting of the Dartmouth Town Council held on Oct. 2nd Mr. J. H. Harris, the medical officer of health, reported that the inspector of the Local Government Board had visited the town relative to the arrangements made to cope with an outbreak of plague. He added that there was no isolation hospital belonging to the council nor were there arrangements for disinfecting Mr Harris also complained of the scarcity of water. The report was eventually referred to a committee.

ATTEMPTED MURDER OF A MEDICAL MAN.—On Oct. 8th a murderous attack was made on Dr. Julius St. Thomas Clarke of Leicester. His assailant was a man named Kirby who fired four shots at him with a revolver as he was walking near Nelson-street. One of the bullets lodged in the lower part of Dr. Clarke's spine, but has not yet been extracted, and the patient's condition is unfortunately very serious Kirby, who was immediately arrested and disarmed, has been in an asylum and is supposed to be insane A later report has been received to the effect that Dr. Clarke's general condition is much more satisfactory.

LEICESTER INFIRMARY BOARD.—The quarterly meeting of the board of governors of the Leicester Infirmary was recently held at the institution, Mr. T. Fielding Johnson presiding. In presenting the usual financial statement the chairman said that there was a balance due to the treasurer on the joint account of the infirmary, fever-house, and children's hospital of £668 4*s* 3*d* At the commencement of the year the infirmary was indebted to the treasurer in the sum of £2195 and at the close of the last quarter this sum had increased to £4826, but thanks to the timely legacies of the late Miss Dalton this large deficit had been nearly wiped off, and it was hoped that by the collections in the churches and chapels, the workpeople's donations, and receipts from other sources, there would be a balance on the right side at the end of the year. Owing to the large increase in the number of operations it had been decided that a new operating theatre must be built which would involve an expenditure of from £7000 to £8000. The report was adopted.

Medical Magistrate.—Mr. M. Cursham Corner, L.S.A., of Mile End-road, E., has been appointed a Justice of the Peace for the County of London, Tower Division.

The East Suffolk Hospital, Ipswich.—Dr. W. A. Elliston, President of the British Medical Association, and Mr. B. Edwards have resigned their appointments on the honorary medical staff of the hospital. At an election held to fill the vacancies Dr. T. Warner and Dr. F. Ward were elected.

The Poplar and Stepney Sick Asylum District.—A conference upon the Open-air Treatment of Phthisis will be held at St. Martin's Town Hall at 3 P.M. on Monday next, Oct. 15th, under the auspices of the managers of the Poplar and Stepney Sick Asylum District.

Literary Intelligence.—Messrs. Smith, Elder, and Co. announce a second edition in the press of the late E. J. Chance's "Bodily Deformities," Vol. I., brought up to date by John Poland, F.R.C.S. Eng. The hitherto unpublished Vol. II. on "Treatment," by the same author, will also be edited by Mr. Poland.—Messrs. W. B. Saunders and Co., medical publishers, Philadelphia, are opening a London Branch of their business at 161, Strand, W.C., for the sale of their medical publications in Great Britain and the Colonies.—Mr. Frederick Treves has written an account of his experiences in South Africa during the three months that the field hospital followed the relief column from Frere to Ladysmith. The record is based on notes written from day to day on the spot. The work, which is illustrated by a number of photographs, will be issued shortly by Messrs. Cassell and Co. under the title of "The Tale of a Field Hospital."

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

Allardice, W. C., M.D. Glasg., has been appointed Certifying Surgeon under the Factory Acts for the Borough of Newcastle-under-Lyme, the Civil Parishes of Chesterton, Silverdale, Keel, and Madeley in the County of Stafford.

Anderton, W. B., M.B. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Second Resident Assistant Medical Officer to the Crumpsall Workhouse, Township of Manchester.

Ashby, A., M.B. Lond., F.R.C.S. Eng., has been re-appointed Medical Officer of Health by the Reading Town Council.

Birchall, E. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer to the Walton Workhouse, West Derby.

Blaker, Percy S., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the East London Hospital for Children and Dispensary for Women, Shadwell, E., vice Joseph Shardlow, resigned.

Body, Henry Martyn, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health by the Crediton (Devon) Rural District Council.

Browne, Geo., M.D., M.Ch. Irel., has been appointed Certifying Surgeon under the Factory Acts for the Ballynahinch District of County Down.

Brown, J. Percival, M.B., Ch.B. Vict., has been appointed Junior House Surgeon to the Macclesfield General Infirmary.

Brown, John, M.D., D.P.H. Vict., has been re-appointed Medical Officer of Health for the Borough of Bacup.

Craig, John, M.B., Ch.B. Edin., has been appointed House Surgeon to the Dumfries and Galloway Royal Infirmary.

Dawson, W. E., L.R.C.P. Irel., L.S.A., L.M., has been appointed Resident Medical Officer, Tower Hamlets Dispensary, Stepney, E.

Evatt, John E., M.B., B.S. Durh., has been appointed Demonstrator and Assistant Lecturer of Anatomy at the University College, Cardiff.

Fisher, Charles, M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Victoria Hospital for Children, Chelsea.

Gemmell, Samson, M.D. Glasg., F.F.P.S. Glasg., has been appointed Professor of Clinical Medicine, University of Glasgow, vice McCall Anderson.

Hall, J. Basil, M.C. Cantab., has been appointed Honorary Assistant Surgeon to the Bradford Royal Infirmary.

Harding, R., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Kington Rural District Council.

Kingsford, Leslie, M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Casualty Department of the East London Hospital for Children and Dispensary for Women, Shadwell, E., vice Percy S. Blaker, resigned.

Laurie, Langworthy, has been appointed House Surgeon to the Victoria Hospital, Bournemouth.

Macrae, D. Mackenzie, M.B. Glasg., has been appointed Resident Surgeon to the Wilts County Asylum, Devizes.

Mapleton, Henry Banbury, M.A. Oxon., M.D., C.M. Edin., D.P.H. Lond., has been appointed Medical Officer of Health for Newton Abbot, Devon, vice Harvey, resigned.

Mules, P. H., M.D. Edin., M.R.C.S., has [illegible] Surgeon to the Wrexham Infirmary, vi[illegible]

Pearce, D. A. C., M.D. Lond., B.S., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer of the Bridge Union, vice L. A. Winter, resigned.

Plumley, Arthur George Grant, M.B. Lond., M.R.C.S., L.R.C.P., L.D.S. Eng., has been appointed Dental Surgeon to the Clayton Hospital and Wakefield General Dispensary.

Rubra, H. H., M.D. Brux., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Anæsthetist to the Great Northern Central Hospital, Holloway-road, N.

Scofield, H. C. L., M.B., C.M. Edin., B.Sc., has been appointed Medical Officer to the Children's Home, Peckham Rye, S.E.

Sissons, A. T., M.B., B.Ch. Vict., has been appointed First Resident Assistant Medical Officer to the Crumpsall Workhouse, Township of Manchester.

Slater, B. H., M.B. Camb., M.R.C.S., L.R.C.P., has been appointed Honorary Assistant Surgeon to the Bradford Royal Infirmary.

Sturdy, H. Carlile, M.B. Durh., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the East London Hospital for Children and Dispensary for Women, Shadwell, E., vice S. Vere Pearson, resigned.

Thompson, William, has been appointed Public Analyst for the Borough of Stockport.

Wallace, J. Sim, M.D., B.Sc., L.D.S., has been appointed Assistant Dental Surgeon to the National Dental Hospital, London, W.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Bath Eastern Dispensary.—Resident Medical Officer. Salary £130 per annum, with furnished apartments, coals, gas, and domestic attendance.

Bradford Royal Infirmary.—House Physician for 12 months, unmarried. Salary £100 per annum, with board and residence.

Bristol City Hospitals.—Resident Medical Officer for the Ham-green Fever Hospital, Bristol, for one year. Salary £100 per annum, with board, lodging, and washing.

Central London Ophthalmic Hospital, Gray's Inn-road, W.C.—House Surgeon. Salary £50 per annum, with board and residence in the hospital.

Cheltenham General Hospital.—House Surgeon for two years, unmarried. Salary £80 per annum, with board and apartments.

Children's Hospital, Nottingham, St. Peter's Church Walk, Nottingham.—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

City of London Asylum, near Dartford, Kent.—Second Assistant Medical Officer and Pathologist, unmarried. Salary £150 a year, with board (except liquors), furnished apartments, washing, and attendance. Apply to the Clerk to the Visiting Committee, Guildhall, London, E.C.

Cornwall County Asylum, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £120, rising to £150 by £10 annually, with board, furnished apartments, &c.

Corporation of Birmingham City Fever Hospital, Lodge-road.—Second Assistant Medical Officer. Salary £120 per annum, with board, residence, &c.

County Asylum, Lancaster.—Assistant Medical Officer. Commencing salary £125 per annum with the usual allowances.

County Borough of Croydon, Croydon Borough Hospital.—Resident Medical Officer for the Croydon Borough Hospital for Infectious Diseases, for one year. Salary £120 per annum, rising to £140 at the end of six months, with board and residence.

Derby County Asylum.—Second Assistant Medical Officer. Salary commencing at £110 per annum, rising to £130, with board, lodging, and washing. Apply to Medical Superintendent, County Asylum, Mickleover, Derby.

Devonshire Hospital, Buxton, Derbyshire.—Assistant House Surgeon. Salary £50 per annum, with furnished apartments, board, and washing.

French Hospital and Dispensary, 172, Shaftesbury-avenue, London.—Resident Medical Officer (not a female), speaking French, unmarried. Salary £80 a year, with full board.

Glasgow Corporation, Police Department.—Assistant to the Bacteriologist in connexion with the Health Department of the City for six months. Salary at the rate of 3 guineas per week. Apply to the Clerk of the Corporation Police Department, City Chambers, Glasgow.

Hull City and County Lunatic Asylum.—Second Assistant Medical Officer for the Asylum at Willerby. Salary £150 per annum, with board, apartments, and washing. Apply to the Town Clerk, Town Hall, Hull.

Hulme Dispensary (not Provident), Dale-street, Stretford-road, Manchester.—House Surgeon. Salary £150 a year, with apartments, attendance, coal, and gas.

Jarvis' Charity, Staunton-on-Wye, Hereford.—Medical Officer, to reside in house provided with garden and good stabling rent free. Salary £150 per annum and certain allowances. Apply to the Correspondent, Bredwardine Vicarage, Hereford.

Leicester Infirmary.—House Surgeon. Salary £120, rising £10 annually until the third year. Board, apartments, and washing provided.

London Temperance Hospital, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Board and residence in the hospital and washing provided, and an honorarium given at the rate of 50 guineas per annum.

Northern Division of South Uist.—Medical Officer. Salary £77 10s. Apply to Mr T. Wilson, Solicitor, Lochmaddy, Clerk.

Paddington-green Children's Hospital, London.—Surgeon to Out-patients. Candidates must be F.R.C.S.

Kyleakin, Skye. [illegible] London —

[illegible] annum, [illegible]

ROYAL ISLE [illegible] Surgeon [illegible] to nurses. [illegible] Salary £100, with [illegible] Royal Sea Bathing

[illegible].—Assistant House [illegible] of £50 per annum,

[illegible] William street,

[illegible] DISPENSARY, [illegible] Vacancy in the

[illegible] road, London — [illegible] Secretary, 23,

[illegible] DISEASES, Red [illegible] months in the

[illegible] £120 a year, [illegible] rooms, coal and [illegible] expenses Apply [illegible]

[illegible] House Surgeon [illegible] and residence.

[illegible] House Surgeon for six months. Salary at the rate of £30 per annum, with board, lodging and laundry.

THE CHIEF INSPECTOR OF FACTORIES gives notice of vacancies for Certifying Surgeons under the Factory Acts at Abercrave, in the county of Brecknock; at Knighton, in the county of Hereford; and at Bexhill, in the county of Sussex

T. [illegible] ARY, Devon.—House Surgeon, [illegible] lodging, and washing

V[illegible] FOR CONSUMPTION —Assistant [illegible] Salary £100 per annum, with [illegible]

[illegible] Officer, [illegible]

[illegible] HOSPITAL.—House [illegible] with board, lodging, and washing.

WORCESTER GENERAL INFIRMARY.—House Surgeon for three years Salary £100 per annum, with board and residence

Births, Marriages, and Deaths.

BIRTHS.

POTTS.—On Oct. 5th, at the Bethnal Green Infirmary, the wife of W. J. Potts, M.D., of a son.

THOMSON.—On Oct 9th, at 14, Coates crescent, Edinburgh, the wife of John Thomson, M.D., F.R.C.P. Ed., of a son.

WARD.—On Oct. 4th, at Milton Cottage, Wokingham, the wife of Ernest Ward, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

CAMPBELL—SHERWOOD.—On Oct 9th, at Christ Church, Streatham Hill, by the Rev. C. S. Nicholl, M.A., vicar, assisted by the Rev. H. Curtis, M.A., vicar of the Church of the Ascension, Balham, John William Campbell, M.D. (Paris), M.B. (Camb.), of Mentone, to May, only daughter of N. N. Sherwood, Esq., of Dunedin, Streatham Hill.

GOD[illegible] [illegible] only surviving child of the late Thomas Entwisle, of Linden House, Cheadle

MIL[illegible]

DEATHS.

LOWSLEY.—On Oct. 4th, at Eldon square, Reading, Oded Lowsley, [illegible] year.

[illegible] residence, 88, Finchley-road, South [illegible] Milson, M.D., only son of the late [illegible], of Swineshead, Lincolnshire, in his 63rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

SECRET COMMISSIONS AND THE MEDICAL PROFESSION.

WE have upon previous occasions expressed our opinion that the outcry against secret commissions in the medical profession was greatly exaggerated. There can be no doubt that they are offered but even the offering is somewhat rare However, a particularly flagrant [illegible] its [illegible]"

"PRIVATE.—An Honorarium of Five per cent will be paid to Medical gentlemen on completion of all successful business introduced by them.

237, EARLSFIELD ROAD, S.W.

DEAR SIR,

Permit us to call your attention to the enclosed Circular.

The *Curative properties of the Thermal Springs of New Zealand* are comparatively unknown in England. All the facts contained in the Circular are based on Dr. Ginder's and other Medical Officers' Report to the N. Z Government, which will be found in detail, with analysis of the Springs, in the Official Year Book of the New Zealand Government for 1899 and previous years; the London publishers are Messrs Eyre and Spottiswood

We trust this communication will receive your approval and commendation

Your Obedient Servants,

J. BASTOW & SON."

We should like to point out to the New Zealand Government that if it wishes to exploit the Springs, as no doubt it does wish and has every right to do, this is the very worst way to set about it.

A POINT OF ETIQUETTE.

To the Editors of THE LANCET.

SIRS,—I have been giving first-aid lectures to the local fire-brigade in accordance with Fire Brigade Union This union confers the Red Cross badge on those surgeons who deliver three different courses of lectures to as many fire-brigades To complete the series and secure the badge I must deliver lectures to brigades to two of my opponent's fire-brigades. What course am I to adopt? The firemen will have to come over to this village for each lecture.—I am, Sirs, yours faithfully,

Oct 9th, 1900. VERITAS

*** If we understand "Veritas's" letter it would seem that his "opponents" (does he mean his brother practitioners?) will require his fire-brigades as audiences before they can obtain their badges, in which case they will not be likely to object to "Veritas" lecturing to their fire-brigades that he may obtain his badge "Veritas" is advised to communicate with his "opponents" and ascertain their views —ED L.

A CONFLICT OF EVIDENCE

AT Cardiff Police Court on Oct. 2nd, Dr. Frederick W. Evans of Charles-street was summoned for furious driving on the information of two police constables who stated that on Sept 26th they saw him driving along Cathedral road at a rate of about 13 or 14 miles an hour. The evidence of Dr. Evans and his coachman was to the effect that the pace hardly, if at all, exceeded 10 miles an hour, and their estimate would in the opinion of persons accustomed to horses be entitled to some weight From the constant use of the gig which is such a feature in the country practitioner's daily work he is likely to be a better judge of distance and speed than a city policeman. The magistrates however preferred the police evidence and fined Dr. Evans 10s.

"MOTOR CARS FOR MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—The gist of Mr Hirsch's experience with a motor-car is embodied in the last three lines of his letter in THE LANCET of Oct. 6th, p 1043 "Motor cars are certainly very useful but liable to get out of order, and I question whether I would buy one again with my present experience" Just so, and I would advise medical men to ponder well before purchasing a machine, costly as well as uncertain. To a medical man time and punctuality are both of value, and it is no joke to "jack up" at a critical moment, for there is always the glorious uncertainty of never knowing whether you will have to leave your car at some road side inn and get home by rail or be towed home or not. Just at the present time there has been a "boom" in car buying by a public ignorant of the intricate machine they are investing in and only waking up after possession to disappointment. There are many who suppose the only thing you have to do is to jump up, turn on a cock, and off you go? Far from it, you must be prepared for ever-recurring breakdowns I have joined an automobile club in the town in which I reside and have during the past six months had many opportunities of noting the capers of motor cars of various kinds and I find too many patients in hospital to please me I am now an on looker and patiently waiting events. Perhaps I may be told I may wait till my coffin is ordered, like the man who in the old days waited for improvement in bicycles, but to "dabble" in motor-cars requires a deeper pocket than bicyoles and all doctors are not rich. One great element of failure in my opinion is the rage for excessive speed. By a medical man whose work is mixed country and town the first question asked should be not "how fast will it go," but "how slow." We know they can go fast. The steam cars are the only ones in which the speed can be regulated to a crawl, but they, too, have their drawbacks and require excessive care, though I think they will prove the "survival of the fittest" in the end. The truth is, the solution of the problem of road motor traffic is a much harder nut to crack than was at first supposed and I fear we shall have to wait some time before we can approach anything like perfection in any system, either oil, steam, or electrical, and the horse will for a yet long time successfully compete with his rivals. Mr. Hirsch is to be congratulated in that he successfully accomplished his journeys. Perhaps it was as much due to good luck as good management, similar to my own experience with the bicycle, only getting one minute tyre puncture in covering nearly 3000 miles of road. I am, Sirs, yours faithfully,

Oct. 8th, 1900. MOTOR-CAR.

To the Editors of THE LANCET.

SIRS,—Medical men who contemplate investing in a motor-car are under an obligation to Mr. Hirsch who gives his experience in THE LANCET of Oct. 6th. I have thought that a steam car would be more suitable for medical work. Will any of your readers who have used these cars kindly give their experience?

I am, Sirs, yours faithfully,

Stockwell-road, S.W., Oct. 8th, 1900 R. J. HEATLY, L.R.C.P. Irel.

"A GHOSTLY JOKE."

THE *Indian Medical Record* is responsible for the following story:—Dr. McTavish of Edinburgh was something of a ventiloquist, and it befell that he wanted a lad to assist in the surgery who must necessarily be of strong nerves. He received several applications, and when telling a lad what the duties were, in order to test his nerves he would say, while pointing to a grinning skeleton standing upright in a corner: "Part of your work will be to feed the skeleton there, and while you are here you may as well have a try to do so." A few lads would consent to a trial and received a basin of hot gruel and a spoon. While they were pouring the hot mass into the skull the doctor would throw his voice so as to make it appear to proceed from the jaws of the bony customer, and gurgle out: "Gr-r-r-gr-h-gh! That's hot!" This was too much, and without exception the lads dropped the basin and bolted. The doctor began to despair of ever getting a suitable helpmate, until a small boy came and was given a basin and a spoon. After the first spoonful the skeleton appeared to say: "Gr-r-r-uh-r-hr! That's hot!" Shovelling in the scalding gruel as fast as ever the boy rapped the skull and impatiently retorted: "Well jist blew on't, ye auld bony!" The doctor sat down on his chair and fairly roared, but when the laugh was over he engaged the lad on the spot.

"THE MOUNTING OF MUSEUM SPECIMENS."

To the Editors of THE LANCET.

SIRS,—F. A. W. (THE LANCET, Oct. 6th, p. 1048) will find useful information in the St. Bartholomew's Hospital Reports, vol. xxxiii., 1897, pp 236-240, *re* mounting museum specimens.

I am, Sirs, yours faithfully,

Cardiff, Oct. 6th, 1900. ELDON PRATT.

A WARNING TO PARENTS.

AT Porth, on Oct. 5th, a woman was charge with having allowed her child to go into the public street while suffering from diphtheria. The proceedings were taken at the instance of Mr. J. Herbert Jones, medical officer of health to the Rhondda Urban District. The evidence showed that the child was notified on August 23rd as suffering from diphtheria and the usual instructions were immediately given to the mother, but on the following day and on subsequent occasions the sanitary inspector found the child out of doors. Since that time four cases of diphtheria had been notified from the street in question. A fine of 30s. and costs was inflicted, making £2 0s. 6*d* in all.

THE MORALITY OF CHEATING.

THE immortal Joseph Surface has many followers, but we think that the following case shows a height of impudence combined with a profession of "duty to one's neighbour" which has rarely been reached. Mr. Charles Theodore Brooks is a dispensing chemist living in Lower Edmonton Of him Mr. A. L. Bridge, an inspector under the Food and Drugs Acts, purchased some mercurial ointment which was found to be deficient in mercury to the extent of 34·67 per cent. It also was made from lanolin instead of lard or suet. Mr. Brooks appeared to explain this little matter on Oct. 4th at the Tottenham Sessions. According to Mr. Bridge the accused had stated in conversation that there was no lard in the ointment because he (Brooks) was a Buddhist and must not handle pig's fat. Mr. Brooks, however, informed the Bench that he merely spoke of lard in an ironical manner. There was lard in his ointment. It was sold for animal purposes and therefore would not be in accordance with the British Pharmacopœia. Mr. Brooks has a proper feeling for his fellow creatures. He explained the slight deficiency in the quantity of mercury by arguing that there would be great danger in selling pure mercurial ointment, for it was a very deadly poison. As a further illustration he would say that a man once asked him for some pure carbolic acid. He supplied him with diluted carbolic acid, which the man drank, and the fact of the dilution saved the man's life. The bench, however, were hard-hearted and fined Mr. Brooks 5s. and 18s. 6*d*. costs. Mercurial ointment, in their opinion, meant the ointment of the British Pharmacopœia. Mr. Brooks sorrowfully said that the bench must take the responsibility. It was a deadly poison.

A NEW WOOD FOR STREET PAVING.

WE have received a specimen block of a wood introduced by Mr. E. Alcott of California, which is being tried in various districts of London for paving the roadways. The wood is called "red gum," and is apparently well adapted for the purpose of making a roadway. It is very dense and fine-grained, in fact the cut cross grain shows an almost velvety surface. It is said not to be absorbent and to have the faculty of binding, so that rain or the washings from horse-dung and urine will have no chance of sinking between the blocks. A section of Piccadilly is at present being laid with this wood and it will be interesting from a sanitary point of view to see how it wears. Probably, however, as soon as it is laid down it will be grubbed up again by the Post Office, the National Telephone Company, an electric lighting company, a water company, a gas company, or a hydraulic power company, and so will not be fairly tested. The sight of a newly-paved roadway is irresistible for such bodies and at present there is no law to stop the annoyance caused by them. We have not heard whether the wood is submitted to any treatment other than ordinary seasoning, but the specimen submitted to us smells strongly of acetic acid, a condition which of course may be accidental.

THE POWERS OF A RURAL SANITARY AUTHORITY.

To the Editors of THE LANCET.

SIRS,—Would you be good enough to inform me in THE LANCET whether a rural sanitary authority has a right to place meters at private houses if they believe that the water has been wasted, and also if they can do it without the consent of the owner of the house?

I am, Sirs, yours faithfully,

Oct. 4th, 1900. WILLIAM MASON, M.O.H.

*** Unless the right to do so [illegible] agreement as a condition of supply we do not [illegible] t exists.—ED. L.

CHANGE-RINGING.

CAMPUS writes:—"Will some reader of THE LANCET who is acquainted with the exercise of change-ringing on church bells kindly give his opinion of the effect of the exercise on health produced by the regular extension of the arms above the head, the position of the body, the mental alertness in observing the moving ropes, counting the place, and remembering the course of the method being rung?"

◆

Practitioner.—Such circulars are highly objectionable but we do not think that the General Medical Council has power to punish their disseminators. There would be no objection, if the practitioner in question is known to spread them broadcast, to writing to the university or corporation to which he belongs and inviting an opinion upon his conduct.

Northumbria.—The essence of the matter rests in the terms of the burial order. A corone [illegible] ect a burial without an inquest, but [illegible] given complaint can be made to hi [illegible] *e* exercise of his discretion would be u [illegible] ve cause to the contrary.

Vincit Veritas should write to the Pharmaceutical Society and the Society of Apothecaries of London.

During the week marked copies of the following newspapers have been received: *Yarmouth Journal, Manchester Courier, Public Health Engineer, Northern Daily Telegraph, Blackburn Standard, Birmingham Daily Gazette, Dundee Courier, Times of India, Pioneer Mail, Nottingham Daily Guardian, Framlingham Weekly News, Lancashire Daily Post, Indian Daily Telegraph (Lucknow), Bradford Observer, Glasgow Herald, Leeds Mercury, Citizen, Architect, Builder, Scotsman, Liverpool Daily Post, Manchester Guardian, Baptist, Bristol Mercury, Sanitary Record, Yorkshire Post, South Eastern Gazette, Oxford Chronicle, West Sussex Gazette, Carpenter and Builder, Mark Lane Express, St. Andrews Citizen, Fife News, Leicester Post, Auckland Chronicle, Jackson's Oxford Journal, City Press, Hastings News, Reading Mercury, Hertfordshire Mercury, Mining Journal, Blackpool Times, Local Government Chronicle, Huddersfield Examiner, Liverpool Journal of Commerce, Surrey Advertiser, Birmingham Daily Mail, Local Government Journal, Stockport Advertiser, Grimsby News, Northampton Herald, Warehouseman and Draper, Cromer Post, Plumber and Decorator, Weekly Free Press and Aberdeen Herald, Devon Weekly Times, Watford Leader, Hereford Times, South Shields Free Press, Derby Standard, Hampshire Independent, Lowestoft Standard, People, Ayr Advertiser, Northampton Daily Chronicle, Worcester Journal* &c., &c.

METEOROLOGICAL READINGS.

(Taken daily at 8 30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 11th, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rainfall	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A M.
Oct. 5	29 81	WSW	0 33	102	63	51	51	55	Cloudy
" 6	30 00	S W.	0·03	93	66	54	56	58	Cloudy
" 7	30 18	S W	..	112	71	58	60	64	Fine
" 8	30 19	SSW	...	111	76	53	57	61	Fine
" 9	30 15	WSW	..	109	76	60	62	64	Hazy
" 10	30 06	N W.	0·01	90	63	57	54	57	Overcast
" 11	30·20	W.		69	52	45	45	47	Hazy

Medical Diary for the ensuing Week.

OPERATIONS.

MONDAY
Thoma
Middle
Samari
(2 P M

(2 30 P M), Cancer (2 P M), Metropolitan (2.30 P M), London Throat (2 P M. and 6 P M), Royal Ear (3 P M), Samaritan (9 30 A M and 2.30 P M)

[illegible]

Throat (2 P M and 6 P M), Samaritan (9 30 A.M and 2 30 P M)

SATURDAY (20th) —Royal Free (9 A.M and 2 P M), Middlesex (1 30 P M), St Thomas's (2 P M), London (2 P M), University College (9 15 A M.), Charing-cross (2 P M), St George's (1 P.M.), St. Mary's (10 P.M),

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ase of Pulmonary
Etiology of Rheu

Hall, Pavilion road,
A Clinical View of
lves (Presidential

iety (20, Hanover-
Exhibition of Slides
and Models of Skin Structure. 8 P M. Papers:—Report on the

TH
of the United
8 30 P M Papers:—
ot-wound of the
onvergent Strabis
" with Choroido-
r D Wood Case
of Cysticercus in the Eye

FRIDAY (19th).—*Society for the Study of Disease in Children* (11, Chandos street Cavendish square, W) —5 30 P M Cases will be shown by Dr D B Lees, Dr J Taylor, Dr G A. Sutherland, Dr G Carpenter, Dr J H Sequeira, Mr R. Clement-Lucas, Mr A H Tubby, and Mr S Stephenson.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

MONDAY (15th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —4 P M Mr M Morris: Consultation (Skin.)

WEST LONDON POST GRADUATE COURSE (West London Hospital W) —5 P M Dr Abraham: Some Skin Affections

TUESDAY (16th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —4 P M Sir W H Broadbent Consultation (Medical)

WEDNESDAY (17th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —4 P M. Mr J. Cantlie: Consultation (Surgical)

(Surgical)

Boyd Surgical Cases in

Hospital (Gray's Inn-
Morbid Anatomy and

raduates' College and Polyclinic
—4 P M Dr StClair Thomson: Con-
oat) 5-7 P M Mr J. Griffith Class
Practical Ophthalmology Demonstration V

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention be given to this notice.

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Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Let ... tion or for private informa-
the names and addresses of
for publication

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told I may wait till my coffin is ordered, like the man who in the old days waited for improvement in bicycles, but to "dabble" in motor-cars requires a deeper pocket than bicycles and all doctors are not rich. One great element of failure in my opinion is the rage for excessive speed. By a medical man whose work is mixed country and town the first question asked should be not "how fast will it go," but "how slow." We know they can go fast. The steam-cars are the only ones in which the speed can be regulated to a crawl, but they, too, have their drawbacks and require excessive care, though I think they will prove the "survival of the fittest" in the end. The truth is, the solution of the problem of road motor traffic is a much harder nut to crack than was at first supposed and I fear we shall have to wait some time before we can approach anything like perfection in any system, either oil, steam, or electrical, and the horse will for a yet long time successfully compete with his rivals. Mr. Hirsch is to be congratulated in that he successfully accomplished his journeys. Perhaps it was as much due to good luck as good management, similar to my own experience with the bicycle, only getting one minute tyre puncture in covering nearly 3000 miles of road.

I am, Sirs, yours faithfully,

Oct. 8th, 1900. MOTOR-CAR.

To the Editors of THE LANCET.

SIRS,—Medical men who contemplate investing in a motor-car are under an obligation to Mr. Hirsch who gives his experience in THE LANCET of Oct. 6th. I have thought that a steam car would be more suitable for medical work. Will any of your readers who have used these cars kindly give their experience?

I am, Sirs, yours faithfully,

Stockwell-road, S.W., Oct. 8th, 1900. R. J. HEATLY, L.R.C.P. Irel.

"A GHOSTLY JOKE."

THE *Indian Medical Record* is responsible for the following story:—Dr. McTavish of Edinburgh was something of a ventriloquist, and it befell that he wanted a lad to assist in the surgery who must necessarily be of strong nerves. He received several applications, and when telling a lad what the duties were, in order to test his nerves he would say, while pointing to a grinning skeleton standing upright in a corner: "Part of your work will be to feed the skeleton there, and while you are here you may as well have a try to do so." A few lads would consent to a trial and received a basin of hot gruel and a spoon. While they were pouring the hot mass into the skull the doctor would throw his voice so as to make it appear to proceed from the jaws of the bony customer, and gurgle out: "Gr-r-r-gr-h-gh! That's hot!" This was too much, and without exception the lads dropped the basin and bolted. The doctor began to despair of ever getting a suitable helpmate, until a small boy came and was given a basin and a spoon. After the first spoonful the skeleton appeared to say: "Gr-r-r-uh-r-hr! That's hot!" Shovelling in the scalding gruel as fast as ever the boy rapped the skull and impatiently retorted: "Well jist blew on't, ye auld bony!" The doctor sat down on his chair and fairly roared, but when the laugh was over he engaged the lad on the spot.

"THE MOUNTING OF MUSEUM SPECIMENS."

To the Editors of THE LANCET.

SIRS,—F. A. W. (THE LANCET, Oct. 6th, p. 1048) will find useful information in the St. Bartholomew's Hospital Reports, vol. xxxiii., 1897, pp. 236-240, *re* mounting museum specimens.

I am, Sirs, yours faithfully,

Cardiff, Oct. 6th, 1900. ELDON PRATT.

A WARNING TO PARENTS.

AT Porth, on Oct. 5th, a woman was charged with having allowed her child to go into the public street while suffering from diphtheria. The proceedings were taken at the instance of Mr. J. Herbert Jones, medical officer of health to the Rhondda Urban District. The evidence showed that the child was notified on August 23rd as suffering from diphtheria and the usual instructions were immediately given to the mother, but on the following day and on subsequent occasions the sanitary inspector found the child out of doors. Since that time four cases of diphtheria had been notified from the street in question. A fine of 30*s*. and costs was inflicted, making £2. 0*s*. 6*d*. in all.

THE MORALITY OF CHEATING.

THE immortal Joseph Surface has many followers, but we think that the following case shows a height of impudence combined with a profession of "duty to one's neighbour" which has rarely been reached. Mr. Charles Theodore Brooks is a dispensing chemist living in Lower Edmonton. Of him Mr. A. L. Bridge, an inspector under the Food and Drugs Acts, purchased some mercurial ointment which was found to be deficient in mercury to the extent of 34·67 per cent. It also was made from lanolin instead of lard or suet. Mr. Brooks appeared to explain this little matter on Oct. 4th at the Tottenham Sessions. According to Mr. Bridge the accused had stated in conversation that there was no lard in the ointment because he (Brooks) was a Buddhist and must not handle pig's fat. Mr. Brooks, however, informed the Bench that he merely spoke of lard in an ironical manner. There was lard in his ointment. It was sold for animal purposes and therefore would not be in accordance with the British Pharmacopœia. Mr. Brooks has a proper feeling for his fellow creatures. He explained the slight deficiency in the quantity of mercury by arguing that there would be great danger in selling pure mercurial ointment, for it was a very deadly poison. As a further illustration he would say that a man once asked him for some pure carbolic acid. He supplied him with diluted carbolic acid, which the man drank, and the fact of the dilution saved the man's life. The bench, however, were hard-hearted and fined Mr. Brooks 5*s*. and 18*s*. 6*d*. costs. Mercurial ointment, in their opinion, meant the ointment of the British Pharmacopœia. Mr. Brooks sorrowfully said that the bench must take the responsibility. It was a deadly poison.

A NEW WOOD FOR STREET PAVING.

WE have received a specimen block of a wood introduced by Mr. E. Alcott of California, which is being tried in various districts of London for paving the roadways. The wood is called "red gum," and is apparently well adapted for the purpose of making a roadway. It is very dense and fine-grained, in fact the cut cross grain shows an almost velvety surface. It is said not to be absorbent and to have the faculty of binding, so that rain or the washings from horse-dung and urine will have no chance of sinking between the blocks. A section of Piccadilly is at present being laid with this wood and it will be interesting from a sanitary point of view to see how it wears. Probably, however, as soon as it is laid down it will be grubbed up again by the Post Office, the National Telephone Company, an electric lighting company, a water company, a gas company, or a hydraulic power company, and so will not be fairly tested. The sight of a newly-paved roadway is irresistible for such bodies and at present there is no law to stop the annoyance caused by them. We have not heard whether the wood is submitted to any treatment other than ordinary seasoning, but the specimen submitted to us smells strongly of acetic acid, a condition which of course may be accidental.

THE POWERS OF A RURAL SANITARY AUTHORITY.

To the Editors of THE LANCET.

SIRS,—Would you be good enough to inform me in THE LANCET whether a rural sanitary authority has a right to place meters at private houses if they believe that the water has been wasted, and also if they can do it without the consent of the owner of the house?

I am, Sirs, yours faithfully,

Oct. 4th, 1900. WILLIAM MASON, M.O.H.

*** Unless the right to do so has been acquired by agreement as a condition of supply we do not believe that such right exists.—ED. L.

CHANGE-RINGING.

CAMPUS writes:—"Will some reader of THE LANCET who is acquainted with the exercise of change-ringing on church bells kindly give his opinion of the effect of the exercise on health produced by the regular extension of the arms above the head, the position of the body, the mental alertness in observing the moving ropes, counting the place, and remembering the course of the method being rung?"

Practitioner.—Such circulars are highly objectionable but we do not think that the General Medical Council has power to punish their disseminators. There would be no objection, if the practitioner in question is known to spread them broadcast, to writing to the university or corporation to which he belongs and inviting an opinion upon his conduct.

Northumbria.—The essence of the matter rests in the terms of the burial order. A coroner has an undoubted right to direct a burial without an inquest, but if such direction be improperly given complaint can be made to his superiors, by whom the *bonâ fide* exercise of his discretion would be upheld unless there were very grave cause to the contrary.

Vincit Veritas should write to the Pharmaceutical Society and the Society of Apothecaries of London.

During the week marked copies of the following newspapers have been received: *Yarmouth Journal, Manchester Courier, Public Health Engineer, Northern Daily Telegraph, Blackburn Standard, Birmingham Daily Gazette, Dundee Courier, Times of India, Pioneer Mail, Nottingham Daily Guardian, Framlingham Weekly News, Lancashire Daily Post, Indian Daily Telegraph (Lucknow), Bradford Observer, Glasgow Herald, Leeds Mercury, Citizen, Architect, Builder, Scotsman, Liverpool Daily Post, Manchester Guardian, Baptist, Bristol Mercury, Sanitary Record, Yorkshire Post, South Eastern Gazette, Oxford Chronicle, West Sussex Gazette, Carpenter and Builder, Mark Lane Express, St. Andrews Citizen, Fife News, Leicester Post, Auckland Chronicle, Jackson's Oxford Journal, City Press, Hastings News, Reading Mercury, Hertfordshire Mercury, Mining Journal, Blackpool Times, Local Government Chronicle, Huddersfield Examiner, Liverpool Journal of Commerce, Surrey Advertiser, Birmingham Daily Mail, Local Government Journal, Stockport Advertiser, Grimsby News, Northampton Herald, Warehouseman and Draper, Cromer Post, Plumber and Decorator, Weekly Free Press and Aberdeen Herald, Devon Weekly Times, Watford Leader, Hereford Times, South Shields Free Press, Derby Standard, Hampshire Independent, Lowestoft Standard, People, Ayr Advertiser, Northampton Daily Chronicle, Worcester Journal &c., &c.*

METEOROLOGICAL READINGS.

(*Taken daily at 8 30 a.m. by Steward's Instruments.*)

THE LANCET Office, Oct. 11th, 1900.

Medical Diary for the ensuing Week.

OPERATIONS.

2.30 P.M.).

London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

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Opening Address.)

WEDNESDAY (17th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—7 30 P.M. Mr F. W. W. Baker: Exhibition of Slides
Paper:—Report on the

Y OF THE UNITED
8 30 P.M. Papers.—

retinitis and

Y OF DISEASE IN CHILDREN
W.).—5 30 P.M. Cases will
ylor, Dr. G. A. Sutherland,
Mr. R. Clement-Lucas, Mr.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

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(West London Hospital
Affections.
COLLEGE AND POLYCLINIC
H. Broadbent: Consulta-

COLLEGE AND POLYCLINIC
J. Cantlie: Consultation

(Surgical.)

WEST LONDON POST GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Robinson: Vulval and Vaginal Discharges.

W.C.).—4 P.M.

rgical Cases in

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Anatomy and

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Practical Ophthalmology. Demonstration V.

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Z.—Messrs. A. and M. Zimmermann, Lond.

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An Address

ON

JOHN LOCKE AS A PHYSICIAN.

Delivered before the Students' Societies of the Medical Department of the University of Pennsylvania, on Jan 16th, 1900,

BY WILLIAM OSLER, M.D., F.R.S.,
PROFESSOR OF MEDICINE, JOHNS HOPKINS UNIVERSITY, BALTIMORE.

GENTLEMEN,—Among the great men of the seventeenth century not one has more enduring claims to our grateful remembrance than John Locke—philosopher, philanthropist, and physician. As a philosopher his praise is in the colleges. As the apostle of common sense he may be ranked with Socrates and a few others who have brought philosophy from the clouds to the working-day world. Of his special virtues and qualifications as the typical English philosopher nothing need be said, but were there time I would fain dwell upon his character as a philanthropist—in the truest sense of the word. The author of the Epistle on Toleration, the Treatise on Education, and the Constitution of Carolina, the man who pleaded for "absolute Liberty, just and true Liberty, equal and impartial Liberty," the man who wrote the memorable words, "All men are naturally in a state of freedom, also of equality," must be ranked as one of the great benefactors of the race.

With the faculty Locke's connexion has usually been described as "loose and uncertain." Indeed, we know him chiefly as a friend of Sydenham. Until the appearance of Fox-Bourne's "Life" it had not been recognised that he was at times an active practitioner, and that throughout the greater part of his long life he was ready to treat cases and to give advice; still less was it known that he was a writer of medical essays, and that he had left a large body of clinical reports and papers. I had become familiar with his professional relations through John Brown's essay, "Locke and Sydenham," and many additional details are given in the "Life" just referred to, but for the more important facts I have made a careful study of the Locke MSS in the British Museum and in the Record Office.

I.—LIFE

Let me first give a brief summary of Locke's life. He was born in the county of Somerset in 1632, the son of an attorney who at the outbreak of the civil war joined the Parliamentary side. Of his boyhood and early education but little are known In 1646 he entered Westminster School under the famous Dr. Busby, where he had as fellow students Richard Lower, Walter Needham, [illegible] Mapletoft, who subsequently [illegible] In 1652 he entered Christ Ch[illegible] B.A. degree in 1655 and the [illegible] year he became senior student [illegible] 1660 lecturer on Greek, and in 1662 lecturer on Rhetoric. In 1665 he served as secretary to the embassy of Sir Walter Vane to the Elector of Brandenburg. Until 1660 a student of classics and rhetoric, Locke appears to have been at a loss to know exactly what calling to follow. Thoroughly disgusted, he had broken with the old scholastic philosophy and, imbued with the new leaning of Bacon and Descartes, felt what Donne calls "the sacred hunger of science." But what probably turned his attention most actively to medicine was the presence in Oxford of the celebrated Robert Boyle, who with his associates had formed a scientific club, the "invisible college," which became the nucleus of the Royal Society Letters of this period show Locke to have been busy with experimental physics, working at problems suggested by Boyle, taking daily notes on the weather (a practice which he kept up for many years), and gradually becoming well versed in the sciences cognate to medicine Unfortunately we have very little information as to the character of his medical studies, which seem, however, to have been of a rather desultory nature, as he did not comply with the very easy requirements for the degree. On these Fox-Bourne makes the following comment: "All that was expected from [illegible] ship in physic w[illegible] the lectures of [illegible] of anatomy and [illegible] certain number [illegible] after that little more than a delay of four years was necessary to qualify him fo[illegible] lectures, delivered every [illegible] during term, were limited t[illegible] of Hippocrates and Galen [illegible] in the spring to attend the [illegible] and to hear four lectures, each two hours long, upon it, and in the autumn to hear three lectures [illegible] These requirem[illegible] in November, [illegible] that he could [illegible] becoming a ba[illegible] ever, was not [illegible] belonged to the Puritan party. During these years he seems to have been intimately associated with Dr. David Thomas, at that time a practitioner at Oxford. He writes to Boyle in February, 1666 67. "Mr. Thomas presents his humble service to you He and I are now upon a new sort of chemistry; that is, extracting money out of the scholars' pockets, and if we can do that, you need not fear but that in time we shall have the lapis, for he that can get gold and silver out of scholars cannot doubt to extract it anywhere else." Tho[illegible] unavailing to procure the docto[illegible]ing with the regulations, it was [illegible] in his senior studentship at Ch[illegible]ally held only by persons in holy orders, and this post, with the salary attached to it, Locke enjoyed till his expulsion in 1684.

Locke did not receive the bachelorship of medicine until 1674, in which year he was appointed to one of the two medical studentships at Christ Church, and it was supposed by his friends that this was a step preliminary to taking the doctor's degree, but to this he never proceeded. In 1666, when acting as an assistant to Dr. Thomas, Lord Ashley, afterwards the first Earl of Shaftesbury, the celebrated Achitophel of Dryden's satire, came to Oxford to drink the waters of the Astrop wells. He was the subject of a remarkable malady of which I shall subsequently give a detailed account. Dr Thomas, to whom he had written to have the waters ready for him, was away but had left word with Locke to get them, and as there was some trouble and delay Locke called on Lord Ashley to apologise. [illegible] a mutual attractio[illegible] friendship between [illegible] as in the following [illegible] House, the London residence of Lord Ashley, as physician and literary factotum.

From this date until 1675 Locke lived in Lord Ashley's family, occupying himself in all sorts of miscellaneous duties, some domestic, as finding young Anthony Ashley a wife, whom he subsequently attended on several interesting occasions. One duty which interests us in America very much is the share which he took in the Carolina colony. As secretary to the Lords Proprietors he was appointed one of the Landgraves and wrote, it is supposed, the celebrated "Fundamental Constitutions of the Government of Carolina," the original draft of which (in his handwriting), with many alterations and erasures, may be seen in the Record Office. The celebrated clause, "No person whatsoever shall disturb, molest, or persecute another for his speculative opinions in religion or his way of worship," expresses the spirit of toleration for which Locke strove all through his life. Subsequently, after Lord Ashley was raised to the peerage as the Earl of Shaftesbury, Locke became Secretary of Presentations During all this period he was deeply interested in medicine and was in intimate association with Sydenham, with Mapletoft, and with other well-known physicians of the day, though it was not until 1674 that he took his M.B. at Oxford About this time he began to suffer much in his health and in 1675 he went to France, where he remained, chiefly at Montpellier and Paris, for four years His journals during this period, which are very full, indicate his continued interest in the profession, though, as he writes to Mapletoft, "My health, which you are so kind to in your wishes, is the only mistress I have a long time courted, and is so coy a one that it will take up the remainder of my days to obtain her good graces and keep her in good humor. She hath of late been very wayward, but I hope is coming about again." In another letter he was a painless internal tumour, broad, and slightly projecting, about the anterior region of the liver, and his hypochondria was very apparent to the touch. Although it had been observed 12 years before, the exact time when the tumour first began is uncertain. For since the colour of the skin was unchanged and no swelling was apparent externally, unless the hand were applied it easily escaped the eye; nor through the whole 12 years did it seem to change in the least. The doctors called into consultation on this point, amongst whom were some from the excellent London college, were inclined to the opinion that this firm and unchanging extuberance was not a morbid tumour, but rather some congenital and unusual malformation of the liver. However the patient himself suspects, not without reason, that the tumour first came into existence in the year 1656, especially as at that time ...... he used to fatigue himself overmuch. By too frequent over-exercise his blood became so heated that his skin would immediately be suffused with a deep redness, and his whole body seemed to be inflamed, all which gave rise to a burning fever. From this time on he was conscious of a complete change in the general condition of his body. Whereas before he was troubled more frequently with pains in the left side, and other splenic symptoms, from now on he escaped absolutely free from these troubles, and in their place acquired a constitution prone to other disorders, and especially susceptible to morbus regius.[2] From the prolonged languor brought on by this disease, when his emaciated body and impaired strength would threaten death, he was frequently restored by the timely use of acidulæ, by means of which he obtained relief for one or two years, and was carried through so many vicissitudes of health, scarcely escaping with his life, until last summer. Then, happily, an internal abscess at last broke out, bringing to a head the source of so many disorders. There is one thing here which I cannot pass by, and that is that the patient's head never once ached though more than fatigued by disease. This, however, is not the only marvel displayed by that head.

"During a bad night about the end of May, 1668, he was suddenly seized with excessive vomiting, accompanied by much disturbance. Everything he had eaten in the preceding meal was rejected, still raw and undigested, in repeated vomitings. He was purged next day by Dr. Glisson, the learned physician-in-ordinary. On the following morning he appeared discoloured a rusty red, which the physician tried to remedy with suitable drugs. But although the face seemed to return a little to its proper appearance, so that he could go about the ordinary duties of life, nevertheless, the languor and loss of appetite returned, anti-icterics and chalybeates being administered in vain. Moreover, about the beginning of June, since all the symptoms were running from bad to worse, the physician prescribed a purging pill to be taken at bedtime. When the patient raised himself up in bed to pass his urine about midnight he was suddenly seized about the region of the stomach and liver with a most acute pain which lasted the greater part of an hour and was finally relieved by resting comfortably in bed. When after an hour or two he again sat up in bed the same excruciating pain returned. Again one hour afterwards he got up, and in the same way when he raised himself upon his buttocks the pain attacked him for the third time, and after a like interval left him. Next morning at 8 o'clock, shortly after taking a purging potion he vomited it up mixed with viscid phlegm. After a while he left his bed, his servants taking him in their arms and placing him upright on his feet, so that his body should nowhere be bent. The cathartic had a satisfactory effect and he was purged. However, though he turned his body, he did not dare bend it, lest the severe pain should come on again. In the evening he began to suffer most acute pain in the back about the loins. This ceased after a quarter of an hour, and at the same there suddenly sprung up below the ensiform cartilage a soft tumour the size of an ostrich egg. It was yielding to the touch, but on being compressed it did not for a moment retain any traces of the fingers. The skin was a *brown* (?) *colour*. There was hardly any pain, and no inflammation. This tumour could not be broken up by the drugs which were administered for six or seven days. Then physicians and surgeons were called into consultation and on June 12th it was opened by the application of cautery. This fact is worthy of observation: before the opening of the tumour a somewhat tenacious and flexible plaster fastened itself so firmly to the skin at the border of the tumour that it could not be torn away without leaving behind a large part of its substance; while, on the other hand, the top of the tumour, about the width of an English half-crown or more, was not even discoloured by it, nor was the plaster at all adherent in that part." The daily record of the case is in English.

"The 12th of June, 1668, in ye morning a caustick was applied and ye same opened in ye afternoon, at wh. dressing besides a large quantity of purulent matter, many bags and skins came away. The like hapned the next day (being Saturday) both in ye fore and afternoon. On Sunday morning (being ye 14th) at ye first drawing out ye tent, a great quantity of yellow choler gushed out and two or three sluffs, wth some tollerable matter at ye latter end, for ye evening only a little matter came forth. And ye like on Monday both morning and evening.

On Tuesday morning a great quantity of matter came forth, with many bags to ye number of at least 80, for ye afternoon little or nothing, and so also on Wednesday.

On Thursday morning we had a new flux, both of matter and skin, in ye afternoon nothing considerable.

A Friday a wax candle was put deep into ye abscesse, and after ye drawing it out some matter and divers sluffs proceeded, in ye afternoon nothing.

20. On Saturday morning and eveninge some matter followed and above 10 bags. The passage could not be found.

21. On Sunday a wax candle put in of four and three-quarter inches and there left until evening, then drawn out without matter.

22. Monday morning. No running: a sponge tent put in for ye afternoon ℥iii matter, bags above 20.

23. Tuesday morning. No running, ℥i of injection for ye evening--℥iii *or iiii injection*, part whereof wh. some matter came away and about 10 bags. About two hours after more came and so ye next morning, at my Lds. rising and about 10 bags at both times.

24 At ye dressing in ye morning, nothing came. Of injections ℥v. or vi., about three in ye afternoon a great flush brought away about 50 sluffs, whereof most were bags (but not red as formerly by reason of the injection) and some like jelly. At ye evening dressing no running. A glove thick spung tent left in ye orifice.

25. Morning. It ran of itselfe a little before dressing. Injection being made there came forth much thin digested looking matter, somewhat fœtid with about 12 bags, whereof one very large. A spung tent put in. In ye evening injection, which came away next morning before dressing wth four or five sluffs.

26. A Friday morning, injection was made & some thin matter came forth. A short spung tent put in: in ye afternoon some matter, but no sluffs.

27. Upon ye drawing out ye spung tent matter followed wth six or seven sluffs. Of injection being made whereof much stayed behind, in ye afternoon ye spung tent being pulled out, a great flush of matter followed, wth almost 20 sluffs. Of injection was made whereof a great part staid in. A hemp tent was put in. Some matter came out in ye night & left a yellow tincture on ye cloths.

28. Pulling out ye tent, some yellow matter came out wth three or four skins. A spung tent put in. The like issued in ye afternoon. Of injection was made & a flax tent put in.

29. It ran in ye night. Next morning after injection a flush of yellowish matter issued wth 18 sluffs. A spung tent put in, after injection, whereof a considerable part remained. In ye afternoon upon ye drawing out ye spung tent, much matter gushed forth, being somewhat fetid, with 12 or 14 sluffs and bags. On injection being made ye same came freely forth, tinctured with matter. A flax tent was put in.

30. In ye morning little matter came out, yellow tinctured, wth one or two skins. A spung tent was put in. For ye afternoon a little matter, wth two or three small sluffs. A flax tent put in.

July 1st. A Wednesday morning. After a second injection much yellow matter came forth wth three or four yellow sluffs, & at last a considerable quantity of whitish well digested matter came out. A flax tent put in. At ye pulling out whereof in ye afternoon some thin matter proceeded & after injection more but little discolored & only two sluffs. A flax tent put in. My Ld. complained of a little paine, lower towards his right side.

2. Upon ye opening on Thursday morning, some little

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[2] Jaundice.

matter came [illegible] wth one small [illegible] A spung tent put in, In ye evening little came forth, no bags. A spung tent put in wth one injection.

3. The spun[illegible] nshed out, without [illegible] after-ward five or [illegible] [illegible]quor. Injection was made and spung tent put in.

4. Saturday morning. Upon pulling out ye tent little proceeded. After ye putting in ye small catheter & injection made considerable quantity of matter issued. A spung tent was put in; for ye afternoon a large quantity of well digested matter came out. No injection made. A spung tent put in.

5. Yellow matter came forth with four or five sluffs, [illegible] siphon. After [illegible] fternoon being [illegible] well digested, [illegible] iphon. A few [illegible] put in. [illegible] phon were put forth, whereof three or four large ones. A hollow tent was put in upon ye pulling out whereof a sluff came forth, wth divers very little ones; more seemed to stop ye passage but could not issue, because ye thinner parts did run out before through ye hollow pipe. Neither did *injection* promote their coming forth, though some matter of a brownish colour came out.

7. Much yellow matter ran in ye night and some more this morning, with two or three sluffs Injection was made, whereof ye greatest part came forth. A spung tent was put in. At night a sluff stuck to ye tent at its pulling out & 4 or 5 more where 2 very yellow came afterwards No injection. A silver hollow tent put in.

8. It run very much in ye night, ye napkin was stained with yellow and green, one bag. A spung tent put in. In ye evening 4 or 5 sluffs, some matter. An open pipe put in.

9. Little run all night and sluff stopt ye pipe One or two more followed, a considerable quantity of atheromatous matter. At night two sluffs; very little atheromatous matter.

10[3] A great running through ye hollow pipe, two or three sluffs. The matter at last being whiter and more even than before. Much running till night. Some sluffs. Injection made and a hollow pipe put in, after most of ye injection was discharged After this a pain supervened in my Ld's back about ye region of his liver, & at night he vomited; and had a cold shivering; wh. seemed to proceed from somewhat too liberal diet that day & catching some cold

11.[3] After a little sweat in ye morning, my Ld. was better. He was not drest till ye afternoon: ye ulcer having very much discharged itselfe in ye meantime; wth some few sluffs.

12.[3] A little matter wth few sluffs. Injection made. A hollow pipe. At night run very little. Two sluffs.

13 Not drest in ye morning. Ran much. At night little matter, 2 or 3 sluffs.

14 It ran much yellowish gleet and matter in ye night. But upon ye opening no matter nor sluffs issued, though injection were made. At night one yellow sluff & a little good whitish matter.

15. In ye night it ran much yellow matter & about six small sluffs. Injection made. No meeting in ye afternoon.

16. Upon opening much running of yellow matter appeared, with 4 or 5 yellow sluffs.

17. A large flux of yellow liquid, wth 4 or 5 yellow sluffs, whereof two large ones sticking in ye pipe. Injection made

18 It had run somewhat copiously before dressing, wth ye ejection of one very small yellow bag. Injection being made brought forth some matter & a considerable quantity of very yellow liquor.

19. Little running before dressing, after it none, no injection.

20 Small quantity (?) of lesse yellow liquor run before dressing, 4 or 3 sluffs. Injection made.

21 Yellow liquor has continued running. No sluffs nor injection

22 Some pretty laudable yellowish matter came out upon dressing. Injection was made

23 A little matter issued upon coughing. No injection.

24 The like today

No injection.

From the long-standing character of the tumour and the character of the material which escaped—the innumerable bags—there can be no doubt that the disease was hydatids of the liver, [illegible] had, as is so often [illegible] e first instances on [illegible] The use of the sympathetic powder on the 10th, 11th, and 12th shows how strongly popular feeling had affected the profession.

Naturally, from the prominent position of the patient and the strange character of the disease, the case attracted unusual attention. The point that concerned Lord Shaftesbury himself most acutely was whether it was better to remove the silver drainage-tube or to keep it in. To get the opinion of the faculty on the subject, he sent, with Locke's assistance, a circular letter containing the following questions:—

"1. Which is most advisable, to resolve to keep it constantly open, or to heal it up as soon as conveniently may be?

2. Whether, if it be healed up at all, one of these two dangers is not like to follow; either a new collection of matter, the imposthume lying below ye orifice by which it vents itself, or a feaver upon stopping of so considerable an issue?

3. Whether if it be to be healed up at all it be not necessary to keep it open as long as any flux of matter comes through the pipe more than would be from an issue of the Depth and Bigness of ye pipe?

4. Whether the pipe that is now in be not of the fittest length and bigness to be worne constantly to keep it open.

5. Whether whilst it is best open it be not best to dresse it but once in two days, especially in cold weather?

6 Whether whilst it is best open it be convenient to use any Injection, how often & of what sort & to what purpose?

7 Whether if it be kept long open it will be in danger of growing in a worse condition than a simple issue of that depth, either by turning to a foule ulcer or a fistula or any other way, and if there be any such danger how to be prevented?

8 Whether the bare keeping in a Silver pipe will, without paine, keep it open as long as one pleases?

9 Whether I may travel in a coach, ride on horseback, boate, or use any such exercise safely with a pipe in of this length?

10 Whether if it be kept long open Nature will not in time so fortify the parts about the end of the Pipe as to make the danger it may bring by rubbing upon them in any exercise, very little or none at all?

11 Whether during the time it is kept open frequent purgeing be necessary and how often?

12. Whether if it should be kept always open it is not to be feared that a constant flux of matter from it, especially if it should continue to be of any considerable quantity, may very much weaken and emaciate the body, & how to be prevented." (Handwriting not Locke's)

To this circular there are among the Shaftesbury papers the replies of Locke, of Sydenham, of Glisson, of Sir George Ent, of Micklethwaite, of Timothy Clark, and of the Abbé Beaupreau of Angers, an eminent French physician. With the exception of Clark, who urged that the issue should be healed, the *opinions agree* in the main. They are too long to quote at length, but those of Locke and Sydenham are of sufficient historical interest to be given.

"*Consilium Abscessus* (*Locke*).

1 It is better to heal it up as soon as it may safely be done. [illegible] constant issue of that [illegible] collection of matter I think it will be

3 Convenient not only till the flux of matter be no more than may be well expected from a flesh issue of that depth, but after it hath gradually decreased to that small thing, it be kept open at least three or four months at what time soever the flux come to that low ebb, but if it happen after Xmas, as in the spring, that it be kept open till the beginning of the next winter, that the flux be constantly and warily observed, and that it be sometimes diligently searched, so that by these ways all the security possible may be had that there is not the least sore or hollow left

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[3] The sympathetic powder made use of.

preface is a sharp and stout defence of the new method, in which it must be confessed Locke does not spare the colleagues of his friend. "How much some of my own faculty have fomented and increased these reports, they themselves know, and with what design I leave it to their own consciences to tell them, only they must give me leave to say it would have become them out of common charity as good men, as well as out of an obligation to improve their art and save men's lives as physicians, upon the first intimation of an unusual method of curing so common a disease as this is, to have inquired more particularly of the way, observed the circumstances, and informed themselves of the events before they cried it down as dangerous and fatal, and frighted all that came within their reach from an enquiry into or trial of his method by the abhorrency they had given them against so bold and hazardous a practice." Evidently Sydenham smarted under the calumnies and misrepresentations and the preface speaks of "the greatest indignities beyond almost the sufferance of a man, and the endangering not only of my reputation and livelihood, but even my life itself." The article is chiefly valuable from the account which it gives of the steps by which Sydenham was led to adopt his cooling treatment. Neither dedication nor preface was ever used. The projected work did not appear and many years later the "Observationes Medicæ," which contained his matured experiences, was dedicated to Mapletoft and another preface was used.

V.—JOURNALS, LETTERS, AND COMMONPLACE BOOKS

A keen observer, a constant note-taker, and of most neat and accurate literary habits, Locke has left a large mass of manuscript, which has been carefully searched and sifted by Mr. Fox-Bourne, in whose Life, as well as in that by Lord King, there are many letters and extracts illustrating his work as a physician. The letters to Mapletoft about Lady Northumberland have been referred to. Of the journals those of his Holland sojourn, which are said by Fox-Bourne to contain much of medical interest, I have not yet seen. In the British Museum is a very characteristic journal in which one may follow Locke's medical work for the year 1679. It is bound with an *Ephemeris* or Calendar of the year. He was in Paris during the early months. As usual he was interested in bills of mortality and he states (Jan. 16th) that the deaths in Paris were from 19,000 to 20,000 a year. He makes a note to ask if the deaths of Quakers, Anabaptists, and Jews are recorded in London. On April 12th he comments on the handbills set up about town with a receipt to kill lice. There are many notes on the treatment of diseases and receipts, to the collection of which he seemed very partial. He queries whether the sympathetic powder could be of any use in dentium dolor, indicating that he still had a lingering belief in it. There are many notes on various topics and memoranda about books, &c. On May 8th he sailed from Calais. On June 4th are brief notes of a Mr. N., sick of a fever, whom he bled, and afterwards jaundice appeared. Notes on vomiting, diseases of the eye, icterus, hernia, hysteria, hypochondria, rheumatism, mania, and tussis occur in June. On August 18th he was sent for in consultation in the case of Mr. Beavis of Olanligh, Kent, and for the next six weeks the Journal is very full, containing a detailed account of the symptoms of Mr. Beavis and the treatment, many notes on the practice of Dr. Jacob, the attending physician, and a characteristic description of two attacks of fever with which he was himself attacked. Mr. Beavis had a long illness, possibly typhoid fever, and it was not until the end of September that Locke left for London.

The Bodleian Common-place Book with the Anecdota Sydenhami.—This is a small folio, bound in parchment, which originally contained 400 pages, of which 247 are torn out. Dr. W. G. Greenhill published a part of the manuscript in 1845 as "Anecdota Sydenhami," and the following extract from the preface may be quoted: "They are taken from a MS. in the Bodleian Library at Oxford (Rawl. C. 406), very neatly (and for the most part very legibly) written, apparently about the end of the seventeenth century. The name of the writer is not mentioned nor is anything known of the history of the MS., except that it once belonged to Dr. Richard Rawlinson and forms part of the collection of MSS. bequeathed by him to the University of Oxford about the middle of the last century. At the beginning of the volume (of which about two-thirds have been torn away) are these words: 'Extracts of Sydenham's Physick Books and some good Letters on Various Subjects.' This is the whole of the *external* evidence respecting the genuineness of the following Anecdota; and perhaps, if there were nothing more to say in their favour, it might be doubted how far the editor was justified in giving them to the world under the sanction of the name of Sydenham: the *internal* evidence, however, is much more conclusive, and indeed to his own mind perfectly satisfactory. The writer professes to have been acquainted with Sydenham himself, and to have originally written the following Notes, partly from his dictation in the years 1682, 1683, and partly from some of his MSS. written chiefly in 1670. These Notes he appears to have revised and written out correctly in their present form *after* 1685 (as he refers to the edition of Sydenham's Work published in that year), and (if the editor's conjecture at p. 69 be correct) *before* 1692, as that is the date of the first edition of the *Processus Integri.*"

Apparently it was not until Mr. Fox-Bourne examined the manuscripts that it was recognised as belonging to Locke, whose handwriting is most distinctive. While largely made up of extracts from Dr. Sydenham's physic books, the *excerpta ex ore Sydenhami* dated 1682–83; show the maintenance at this date of an intimate professional relationship between the two great men.

The other medical papers in the volume illustrate the wide scope of Locke's inquiries. There are statements about the Peruvian bark and the best methods of its preparation. But the chief interest after the Sydenham notes relates to a sort of collective investigation which Locke instituted on public health. He seems to have had a deep conviction that much good would follow a careful study of the bills of mortality. His circular letter contains the following inquiries (MS., p. 68): "1. What bills of mortality are kept in foreign countries, either as to the diseases of which persons die, or the number who die weekly or yearly in the most capital cities or towns of Europe or other parts of the world, as Paris, Madrid, Amsterdam, Venice, Hamburg, Rome, Constantinople, Smyrna, Dublin, Edinburgh, &c., as also in New England, Barbadoes, Jamaica, and other Plantations. 2. The aire of different countries, with the temper and alteration of the same at the different seasons of the year, and the diseases those countries are subject to and the time when. 3. The opinion physicians have of Jesuit's bark, and the best account they can give of it. 4. The esteem which physicians have had of Dr. Sydenham and his works. 5. The order observed in foreign countries as to physicians, surgeons, apothecaries and herbalists for the improvement of travellers and young students."

There are answers from several correspondents. Dr. Willoughby of Dublin (April 17th, 1691) gives a tabular account of the bills of mortality between 1682–90 (inclusive), and a description of the air of the country. He speaks of the Peruvian bark as "the only specific I know in nature." Of Dr. Sydenham he says, "he has been very honest in rescinding from Physick all the unnecessary pomp of alteratives and preparatives and reducing it to the use of the grand remedies which in Physick do justly fill both sides of the loafe." In another place is an account of Dr. Willoughby's proposal for the improvement of agriculture in Ireland, the important part of which was that every proprietor who will not improve his waste land shall make over four-fifths of it to the Crown. There is a brief statement of the Amsterdam bills of 1691 and 1693, and an account of Dr. Bett's proposal to the Lord Mayor for the improvement of the returns in London. There are letters from James Young of Plymouth about various diseases, and one from Dr. Eales (?) giving an account of Dr. Morton's books, in which "he has improved the hints of our good friend the great Dr. Sydenham admirably well." Dr. Patrick Dun sends a full statement about the mortality bills of Dublin, and pp. 93 to 96 of the MS. contain *in extenso* the death-rates from Jan. 1695 to April, 1698. Pages 110 to 357 are torn out, but from the index, pp. 369–371, we can glean the contents of the missing leaves—books whose authors are unknown, "books to be wrote," and "books wrote in defence of the murder of King Charles I," with a long list of the authors, and about the "*Eikon Basilike*" and the various controversies upon it, extending from pp. 199 to 236.

Though qualified and deeply interested in both the science and the art of medicine Locke never became, as Fox-Bourne says, "in any orderly way a physician." Until he left England in 1683 "he was still waiting for an opportunity of devoting himself steadily to his favourite occupation. He was still generally spoken of by his friends as Dr. Locke, and he still regarded himself as before everything else a doctor." Hereafter questions of philosophy, finance, education, trade, theology, &c., occupied his busy life, but through it all, and to the very end, there are references in his letters and journals to show that his first love was not forgotten. In the memorable and oft-quoted letter to Dr. Thomas Molyneaux in praise of Sydenham's method, Jan. 20th, 1692-93, he speaks of himself as one who wishes well to the practice of physic "though he meddles not with it," yet in the same year we find him prescribing for a friend's wife. In 1694 he is corresponding with Dr. Hans Sloane on medical matters. In January, 1697-98, King William consulted him, believing that they suffered with similar diseases. In 1701 he writes again to Sloane about a patient with an obstinate fever, and in the following year he gives very wise advise to his old friend Lomborch, who was ill. Evidently Locke's clear, strong judgment was valued by his friends in all relations of life, and as Somers and other politicians turned to him for instruction in questions of trade and finance so his friends and others insisted upon utilising his medical knowledge. Sydenham, Boyle, Thomas, Mapletoft, and Molyneaux had been his intimate associates. In Montpellier, in Paris, and in Holland he had been a welcome guest in medical circles, and in London we have met him in consultation with the most eminent practitioners of the day upon a most important case and handing in a written opinion as their colleague and equal.

For each one of us there is still a "touch divine" in the life and writings of John Locke. A singularly attractive personality, with a sweet reasonableness of temper and a charming freedom from flaws and defects of character, he is an author whom, liking at the first acquaintance, we soon love as a friend. Perhaps the greatest, certainly, as Professor Fowler says, the most characteristic, English philosopher, we may claim Dr. Locke as a bright ornament of our profession, not so much for what he did in it, as for the methods which he inculcated and the influence which he exercised upon the English Hippocrates. He has a higher claim as a really great benefactor of humanity, one of the few who, as was so finely said of Isocrates, "reflected the human spirit always on the nobler side." One of Locke's earliest writings was a translation for Lady Shaftesbury of Pierre Nicole's Essays, in one of which, on the "Way of Preserving Peace with Men," Locke seems to have found a rule of life which I commend to you: "Live the best life you can, but live it so as not to give needless offence to others; do all you can to avoid the vices, follies, and weaknesses of your neighbours, but take no needless offence at their divergences from your ideal" (Fox-Bourne)

The Hunterian Lecture

ON

THE CLINICAL STUDY OF HEART DISEASE.

Delivered before the Hunterian Society on Oct. 10th, 1900,

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GENTLEMEN,—The great man whom your society commemorates had made many observations on the vascular system in men and in animals, some of which are preserved in his interesting "Treatise on the Blood, Inflammation, and Gunshot Wounds," written in 1793. He describes a patient who from boyhood had suffered from shortness of breath, palpitation, attacks of venous engorgement, and irregular action of the heart, and who died from dropsy. Post mortem John Hunter found the aortic valves to be thick, hard, and contracted, and he remarks: "This diseased structure of the valves accounts for every one of what may be called his original symptoms, and was such as to render them [i.e., the valves] of very little use; the blood therefore must have fallen back into the cavity of the ventricle again at every systole of the artery." He discusses whether this state of the valves was a natural formation or a disease, and points out the wide effect on the circulation of such a condition. "It may be difficult," says Hunter, "to account for the increased size of the heart, whether it was a mechanical effect, as the blood would be thrown back into it at every systole of the aorta and diastole of the heart, or whether it arose from a particular affection of that viscus. The first idea is the more natural, but it is not necessary that the cause should be of this kind, for we see every day enlarged hearts where the symptoms have been somewhat similar, and yet no visible mechanical cause existed, and indeed it is a common effect where there is an impeded circulation." The account shows us how far a case of heart disease was understood by Hunter, and his views may be taken as the most advanced of his time. He had perceived how valvular disease led to palpitation, shortness of breath, venous engorgement, and dropsy, and he suspected, but was not sure of, the causal relation of aortic valvular disease to hypertrophy of the left ventricle. He was clearly not familiar with affection of the aortic valves as a very common disease; he does not seem to have considered whether the mitral orifice admitted regurgitation, as it very likely did in such a case and in some of the other examples of hypertrophy which he mentions; he knew nothing of the association of renal disease with hypertrophy of the left ventricle; and of course he was unacquainted with the method of ascertaining valvular disease by auscultation of the heart.

Hunter gave all the time at his command to the original observation of nature and did not pay much attention to the books of the past or of his own time. He had probably never read the account of an enlarged heart in which extensive disease of the aortic valves was found post-mortem which Dr James Douglas had given in the "*Philosophical* Transactions" for 1716. Douglas had heard during the patient's life a loud sound proceeding from the cardiac area, the systolic murmur of aortic stenosis with which we are all perfectly familiar. Had Hunter read this observation and considered it in relation to his own observation on disease of the aortic valves it does not seem improbable that he might have anticipated part of Laennec's subsequent discovery and have initiated the auscultation of the heart and elucidated the meaning of valvular murmurs. Douglas has not, I think, received sufficient honour for his remarkable observation. He was a man of great ability, great industry, acute observation, and extensive learning. He died in 1742 and left behind him numerous medical, pathological, and anatomical observations[1] of a high order, some botanical works of interest[2] and an admirable bibliography and summary of all anatomical writers from Hippocrates to Harvey.[3] He merits the honourable commemoration which he receives whenever the fold of Douglas is mentioned. The human body, a nobler structure than any temple made with hands, is a kind of Westminster Abbey for the first centuries of anatomists. There Willis, Fallopius, Malpighi, Tulpius, Lower, Wharton, and Glisson all have their monuments, more suitable to their work and more to their own taste than any "storied urn or animated bust." Douglas well deserves his place in that *temple of fame*. With regard to diseases of the heart we feel that we know a great deal more than he did, much more even than John Hunter did. Vast have been the additions to knowledge in that subject since Hunter's century. Dr. Mead was the most famous physician of London in Hunter's childhood, and in his medical writings all he has to say about heart disease fills only two small pages. We have at our disposal works on heart disease the titles alone of which fill 92 large pages with double columns of the catalogue of the Surgeon General's Library at Washington, that admirable aid to study which we owe to the organising skill and indefatigable industry of Dr. Billings. Notwithstanding this vast accumulation of knowledge in the hands of the medical profession of to-day, difficulties still exist in relation to heart disease and errors are committed which we should all wish to avoid. Much as is known many cases are hard to make out and difficult to treat.

I propose to discuss a few of the questions which from

[illegible] Transactions, Nos. 345 to 350, vols. xxv., xxvii., xxix.,
[illegible] ription of the
[illegible] 'e ferens, 1727.

this opening, after the contents had been sponged out, the mucous membrane was examined systematically, that lining the anterior wall of the stomach being pressed into the opening from the front and that on the posterior wall being brought into view bit by bit by the fingers of the left hand, which were passed through the rent in the great omentum. The only part which could not be seen was the neighbourhood of the cardiac orifice, and this was brought into view without difficulty by means of a full-sized vaginal speculum passed into the opening. Two small superficial ulcers were discovered on the posterior wall, nearer the cardiac end than the pylorus. They were triangular in shape when seen through the speculum (this may have been due to tension upon their margins), with steeply cut edges, only involving the mucous membrane and bleeding freely when touched. Silk ligatures were passed in two directions underneath these ulcers by means of curved needles and tied so as to strangulate the base; and as nothing else could be found the wound in the stomach was closed by means of a double set of silk sutures, the sponges were withdrawn, and the abdominal opening was secured with silkworm gut. Recovery was uneventful except for the persistence of vomiting. This was very severe and very painful for the first 36 hours and continued once or twice a day for the first 10 days, when it ceased altogether. On one occasion, some days after the operation, a small quantity of blood was brought up, but it seems to have preceded the vomiting, and it was not certain that it came from the stomach. The patient was allowed to have peptonised milk and the yelk of an egg on the second day after the operation, but no solid food was given until the abdominal wound was completely sound. She left the hospital on Jan. 6th, 1900, when she was free from pain and sickness and had been on ordinary diet for some days.

CASE 2.—This was the case of a woman, 34 years of age, who was admitted into the London Hospital under the care of my colleague, Dr. F. J. Smith, on Feb 9th, 1900. The patient had vomited blood for the first time on Feb. 5th; the quantity was said to be half a pint. This was repeated on the same day, once again on the 6th, twice on the 8th, and once on the 9th, the quantity on some of these occasions being undoubtedly very considerable. The motions were black. There was no history of dyspepsia or of vomiting after food. There had been a certain amount of pain in the abdomen during the last fortnight, but it was vague and not localised, and was not made worse by food. The abdomen was not tender. The patient had never vomited blood before, but about a year ago her stools had been very dark for some days. She was much blanched and the pulse was 132. The day after admission the patient vomited again, bringing up 10 ounces of almost pure blood; and as it was clear that further delay would be dangerous Dr. Smith very kindly transferred the case to me. An operation similar in all essentials to that already described was performed on the evening of Feb. 10th. One very small bleeding point was found on the posterior wall of the stomach near the pylorus. It could scarcely be called an ulcer, but as the edges were ecchymosed and blood could be seen oozing from it it was sutured in the way already described. The wounds in the stomach and in the abdominal wall were closed with as little delay as possible and three pints of saline fluid were transfused into the median basilic vein. The patient vomited twice in the course of the night, bringing up a certain amount of coffee-ground material but no fresh blood. After that there was no further trouble. Owing to the great previous loss of blood convalescence was slow, but the patient rallied well as soon as she was placed upon ordinary diet, and she left the hospital four weeks after the operation.

CASE 3.—This case had a more chequered history than the other two. The patient was a man, 42 years of age, who had been an inmate of another hospital five years before, suffering from pain after taking food, vomiting, and loss of flesh. He recovered from this, and continued well until seven months before admission, when the old symptoms returned with, in addition, hæmatemesis and melæna. There was considerable tenderness and pain in the epigastrium, but no lump could be felt. Laparotomy was performed on May 29th, 1900, with the view of ascertaining whether there was a malignant growth. Nothing was found and the abdomen was closed. On recovering from the anæsthetic the patient began to vomit blood; and as this continued through the night without there being anything to account for it, on the following day the abdomen was re-opened, the stomach was drawn into the wound, packed round with sponges, and opened in the same way as in the two former cases. The stomach was very large, the mucous membrane was closely folded upon itself, and for a long time the source of the bleeding could not be found; but at last, on introducing a vaginal speculum, a large irregular surface upwards of one and a half inches in length was found at the cardiac end. Blood was pouring from it freely. The surface was covered with granulations and was very uneven. The edges were well defined but not steep. The muscular coat did not appear to be exposed. An attempt was made to ligature the tissues of the base by means of silk sutures passed underneath them from the mucous surface, but the silk cut through at once and only made the bleeding worse. After two or three attempts, as the patient's condition was not such as to make it advisable to prolong the operation more than was absolutely necessary, I determined to ligature the whole thickness of the wall. Fortunately, there were no adhesions on the serous side. A hand was introduced into the peritoneal cavity, the ulcerated portion of the stomach wall was invaginated into the interior by pressure applied upon the serous surface, and a silk ligature was tied as tightly as possible around the base of the invaginated cone. This controlled the bleeding at once. Three Lembert sutures were inserted across the puckered spot on the serous surface to safeguard it when the strangulated portion came away, and the incisions in the stomach and in the abdominal wall were closed as rapidly as possible. The patient was a good deal collapsed but rallied well. A small quantity of altered blood was vomited the same night, and the first stools that were passed were dark chocolate in colour, but there was no sign of any fresh bleeding, and everything went on well for 15 days. Then the patient was sick after taking some chicken, and two days later he was sick again, bringing up a considerable quantity of blood. This was followed by severe collapse, so that strychnia had to be freely given hypodermically. Three days later he was sick again, but brought up no more blood; and after that he began to improve rapidly. There was no more vomiting or pain on taking food. A fortnight later the patient was placed upon a diet containing minced meat, and a few days afterwards he left the hospital, apparently perfectly well. Whether the hæmatemesis a fortnight after the operation was due to the separation of the strangulated portion of the stomach wall or to the presence of another ulcer which had been overlooked at the time of the operation it is impossible to say, but the rapid recovery and the freedom from pain make me incline to the former view. Still, it must be remembered that ulcers are multiple in no less than 13 per cent. of the cases examined post mortem.

It has been estimated that hæmatemesis only proves fatal in 4 per cent., or at most in 5 per cent., of the cases in which ulceration of the stomach is diagnosed, and it might, therefore, be thought that such an operation as the one which I have described would be very rarely required. But though hæmatemesis may not actually prove fatal of itself it not unfrequently places life in serious danger and still more often it creates such a feeling of apprehension as to destroy all pleasure in life. It is not unreasonable, therefore, to think that if this operation could be shown to be unattended by any great amount of risk there are many people who would prefer the chance of an immediate and perfect cure to months, and even years, of comparative starvation with the possibility of sudden death always before them and at best a doubtful hope that recovery will ever be perfect. I am aware that the mortality attendant on operation for acute hæmorrhage has been estimated by Mr. Mayo Robson in his recent lectures at 64 per cent., but these figures admit of an obvious explanation and they merely illustrate the fallacy of statistics. As a matter of fact, the stomach, owing to the thickness of its coats, stands suture better than any other portion of the digestive tract, and if only cases are operated upon at a sufficiently early period, and not when they are *in extremis* or when the wall of the stomach has become extensively thickened and adherent, there seems to be no valid reason why the mortality should be greater than that of interval operations in cases of inflammation of the appendix. I must not be understood to suggest operation in cases in which the amount of blood lost is not sufficient to be serious or in which there has been only a single attack of hæmatemesis; but when the bleeding returns more than once and is either so profuse as to place life in immediate peril or so continuous as to threaten a condition of dangerous anæmia, operation, with the view not only of stopping the bleeding once for all but of getting rid of the ulcer and of doing away with the possible risk of perforation, seems to me to offer a far better prospect than persistence in a form of treatment which has been tried and so far has not succeeded.

There are two points which deserve a certain amount of consideration. The first is the difficulty of finding the spot from which the bleeding comes. The second is the difficulty of dealing with it when it is found. There are two cases on record in [illegible] d for hæmatemesis and [illegible] been ascertained. In one of these an ulcer, described as being larger than a franc piece, was found later at the post-mortem examination. That it was overlooked is not a matter for surprise if it is taken into consideration how difficult it is, especially in an operation which may have to be performed against time, to inspect and to examine thoroughly the whole mucous membrane of the stomach through a narrow opening in its anterior wall and to unfold and open out every recess so as to make sure that no erosion can be overlooked In the other case no ulcer at all was found. This case does not stand alone; there are a considerable number of cases on record in which hæmatemesis has occurred and has proved fatal, not only without any ulcer, but without any lesion that could be detected post mortem, and this perhaps constitutes the greatest difficulty of all

A good many of these cases have occurred after abdominal operations. One case, following an abdominal exploration, happened in my own wards only a few days before my third case of hæmatemesis was operated upon The patient was a man, only 23 years of age. The complaint was carcinoma of the pelvic peritoneum. The operation was merely an incision two inches in length in the left iliac fossa and did not take more than 10 minutes altogether. The anæsthetic, which was A.C.E., was taken perfectly. The next morning, however, hæmatemesis set in and continued with such severity that death ensued within 48 hours, and at the post-mortem examination no lesion of any kind connected with the stomach could be found. There was no secondary deposit or ulceration. It is quite true that in these cases the other symptoms of gastric ulcer are usually wanting, but so they may be in the more acute forms of ulceration, the very cases in which hæmatemesis is most likely to occur and in which gastrotomy would prove of greatest service. In reference to this point I do not feel at all sure that the ulcer would ever have been discovered in my second case if the examination had been made post mortem and not during life In spite of the patient having been reduced by the loss of blood to such a condition as to render transfusion imperative the ulcer was so insignificant that it was only detected after a long search. It was a mere erosion and did not deserve to be called an ulcer, and I cannot help thinking how easy it would have been to have overlooked it altogether if the inspection had been made after death, when there was no blood escaping from it to act as a guide.

The question, I suppose, really turns upon what is meant by the phrase "ulcer of the stomach." Hæmorrhage may, of course, take place from the mucous membrane of the stomach, as it [illegible] without ulceration, and it [illegible] to prove fatal; but it is [illegible] t it can take place to this extent without a superficial rupture or erosion of some kind—so slight, perhaps, as to be scarcely perceptible post mortem when the bleeding has ceased, but distinct enough to localise the source of the hæmorrhage if seen during life and so to bring it within the range of surgical treatment. Certainly, given another case similar to the one which I have mentioned above of apparently [illegible] in spite of all ordinary [illegible] fatal, I shall not hesitate [illegible] eding comes, even if this does involve opening the abdomen a second time and incising the wall of the stomach.

The other difficulty to which I alluded is the treatment of the bleeding point when it has been found. All sorts of methods [illegible] a good many have been tried—exc[illegible] of the artery on one or both side[illegible] ace, the actual cautery, strangulat[illegible] sutures, ligature of the whole thickness of the wall drawn up into a cone, gastro-enterostomy, pyloroplasty, and even pylorectomy. Clearly no single method is available or even possible for all cases. Excision is probably the ideal one, but in any given case it is impossible to form a decision until the ulcer is seen and all the conditions are known. The locality of the ulcer, its size and dept[illegible] much inc[illegible] sions to neighbouring organs, all require to be taken into consideration, and it very rarely happens that anything but the most general information can be obtained about any of these points before the abdomen is opened. Even the character of the hæmorrhage gives no clue, for apparently it may be equally severe and dangerous, whether it is arterial, venous, or even capillary.

Wimpole street, W.

THE PROPHYLAXIS OF MALARIA AND THE DESTRUCTION OF MOSQUITOES IN THE ISLAND OF ASINARA.

BY PROFESSOR C. FERMI

AND

DR TONSINI.

(*Specially translated for* THE LANCET *from the "Annali d'Igiene Sperimentali,"* Vol. X., *Fasc. II., 1900.*)

As our readers may be aware, the island of Asinara, which is situated to the north of Sardinia, has the form of a figure 8 and it is only inhabited by convicts and by the staff of the lazaretto and of the penal colony. Before beginning the prophylactic experiments against malaria we considered it essential to study the topography of the island minutely and to compile a map indicating the following points: (1) the localities which are affected by malaria of grave or of mild type; (2) the localities where water exists either perennially or temporarily, in a standing condition or running, potable or brackish; (3) marshes, cisterns, pools, wells, tubs, &c.; (4) the superficial area and depth of the various collections of water; (5) the temperature, flora (lemna), fauna (amphibians, aquatic insects, &c.), of such collections; and (6) the presence of larvæ of the culex and of the anopheles We were careful to compile the chart in the æstivo-autumnal season of the year.

The following are the results of our investigations. In the whole island of Asinara we found 11 malarious localities, six of which, with severe types of fever, lie in the southern portion facing Sardinia—namely, at Sant' Andrea, Castellaccia, Fornelli, Punta Lunga, Stagno di Santa Maria, and P Pagliaccia, and the remaining five, with mild forms of the disease, in the northerly part—namely, at Cala d'Oliva, La Reale, Secondo Periodo, Campo Perso, and Tumbarino. The total superficial water area in the malarial season varies between 600 and 700 square metres, only one-fifth of which belongs to the northern half of the island, while all the rest lies in the southern portion, which is much more malarious. With regard to these 600 or 700 square metres it is to be noted that about one-half consists of perennial collections of water, including about 400 square metres of marshes, of which there are nine—namely, one of 10, two of 13, two of 20, one of 30, one of 40, one of 100, and one of 200 square metres; about 50 square metres are formed by 36 wells, half of which depend on springs; there are besides one deep well, 13 tanks with a superficies of 20 square metres, and seven tubs with four or five square metres of surface. We found larvæ of mosquitoes in nine collections of water and none in the other nine All the seven tubs and a drinking-tank contained a great number of larvæ; in the tubs especially were numerous larvæ of anopheles, and in two of these filled with soapsuds we found many eggs of the culex. These last, though not yet hatched, were still alive, for they speedily emerged from the egg when placed in ordinary water, otherwise the larvæ did not live for more than 24 hours. We found aquatic insects in 506 specimens of water, and amongst [illegible] other coleoptera, and [illegible] the mosquito. [illegible] assed to the prophylactic experiments.

A *Destruction of the mosquito in its larval stage.*—The destruction of the larvæ [illegible] water throughout the i[illegible] method described in a [illegible] *Sperimentali*' (fasc I., 1900), entitled "The Liberation of a City from Mosquitoes" The process was commenced in June and was continued until the end of November. The drinking-tanks and the tubs containing larvæ were completely emptied every 10 or 15 days, good care being taken that the water was rapidly absorbed by the soil so as not to allow of the development of the pupa, which may take place even on moist ground.

B. *Destruction of the mosquito in its adult stage.*—This was done by means of a mixture of powder of pyrethrum, chrysanthemum, valerian, &c., and with the zanzolina of Celli and Casagrandi, and, in the dormitories of the convicts when we had nothing better, by chlorine gas evolved from chloride of lime by sulphuric acid.

C. *Protection of habitations against the mosquito.*—We instituted these experiments in the convicts' dormitories which are situated in the southern part of the island looking towards Sardinia. The two dormitories, which are of rectangular form and one storey high, are built side by side; each is provided with one door and from 10 to 12 windows placed at a height of one and a half metres from the ground, and each accommodates about 40 convicts The means used for protection against the mosquitoes consisted of strong resistant muslin tacked over frames fitted on the windows. Every morning regularly on the convicts leaving, any mosquitoes which might have found their way into the dormitories were destroyed. When the insecticide employed was chlorine the windows were opened after an hour or two, so that on the return of the convicts the dormitories might be quite free from both gas and mosquitoes. By a daily inspection of the cells and by questioning the convicts and guards we assured ourselves that the experiments were going on satisfactorily.

The results obtained were as follows. 1. The anopheles was almost never found in any of the dormitories, and the culex pipiens was much diminished in comparison with former years. 2. No case of primary malaria originating in the island was observed, for of the nine cases which occurred two came from Castiadas, one from Isili, and six were relapses. In the preceding year there had been 99 cases, of which 40 had been contracted in the island.

The island of Asinara both by its position and by the small quantity of water which it contains, by the absence of streams, and by the ease with which its convict population can be subjected to experimental conditions, lends itself in a unique and peculiarly suitable way to these experiments for the prevention of malaria, experiments which we mean to continue in the present year with the full confidence of then being able to present the first example of an entire country being freed from malaria by the destruction of the malaria-producing mosquitoes infesting it, and by the protection of the inhabitants against their infecting bites.

OPERATION v. TRUSS IN THE INGUINAL HERNIA OF CHILDHOOD.[1]

BY R HAMILTON RUSSELL, F.R.C.S. ENG.,
SURGEON TO THE MELBOURNE HOSPITAL FOR SICK CHILDREN.

AMONG the rather numerous contributions that have been made to the literature of hernia during the year 1899 there have been two that have come under my notice dealing especially with the questions propounded by the occurrence of inguinal hernia in children. At the Portsmouth meeting of the British Medical Association the subject was dealt with by no less eminent and experienced an authority than Mr. John Langton. I hope I may be pardoned for my undoubted presumption in placing in juxtaposition to Mr. Langton's authoritative utterance a paper read before the Surgical Section of the Inter-colonial Medical Congress of Australasia and published in THE LANCET of Nov. 18th, 1899, p. 1353, by myself, and I must in extenuation state the reasons that have impelled me to this course. In the first place I must point out the direct, I may even say the extraordinary, antagonism between the views held by Mr. Langton and those to which my own experience and reasoning have led me as set forth in the above-mentioned paper. The principles underlying the treatment of inguinal hernia in childhood that Mr. Langton advances as the result of his mature experience, together with the pathological reasoning that he incidentally introduces, display no new features. On the contrary, they constitute simply a confirmation of principles and methods that are time-honoured, so that I feel almost guilty of sacrilege in venturing to bring them into serious question. The effect of Mr. Langton's weighty pronouncement will without doubt be to disarm any lurking suspicions there may have been as to the rectitude of our established courses in dealing with hernia in childhood; my desire, on the contrary, is to re-arouse such suspicion and to stimulate rebellion. Mr. Langton's views may be stated as follows:—1. Hernia in a child may almost always be cured by a truss if sufficient skill and care be exercised, and some details are given as to the relation between the length of time the truss should be worn and the age of the patient. 2. Operation is, therefore, very rarely called for in children, and as additional reasons telling against operative treatment it is stated that the anatomical structures in the case of children are ill-suited to manipulation and that the sac is often difficult to find. 3. As to the mode by which continuous retention of the hernia brings about a "cure," this is not very clearly set forth, but it seems to me that a sort of veiled countenance is accorded to the popular superstition that the truss in some mysterious way causes obliteration of the sac through pressure. Now the whole argument hangs upon the truth or falsity of the proposition that inguinal hernia is curable in the large majority or even in a reasonable percentage of cases by the use of a truss, as Mr. Langton, in common with almost all authorities, states to be the case. To this proposition I must, with all deference, oppose a direct negative, and I cannot make it too sweeping and too strong. I say simply that (excluding very young infants) the use of a truss never cured a hernia yet and never will. To be explicit, by "curing" I mean not merely causing the hernia to keep up for an indefinite period—the essential feature of the "cure" must be the abolition of the hernial sac. The term "cure" is a misnomer when applied to any method of treatment that causes the hernia to disappear but leaves the sac still existent and ready at any time during the patient's life to receive the hernia again. What, then, is the explanation of the extraordinary error that has permeated the theory of inguinal hernia? Simply this: the remarkable mechanism of the inguinal canal has not been rightly understood and its significance has not been fully grasped; above all, the great fact of inguinal hernia has not been recognised—viz., that there is only one fundamental cause of oblique inguinal hernia, and that cause is the presence of a congenital sac in the inguinal canal. This statement is equivalent to a denial of the existence of any such affection as acquired oblique inguinal hernia. The practical significance of this fact and how far-reaching its effect must be upon the whole attitude of surgical science in respect of inguinal hernia is, I venture to say, a thing not generally apprehended. I have already dealt with this subject in another paper with considerable fulness, and I would ask any readers who do me the honour of considering this paper worthy of perusal to refer back to that paper, which is to be found in THE LANCET of Nov. 18th, 1899, p. 1353. On the present occasion I do not propose to recapitulate all the arguments that have already been adduced, but I think I see sufficient reason for telling the story again, and this time I shall treat it in a somewhat different way.

In my former paper I dealt with the subject of the etiology and treatment of inguinal hernia in the young in the customary formal way, beginning with the anatomy and physiology of the inguinal canal, passing onwards by stages of pathological reasoning and clinical observation to certain conclusions as to the right treatment of inguinal hernia in children—conclusions which are diametrically opposed to those that have always been and still are regarded as unimpeachable. On the present occasion I shall proceed in the reverse order, commencing with the operative treatment, deducing from the results obtained important conclusions as to the etiology of inguinal hernia, and finally the conclusion that the presence of a congenital sac is the sole cause of inguinal hernia, and that operative removal of the sac is the only treatment that is surgically sound. The adoption of this order in the treatment of the subject has the further advantage that it coincides with the order in which the evidence presented itself to me, and it will probably prove a convenient and effective plan for me to sketch briefly the history of my own experience in the treatment of inguinal hernia in childhood.

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[1] The arguments employed in this paper are not meant to apply to the case of very young infants.

It is now nearly five years since I first operated on a child by Bassini's method and I can remember my dissatisfaction at the end of the operation. I had incised the external oblique aponeurosis which was quite unnecessary; I had found the sac projecting through a relatively small opening,
bounded b
below, and
stitching th
happily no
when carric
integral factor in the permanent prevention of hernia. In a certain class of cases—viz., old-standing hernia where the inguinal opening is widely stretched and the musculature extensively damaged—suturing of the walls of the canal after Bassini's method is possibly both rational and proper when performed with full understanding of the purely temporary object the sutures are intended to serve, but as a routine m
manently fortifying
the hernia the mere
Since that first case I have never used any sutures whatever to the walls of the canal in children. I now began to operate with rapidly increasing frequency and was very soon struck with the fact that the inguinal herniæ of boys are with the rarest exception all alike, in that they are formed by the descent of bowel or omentum into an unobliterated portion of the processus vaginalis; while there is, I believe, no exception to the rule that the sac is congenital. Thus I have now operated 80 times, and of these I have no doubt
that 79 were funicular (either total or partial) a
was a non-funicular congenital sac. If I am ask
I know that all these sacs were funicular in
I answer, in the first place, that as soon as a
begins to operate as a matter of routine on
in children, instead of using the truss he w.
soon convince himself of the funicular origin
sacs by means of a host of coinciding points of e
Thus a certain number bear the unmistakeable b
funicular origin in a variety of markings, annular
ings, &c., due to attempted obliteration at those p
by some evidence of obvious relationship with the tunica vaginalis, and so on; while those that do not offer any such direct evidence will be found to be anatomically identical with those that do in their relationship to the cord. That all the sacs are of congenital origin and that none of them are acquired is furthermore proved by the results of operation. Now, if a surgeon operates on a case of inguinal hernia and he opens up the canal and removes the sac and fixes the stump somewhere and puts the cord in a position which he considers an improvement on that chosen by Nature, and he carefully stitches up the canal and keeps the patient in bed for six weeks and the hernia does not recur,—having done all these things he does not really know what the result is due to and he will therefore have learnt nothing as to the original cause of the hernia. His position will be that of the apothecary who puts into a "mixture" a drug for each ailment that he thinks his patient *may be* suffering from, so that when the patient recovers he is no nearer to a correct diagnosis, being unable to tell which, if any, of the drugs has effected the good result. If, on the other hand, the surgeon operates on a case of inguinal hernia, and he does nothing except ligature and remove the sac at the level of the internal ring, and he lets the patient get up in 10 days,—if then the hernia does not recur he knows exactly what he has done to cure the hernia and there can be no possible doubt as to the original cause of the affection. Simple removal of the sac having cured the hernia the conclusion that the sac must have been the sole cause of the hernia is irresistible, for had there been any factor other than the presence of a congenital sac concerned in the production of

have found that the whole number are caused by the presence of a congenital sac. I find, further, that of the 80 congenital sacs 79 were of funicular origin. It is, I submit, inevitable that from these facts we should deduce the following conclusions:—1. Inguinal hernia in young subjects is caused by the presence of a congenital sac and there is no other cause. 2. The sac is in the vast majority of cases an unobliterated portion of the processus vaginalis. 3. Acquired oblique inguinal hernia in the young has no existence in fact. 4. Seeing that oblique inguinal hernia cannot occur in the absence of a congenital sac there can be no recurrence after the sac has been efficiently removed. These conclusions have yet, however, to be passed through a mill of very exacting criticism, and on their behalf many objections, at first sight very formidable, have to be met. The first objection that will be advanced will be on the score of sheer *primâ facie* probability. Is it reasonable, it will be urged, to deny to the inguinal canal of all places the capability of becoming the seat of acquired hernia? Acquired hernia is common elsewhere, notably in the femoral canal, and also in the form of direct hernia through the external ring. It is liable to occur also with inconvenient promptitude in any portion of the abdominal wall that may have been incised. Is it likely that the

scrutiny of the mechanism of the inguinal canal. I must ask pardon for saying that a clear idea of this mechanism is by no means universally displayed by the multitude of surgeons who have written upon hernia, and even Lockwood, whose writings on this subject are surely of surpassing excellence, does not appear to me to make quite as much of it as I
made. I am not aware that
described quite so clearly as they are set forth in my own paper to which allusion has been made, and as I have nothing to alter in that description I will ask permission to reproduce it.

springs from Poupart's ligament, that the conjoined tendon fortifies the inner portion of the canal, and that the whole region receives support from its covering of external oblique aponeurosis, but the

abdominal viscera and a *vis a tergo* is required before any viscus can be

This, then, I consider the complete answer to the argument as to the improbability of the inguinal canal being immune from liability to become the seat of an acquired sac, based on the analogy of hernia occurring in other situations. There is no real analogy whatever. This remarkable automatic, self-regulating sphincter mechanism is the peculiar possession of the inguinal canal; it completely destroys any semblance of analogy with any other of the seats of hernia, and intelligent contemplation of it will go far towards converting our views as to the probability in favour of the inguinal canal being sometimes invaded by an acquired sac into something very like a dead certain conviction that in the face of such efficient protection it never can be so invaded.

The second objection that has to be met deals with my fourth proposition, which is to the effect that hernia cannot recur after the sac has been efficiently removed. To this statement will be opposed the seemingly unanswerable argument that hernia has recurred often enough after operations in which removal of the sac was a feature. I have

TABLE OF 15 CASES OF DIPHTHERIA TREATED WITH SALINE INFUSIONS.

Case.	Age.	Antitoxin.	Saline infusion. Injections.	Saline infusion. Amount.	Remarks on case.	Complications and sequelæ.	Number of days in hospital.	Result.
1	5½ years.	12,000 units.	4	20 ounces.	Great fœtor with spreading membrane.	Suppression of the urine.	3	Death.
2	4 ,,	9,000 ,,	3	15 ,,	Profuse epistaxis.	Scarlet fever 18 days after admission.	98	Recovery
3	4½ ,,	15,000 ,,	2	25 ,,	Very severe attack with "bull neck."	Macular rash on the fifth day; paresis of the lower limbs.	73	Recovery.
4	1½ ,,	12,000 ,,	3	26 ,,	Extreme restlessness; sleep after infusion.	Abscess on the seventh day; rash on the third day; cardiac vomiting and failure.	17	Death.
5	5 ,,	15,000 ,,	4	36 ,,	Much discoloured membrane; great swelling.	—	Transferred to the Convalescent Hospital.	Recovery.
6	2 ,,	9,000 ,,	3	20 ,,	Hæmorrhagic.	—	2	Death.
	5 ,,	18,000 ,,	2	20 ,,	—	—	3	Death.
8	2½ ,,	15,000 ,,	1	9 ,,	—	—	1	Death.
9	4 ,,	12,000 ,,	2	22 ,,	Profuse epistaxis continuing till death.	—	7	Death.
10	9 ,,	15,000 ,,	2	24 ,,	Great restlessness relieved by infusion.	Broncho-pneumonia on the sixth day.	8	Death.
11	7 months.	9,000 ,,	2	6 ,,	Faucial and nasal.	—	52	Recovery.
12	3 years.	15,000 ,,	3	20 ,,	Much membrane; severe continuous epistaxis.	Cardiac vomiting from the fifth to the eleventh day; diaphragmatic and laryngeal paralysis on the thirtieth day. Paresis of the lower limbs.	63	Recovery.
13	4 ,,	9,000 ,,	3	33 ,,	Much membrane spreading; great fœtor.	Ocular paralysis on the thirty-fourth day.	Transferred to the Convalescent Hospital.	Recovery.
14	2 ,,	9,000 ,,	4	24 ,,	Spreading discoloured membrane.	Rash on the second day; general paresis.	62	Recovery.
15*	6 ,,	15,000 ,,	2	23 ,,	Much membrane; fœtor; delirium; hæmorrhagic.	Abscess on the eighth day. Cardiac vomiting from the thirty-second to the forty-first day. Diaphragmatic paralysis on the thirty-fifth day; general paresis.	98	Recovery.

* This patient was under the care of my colleague, Dr. Densham, after the first week. During the vomiting stage she was given saline infusions on several occasions with marked benefit.

15 patients seven died, while eight recovered after a convalescence more or less eventful. Of the seven fatal cases six patients died during the acute stage. In three cases the patients developed the usual symptoms of heart failure; one patient died on the seventeenth day, the other two recovering after a prolonged period, during which paralysis of the diaphragm occurred.

Of course no definite conclusion may be drawn from the results of only 15 cases, although these were chosen from a large number of admissions as being of the severest type and therefore most likely to develop cardiac paralysis. Nevertheless this treatment appears so far to have some influence in diminishing both the frequency of onset of symptoms of heart failure and their severity when they do occur. Further experience is, however, necessary before one may dogmatise.

As in the case of antitoxin treatment the results will probably be the better the earlier the patient is admitted to hospital, and on this account I have endeavoured in all cases to complete the infusion by the second day after admission.

Two of the patients developed an abscess at the site of injection. This, though a high rate, must be considered, I think, as more or less accidental, and in dealing with a large number of cases the occurrence of an abscess after saline infusion would be probably not more frequent than is the case after injection of antitoxin alone. In neither instance did any ill effect follow and after evacuation of the pus healing rapidly took place.

My best thanks are due to Dr. Birdwood for permission to publish this paper and to my colleague, Dr. W. A. Densham, for permission to make use of Case 15.

Hither Green, S.E.

THE VALUE OF ANTI-STREPTOCOCCIC SERUM.

BY GERALD S. WALTON, M.B., C.M. EDIN.

A RECENT number of THE LANCET contains some depreciatory remarks about anti-streptococcic serum by Dr. Ranken Lyle.[1] Scepticism is a virtue, but it may be carried to an extreme, and what I fear is that some medical men after reading Dr. Lyle's paper may put its scepticism into practice and never use the serum again. I venture to think that such ultra-rationalism will every now and then meet with its own reward in the shape of a lost case. I have not the slightest hesitation in saying that in the two cases which I am about to describe the result was no mere coincidence, such as Dr. Lyle wishes to suggest, but that it was a genuine remedial action on the part of the serum only.

CASE 1.—A married woman, aged 20 years, a primipara who had been anæmic and ill-looking even before the birth of her child, was confined easily on August 10th, 1900. There were shock and depression of spirits and slight rise in the pulse and the temperature almost from the start. There was sepsis from the third day, when a small fœtid clot was passed. The milk was suppressed and the infant had to be weaned. The lochia were much too small in amount and were rather putrid, and the womb was flabby and tender. By the fifth day the temperature was 101·5° F., the pulse was 130, and the patient was weak and yellowish in colour.

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[1] "Puerperal Sepsis," THE LANCET, Sept. 29th, 1900, p. 925.

by a slight reaction, and on the next morning there was a distinct though slight improvement in the pulse, in the temperature, and in the general condition, which was [illegible]

[illegible] occurred after [illegible] time the im- [illegible] days and the [illegible] dropped to 100°. A relapse then set in, and by the sixteenth day the temperature gradually went up to 103°. On the next morning 10 cubic centimetres of the serum were injected into the right arm, the temperature then being 101·5°. In the evening a pleuritic catch was complained of and was detected in the right lung and a little [illegible] The patient's temperature was [illegible] the same on the next morning [illegible] sodium salicylate. This caused profuse sweating and a rich crop of sudamina and brought down the temperature to 99·4°. The patient was then put on a mixture containing sodium salicylate and she was convalescent by Sept. 4th.

CASE 2.—The patient was a woman, aged 30 years, who was, curiously enough, of the same name as the patient in Case 1 but was not in any way related to her. She had been subject to "[illegible]" [illegible] e had another attack after [illegible] the case and the appearar[illegible] icate that she was right. She was very weak. On the second day of my attendance her temperature was 100° F. and her pulse was 108. There was a nasty dark slough which involved the tonsil, the uvula, and the neighbouring parts. The patient's general condition seemed precarious in the extreme and a swab and a bit of the slough were sent to the Jenner Institute of Preventive Medicine for examination; but without waiting for the report, as I judged the case to be septic if not diphtheritic, I injected 10 cubic centimetres of anti-streptococcic serum. [illegible] the pulse [illegible] although [illegible] the patie[illegible] temperat[illegible] strength, and her general condition was vastly improved. A report from the Jenner Institute came that day that diphtheritic bacilli had been found in the materials submitted for examination and she was consequently removed to the isolation hospital, where she continued to make satisfactory progress.

The serum used on all these occasions was supplied by Messrs. Burroughs and Wellcome. It is true that the patient in Case 1 eventually got well on sodium salicylate and that there was apparently a connexion between the third injection of anti-streptococcic serum and the smart attack of dry pleurisy which occurred, yet I was quite satisfied with the effect of the serum on the fifth and sixth days and I blame myself for not using it again till the sixteenth day. With [illegible] who was kind enough to [illegible] me out that the effect of [illegible] Even allowing that she was left in a weak state and that after leaving my hands she was further [illegible] days, I maint[illegible] which the c[illegible] Diphtheria in [illegible] I would suggest that in all cases a preliminary dose of anti-streptococcic serum should be given. I cannot think it judicious that such a powerful remedy—call it "tonic" if you will—should be lightly and flippantly cast aside.

Sutton, Surrey.

HOSPITAL SATURDAY.—Hospital Saturday was observed in London on Saturday for the twenty-seventh successive year, and special collections were made in many thousands of business houses and workshops on behalf of the hospitals and dispensaries. The method of street collection has been abandoned, but the regular "penny-a week" collection in the industrial establishments will be continued until the end of December, by which time it is hoped that the total for the year will not fall short of that raised in 1899—viz., £20,013. The result of Saturday's collection will be announced at the annual general meeting of the association to be held at the Mansion House on Oct 27th.

Clinical Notes:

MEDICAL, SU[illegible] [illegible] .ND

T[illegible]

A CASE OF ANTHRAX; EXCISION OF PUSTULE; RECOVERY.

BY EDWARD C. [illegible]

BACTERIOL[illegible]

I AM reminded by the case narrated by Dr. E. F. M. Neave in THE LANCET of Oct. 6th, p. 1012, of a somewhat similar one which occurred in my own practice.

I was consulted at 2 P.M. on Oct. 22nd, 1898, by a man whose business involved the handling of imported hides as received. He had upon his neck over the sterno-mastoid a swelling of a very suspicious appearance, dusky red, with a central depression surrounded by vesicles of small size, which he had noticed that morning for the first time. His temperature was above 102° F. and the appearances were altogether so unsatisfactory that I asked my friend Dr. C. Wenyon, who had seen several cases of anthrax in [illegible] me, and he was incline[illegible] so fully on the followin[illegible] extent increased in si[illegible] 104°. The patient bein[illegible] willing to submit to ope[illegible] three-quarters of [illegible] and removing everything down [illegible] and was then thoroughly cauter[illegible] undisturbed till the slough separated. The temperature fell on the same evening to 99·4°, and was normal on the following day, after which recovery was uninterrupted. The serum con[illegible] few bacilli, quite like those of anthrax, but I [illegible] yet had time to examine the pustule. Apart, [illegible] its perfectly typical appearance, a drop of [illegible] grees in the temperature within six hours [illegible], and the fact that the patient remembered having had a pimple on his neck, which he had scratched with his nail whilst engaged in examining hides, seemed to render any doubt of the diagnosis untenable. It seems a pity that the same treatment was not tried in the case which suggested this note.

No remedy is known to have any certain effect in this disease, whilst it seems probable that the toxic symptoms, in the human subject at least, [illegible] from a limited [illegible] *[illegible] facie* the trea[illegible] similar case I should certainly do the same again, except that I should do it at once

Old Kent-road, S.E.

A RARE CASE OF FRACTURE OF THE OS CALCIS BY MUSCULAR FORCE.

BY ROBERT THOMSON, M.D., M.CH. R.U.I.,

HONORARY SURGEON TO THE MARGATE COTTAGE HOSPITAL.

A WOMAN, aged 57 years, stood on a Windsor chair to reach some china from a cupboard. She had the china in her hand and was turning round to place it on a table close by when she got too near the edge of the chair, which capsized, and she was thrown to the ground. As her weight was overbalancing the chair her left foot, while remaining in contact with the seat, was forcibly and suddenly flexed. She was wearing a pair of ordinary [illegible] On examination some hours after [illegible] up the back of the left leg a [illegible] ankle. The tendo Achillis was felt ending in a hard moveable mass some five inches from the sole of the foot and between this mass and the os calcis was a considerable depression It was evident that the os calcis had fractured, the tendon remaining intact. The fragments could not be approximated. I cut down on the seat of the fracture and found that a piece of os calcis of about the size of half a walnut and corresponding to the area of insertion of the tendon had been wrenched off and drawn upwards. This could now, under anæsthesia, be easily brought down and apposed to the corresponding fracture surface on the os calcis. The fragments were retained in position by an encircling silver wire passed through the body of the os calcis and through the tendon at its attachment to the fragment. The wound healed by first intention and firm union of bone resulted. Free action of the joint was subsequently much delayed by an attack of melancholia, during which the patient would not leave her bed or permit of movements being made At the end of two and a half months, however, she could walk well.

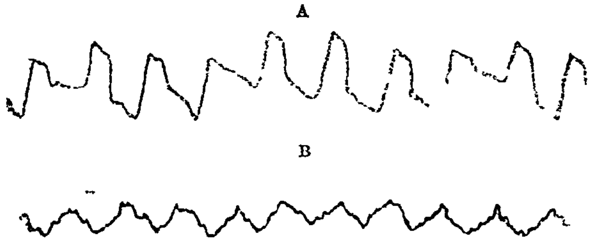
This patient presented no evidence of bone degeneration and had never sustained a fracture of any kind before. She was well nourished and had enjoyed good physical health. She is said to have had previous mental attacks. No obvious reason presents itself for the bone having fractured, instead of the usual rupture of the tendo Achillis under like circumstances, except it be the noticeable tendency of bone to fracture under slight provocation observed in some patients suffering from mental disease.

Margate

A POINT IN THE DIAGNOSIS OF ANEURYSM OF THE AORTA.

BY WALTER BROADBENT, M.D. CANTAB., M.R.C.P. LOND.

THERE are cases of aneurysm of the transverse part of the arch of the aorta which present as a slight pulsation in the second left intercostal space near the sternum before they have involved the recurrent laryngeal nerve, or the aorta may be pushed forward by an aneurysm of its posterior wall and give pulsation in this space. There are also cases where old phthisis of the left lung has caused exposure of the heart sufficient to give pulsation in the second left space. In both conditions the second sound is louder than normal over the pulsating area and it is difficult to make out any diastolic shock in the early pulsation of an aneurysm, though as a rule it is easy to distinguish the cardiac pulsation, since the whole surface of the heart is usually exposed and pulsation is continuous down to the apex beat. If a tracing of the pulsation be taken by a Marey's sphygmograph any doubt is at once cleared up, the arterial character of the tracing marking an aneurysm. The accompanying tracing (A) was taken from a man who had a cough and diminished air entry into the left upper lobe, and it was thought that he might be the subject of early phthisis. Subsequent paralysis of the left vocal cord and increase in the pulsation confirmed the diagnosis of aneurysm. A tracing (B) of the cardiac pulsation in the second left space from a case of old phthisis is added for comparison.



A, Pulsation in the second left space Small aneurysm of the transverse part of the arch B, Pulsation in the second left space in a case of old phthisis

Brighton.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of the society was held on Oct. 10th, the President, Mr. Christopher Heath, being in the chair. One new member was elected and the deaths of two members were reported. There were no fresh applications for grants. The death of a widow was announced. Applications for grants were read from the 47 widows, 12 orphans, and six recipients from the Copeland Fund now on the funds of the society, and it was resolved that £1187 10s. be given at the next court. It was also resolved that Christmas presents be given this year amounting to £531—£10 to each widow, £3 to each orphan, and £5 to the five receiving extra grants from the Copeland Fund. The expenses of the quarter were £61 5s.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

A CASE OF HYDATID CYSTS OF THE LIVER RECURRING AFTER AN INTERVAL OF TEN YEARS IN THE PLEURAL AND PERITONEAL CAVITIES; DRAINAGE; RECOVERY.

(Under the care of Dr. EUSTACE SMITH and Mr. J. F. C. H. MACREADY.)

ALTHOUGH hydatid disease is not so frequently met with in this country as in some other portions of the world, such as Australia, yet it is sufficiently common to cause us frequently great difficulties both in diagnosis and treatment The following case illustrates the value of the bile test when applied to the hydatid fluid as an indication that the cavity opened communicates with the liver. Even when it is difficult or impossible to obtain the bile reaction crystals of bilirubin may be found in the hydatid fluid by the aid of the microscope; this fact was first pointed out by Bristowe.[1] For the notes of the case we are indebted to Dr. J. G. Emanuel, pathologist to the General Hospital, Birmingham, and late resident medical officer City of London Hospital for Diseases of the Chest, and for a careful record of the clinical history to Dr. O. K. Williamson.

A married man, aged 24 years, was on May 11th, 1899, admitted into the City of London Hospital for Diseases of the Chest, under the care of Dr. Eustace Smith. The patient was suffering from shortness of breath which had been coming on and gradually getting worse and worse for about five weeks. Five weeks before his admission while at work the patient was seized with a sharp pain in the middle of the abdomen. As a means of getting relief he took some tea but vomited immediately and he then went home and from that day onwards had done no work, having felt too weak and his breath having been too short. For two weeks before admission he had had pains in the right side of his back. The past history of the patient showed that on the whole he had enjoyed good health but that on two occasions (July, 1888, and October, 1889) he had been an in-patient at St. Bartholomew's Hospital and that on each occasion he had had a hydatid cyst of the liver incised and drained. The patient had two abdominal scars (one in the right vertical nipple line and the other in the epigastrium a little to the right of the middle line) bearing testimony to the statement, and subsequent inquiry at St. Bartholomew's Hospital corroborated these facts. The first operation was performed 11 years ago (in July, 1888) and the second operation a year later (in October, 1889). At each operation a hydatid cyst with daughter cysts was found, incised, and drained. After the second operation the patient left the hospital (in December, 1889) and had enjoyed good health since till five weeks before his admission to the hospital.

On admission the patient was found to be a pale, thin, red-haired man, sitting up in bed with a good deal of dyspnœa and the alæ nasi working. The pulse was 120, the respirations were 36, and the temperature was 102° F. The physical signs pointed to a large amount of fluid in the right chest; the heart was displaced outwards to the left (the maximum cardiac impulse being in the fifth space and in the anterior axillary line) and the liver was displaced downwards (the lower edge being three inches below the costal margin in the right vertical nipple line). The left lung was clear except for a few scattered sibilant rhonchi The heart sounds were normal. The urine was free from albumin. In the abdomen there was bulging of the right hypochondrium corresponding to the displaced liver. The tongue was clean, the appetite was poor, [illegible] The patient had been sleeping badly previously to his admission.

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[1] Transactions of the Pathological Society of London, vol. iv.

On the evening of the patient's admission (May 11th) an exploring needle was put into the right chest in the eighth space in the scapular line and a syringeful of quite clear greenish yellow fluid loaded with albumin was obtained. On the following day, the dyspnœa having shown no signs of improvement, the right chest was tapped at the site of the exploratory [illegible] used. Failing, ho[illegible] was resorted to and eventually there were drawn off 38 ounces of [illegible] gravity of [illegible] quantity of [illegible] ent which [illegible] pus cells, granular débris, and cholesterin. No hooklets were found. The aspiration gave marked relief to the patient and he passed a good night. On the next morning (the 13th), however, he had a rigor, the temperature rising to 104·2°. On the 14th the evening temperature was 103·8° and as the patient showed evidence of sepsis it was decided to resect at the site of the aspiration puncture and to drain the pleural cavity. On the morning of the 15th the patient suddenly coughed up in the course of a few minutes about eight ounces of offensively smelling purulent greenish yellow fluid. Up to this date he had only had a slight cough accompanied by a little mucoid expectoration which had not attracted much attention, but from this time onwards the cough became troublesome and the expectoration purulent, considerable in amount, and offensive.

On May 16th the patient was anæsthetised and Mr. Macready resected a portion of the tenth rib in the right axilla. A needle put into the underlying membrane revealed pus. The membrane was then incised and there escaped a *large quantity of opaque greenish yellow* fœtid smelling purulent fluid together with some gas and a very large number of hydatid daughter cysts of various sizes. On inserting a finger into the now empty cyst a second tense membrane was felt presenting towards the wound and fluctuation could be obtained between a hand placed on the abdomen and a finger on this membrane. A needle inserted into this membrane again revealed offensive pus and so, having fixed the membrane to the edges of the wound with a couple of stitches, an incision into it was made and there escaped another very large quantity of fluid similar to that from the first cyst and containing similar daughter cysts in great numbers and of various sizes. The total quantity of fluid from the two cysts measured after the operation was seven and a half pints, but this did not express the total volume of the cysts, as a good deal of fluid was lost at the time of operating. The patient's breathing became easier almost immediately and the bulging in the abdomen caused by the liver disappeared. Two drainage tubes were inserted into the now empty cyst cavities. The wound was dressed daily and there was constantly a free discharge into the dressings. The cough remained troublesome and the expectoration free and highly offensive.

After this operation the patient in some respects improved and in others grew worse, for while his breathing became much easier (the maximum cardiac impulse being now in the fifth space in the vertical nipple line) his cough was more troublesome and distressing and his expectoration gradually increased in amount, rising to 10, 12, and 14 ounces per day, and was constantly offensive. His sleep also became seriously interfered with and he was obliged to assume the upright posture in bed both night and day. He was unable to lie on his back or on one side, for the instant that he attempted to do this a paroxysm of violent coughing would ensue accompanied by the expectoration of the offensive sputum. He was only able to sit straight up or to lean a little forwards and he accustomed himself to sleep with his head and arms resting on a cradle placed in front. The temperature remained high, rising to between 100° and 102° every night and the patient himself began obviously to lose ground. On four days (May 18th, 20th, 27th, and 29th) the sputum *was noted to contain some* bright yellow frothy material which gave the tests for bile. This led to the belief that the patient had another cyst in his liver which had ruptured through the diaphragm into the base of the right lung and was being coughed up. As the patient's condition was certainly getting worse further surgical help was indicated and it was decided to explore the liver in the hopes of finding this organ to be the seat of another cyst. [illegible] evacuation of the two pleural cysts) Mr. Macready performed a laparotomy and the liver was thoroughly explored and found to be adherent to the abdominal wall along the sites of the two old scars dating back to 1888 and 1889. In other respects, however, the liver appeared to be quite normal and so the wound was closed. While the patient was still under the anæsthetic a fluctuating swelling of about the size of an orange was palpated in the left iliac fossa. A needle inserted into this revealed offensive pus and accordingly it was carefully incised and about eight ounces of very offensive opaque brown fluid were evacuated similar in character to that evacuated at the previous operation from the pleural cavity but containing no daughter cysts. This abscess cavity was definitely shut off above by adhesions and certainly had no connexion with the liver. Below it extended downwards and inwards into the pelvis passing beyond the reach of the finger. This was undoubtedly a circumscribed suppurating hydatid cyst in the peritoneal cavity. Into this now empty cyst a drainage-tube was inserted. Subsequently it was dressed daily. The laparotomy wound healed by first intention, although it lay midway between two pus-discharging wounds—one in the right axilla where the pleural cysts were draining, and the other in the left iliac fossa where the peritoneal cyst was draining. The administration of the anæsthetic during the operation was rendered exceedingly difficult and unpleasant owing to the almost incessant coughing and expectoration of filthy yellowish offensive sputum.

The result of this operation was exceedingly unsatisfactory, because although the patient was to a certain extent relieved by the evacuation of the pent-up pus in the left iliac fossa the serious and distressing symptom which it was sought to relieve—viz., that of being unable to lie back or on either side without bringing on a violent paroxysm of coughing accompanied by offensive expectoration and obliging the patient to pass his days sitting upright and his nights leaning forwards on a cradle—was in no wise improved, and in addition he had a wound in the abdominal wall five inches in lengt[illegible] been explored, another wound i[illegible]er in the left iliac fossa, the two [illegible] The temperature continued to rise every evening to about 100° and the expectoration measured three, four, or five ounces of pus a day. Dr. Emanuel was confident, however, that the patient had another cyst communicating with his liver and his right lung, because he still continued at times to expectorate bile in his sputum. This hidden cyst further communicated in all probability with the thoracic wound which was draining the two cysts incised at the first operation on May 16th, as on many occasions the discharge from the wound contained bile and sometimes in considerable quantities. In the hopes of finding this troublesome cyst the right chest was explored with an exploring needle in different places without *success. On the afternoon*, however, of June 12th a long exploring needle was passed inside the wound in the right side of the thorax in a direction forwards and inwards and at a distance of five and a half inches from the surface of the chest, Dr. Emanuel came upon a hard bulging wall through which he pushed the exploring needle, using some considerable amount of force, and went into what gave the impression of being a cavity. From this he withdrew pus, which was offensive and similar in character to that which the patient had been expectorating. A director was then passed along the needle, and along *this director* a blunt-pointed bistoury, and a crucial incision was made in the wall of this the third thoracic cyst. 19 ounces of pus escaped and a drainage-tube was inserted. The patient immediately felt more comfortable and was able to lie down on his back and have a good night's rest; he had not been able to lie in a recumbent position for just three and a half weeks. After this he continued to sleep well and in a natural posture and coughed up no more of the yellowish offensive material till June 14th, when he again began to feel uncomfortable, not being able to lie down without the occurrence of a paroxysm of coughing. A careful examination showed that this was caused by the drainage-tube being out of its place, the hole in the cyst wall having closed up. The opening of this cyst was, it will be remembered, five and a half inches from the surface and it was very difficult to be sure whether the drainage-tube was in it or not. So on June 14th Dr. Emanuel again incised with a director and blunt-pointed bistoury and evacuated seven ounces of pus. The patient for the second time was immediately relieved and able to resume the horizontal posture with comfort. By this time the laparotomy wound over the liver was healed and the wound in the left iliac fossa was very small and discharging only a little pus every day. The thoracic wound [illegible] freely. On June 15th the patient got [illegible] onwards [illegible] to improve materially. His cough [illegible] became less troublesome and his sleep natural and sound. The temperature came down and he began to put on flesh. On the 27th it was again found necessary to in[illegible] cyst on account of the cough and [illegible] for two or three days, showing that the cyst was not draining properly, and on this occasion two ounces of pus escaped.

In the meanwhile the thoracic wound had been gradually healing and getting smaller and smaller, and it was evident that it was not sufficient for the thorough drainage of the third pleural cyst, the opening of which was five and a half inches from the surface. This opinion was supported by the facts that the patient's expectoration still amounted to six ounces of pus a day and that during the last week in June it had contained bile on two occasions. Accordingly it was deemed advisable to enlarge the thoracic wound and this Mr. Macready did on July 1st by resecting a piece of the ninth rib immediately above the former resection and making one large wound. At the time of the operation the cyst had been emptied by the patient's coughing and it was not possible to find one's way into the cyst. Consequently the patient was doomed to another two bad nights in which he was unable to lie on his back or on his side without bringing on a paroxysm of coughing and expectoration. On July 3rd, however, the cyst having become more or less filled up again, it was possible to incise it again and to insert a drainage-tube, this time with permanent good result, the cyst from now onwards draining thoroughly well. From this date the expectoration began to diminish rapidly and very soon ceased altogether; no expectoration was coughed up after July 5th. The patient began to eat well, to sleep well, to put on weight, to lose all pyrexia, and soon to look a very different man. On July 9th he was again allowed to get up. On the 17th the tube was left out of the wound in the left iliac fossa. On the 24th the wound in the left iliac fossa had healed up entirely. By August 15th great strides had been made. The thoracic wound was draining freely, and the tube was being gradually shortened. The patient had no cough and no expectoration. He ate and slept well and the temperature had been normal for the preceding four weeks. On July 23rd and the following few days there was a return of the expectoration of the golden-coloured offensive sputum which caused considerable anxiety for a time, suggesting the possibility of having to grapple with another cyst The alarm, however, proved to be unnecessary, for after a few days it ceased spontaneously and did not return. It was probably due to some temporary interference with drainage. On Sept. 11th the tubes were left out of the thoracic wound which was still discharging freely. The patient was doing well in every respect. On the 30th all discharge had ceased. The thoracic wound had quite healed. The patient had gained two stones in weight during the previous three months. He looked and felt quite well, ate well, slept well, had no cough or expectoration, could run upstairs without getting short of breath, and had no pain. The pulse, respiration, and temperature were normal. He was well marked with scars, of which he had five—(1) the scar of the laparotomy wound of May 30th, 1899, which lay between; (2) the old scar of 1888 on the left: and (3) the old scar of 1889 on the right; there were also (4) a scar in the left iliac fossa and (5) a scar at the seat of the thoracic wound. The only abnormal physical signs were in the right chest and consisted of impairment of the percussion note below the angle of the scapula and slightly weak breath-sounds at the right base. The heart's apex beat was in the fifth space, half an inch internal to the vertical nipple line. The patient was discharged from the hospital on Sept 30th, 1899, and has remained perfectly well and at his work up to the time of writing (Sept. 27th, 1900).

CARDIFF INFIRMARY.—At a meeting of the managing committee of the Cardiff Infirmary held on Oct 10th it was stated that the overdraft due to the bank had now reached £3600.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Etiology of Rheumatic Fever.—A Case of Pulmonary Valvulitis.—Sarcoma of the Lung and Supra-renal Body.

A MEETING of this society was held on Oct. 16th, Mr. WATSON CHEYNE, the President, being in the chair.

Dr. F. J. POYNTON and Dr. ALEXANDER PAINE made a communication on the Etiology of Rheumatic Fever which was an extension of their paper of the same title which was published in THE LANCET of Sept. 22nd and 29th, 1900. The present communication consisted of three parts. The first gave an outline of the experimental results obtained in rabbits with a diplococcus isolated from eight cases of rheumatic fever up to the date of the completion of the original paper in June. To these results were added some new facts ascertained since that date, and three more cases of rheumatic fever in which they had found the organism. The second part consisted of a demonstration by a series of lantern slides showing the identity of the lesions of rheumatic fever in human beings with those produced by the diplococcus in rabbits. The third part consisted of a series of microscopic specimens illustrating the morbid changes that were produced by the organism in man and in rabbits. Sketches and cultures were also shown in illustration of the paper, as was one macroscopic preparation. Dr. Poynton and Dr. Paine laid stress upon the fact that the cases of rheumatic fever chosen as the clinical basis of the original paper were characteristic ones and none of them doubtful. They briefly recapitulated the experimental results which had been obtained up to June last and described in more detail the newer facts. In one case they had isolated the organism from the throat in a case of rheumatic angina. The diplococci had been grown in pure culture in a medium of milk and bouillon rendered slightly acid with lactic acid and then transferred to blood agar. Injected by Mr. H. G. Plimmer, pathologist to St. Mary's Hospital, intravenously into a rabbit they rapidly produced death from acute valvulitis. The organisms were then isolated from the blood and cerebro-spinal fluid and cultivated as before. Injected into a young rabbit they produced polyarthritis and endocarditis. The joint effusion was considerable, but eventually disappeared entirely and the animal made a complete recovery. Since June they had detected the diplococci in three more cases of rheumatic fever, making 11 altogether, and had obtained them from the bladder after death from rheumatic pericarditis. They had also isolated them from the urine during an acute attack of pericarditis. The diplococci isolated from the urine were grown on blood agar and injected intravenously into a rabbit. Acute pericarditis, aortic and mitral valvulitis, pyrexia, wasting, and arthritis followed and resulted in death upon the twentieth day. There was no suppuration in any of the viscera. They also detailed an experimental result in which for some days definite involuntary clonic movements were noted. The movements had the characters of a chorea and in addition the animal was very nervous. With the chorea there was valvulitis. The microscopic investigation of the tissues had not yet been completed. One detail which they had recently ascertained was, they believed, of great importance. In the pericardial exudation of a rabbit that had suffered from pericarditis they had found in addition to the diplococcus, which was present in scanty numbers, some large solitary cocci. These they had already noticed as occurring when the diplococcus was grown upon unsuitable media, and they had also seen them in the human tissues. They were, they believed, an altered condition of the organism, dependent either upon loss of virulence or alteration in the chemistry of the tissues in which they were located, or upon both factors They appeared to be an evidence of subsidence of the lesion. The converse of this condition—namely, the occurrence of very numerous and small diplococci—were found in some cases of malignant endocarditis, and this they thought pointed to a local increase in virulence of the diplococci. The latent energy and vitality of the solitary cocci were possibly important from the view of rheumatic relapses. In conclusion, they felt sure that rheumatic fever was a disease to which there was great local resistance, hence the fugitive character of the arthritis, pericarditis, chorea, and other lesions usually met with in the disease. In several of these lesions they had seen the diplococci taken up by connective tissue and endothelial cells in great numbers.—Mr. EDGAR M. CROOKSHANK congratulated Dr Poynton and Dr. Paine on their researches and the beauty of their preparations. Various micrococci and streptococci had at different times been associated with various diseases of the internal organs. Some years ago he had brought forward a long list of diseases in which streptococci had been described as a causal agent. He believed they were the consequence, not the cause, of the several diseases. But the evidence adduced in this inquiry was of a totally different character. The chief interest of these researches centred around the inoculation experiments. He remarked in reference to one of the photo-micrographs which had been shown that the organism had some resemblance superficially to that of rabbit septicæmia. It was only a superficial resemblance, but he would like to be quite sure that this disease had been excluded by subsequent inoculation.—Dr. FREDERICK BATTEN remarked on the effect that the poisons seemed to have on the nervous system. One of the rabbits experimented on had had paralysis of the hind legs. This might, he thought, be of a choreic nature because he had known dogs suffering from chorea to have paralysis in the hind legs and choreiform movements in their forelegs.—The PRESIDENT asked how Dr. Poynton and Dr. Paine has isolated the organism from the throat. Bacteria had been found in rheumatoid arthritis and he would like to know whether they thought the organism which they had discovered was related in any way to the one in that disease.—Mr. S G SHATTOCK asked how Dr. Poynton and Dr. Paine had differentiated the organism they had found from Fraenkel's pneumococcus.—Dr. PAINE, in reply, said that the kidney had been found to be affected in most of their animals. As regards the procuring of the organism from the throat every care had been taken and great precautions observed to avoid contamination in the inoculations. The results obtained were very constant. As to the isolation of the organism from the throat, this source was

Mucus was taken from

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terwards blood-agar was inoculated.—Dr. POYNTON, in reply, said that the pneumonia and pleurisy which occurred in rheumatic fever were no doubt actually of a rheumatic nature. As regards the possibility of rabbit septicæmia the dose administered had been considerable and the animals would have died within a few hours had it been that virus, whereas they lived many days.

Dr. T. CHURTON (Leeds) read the notes and exhibited specimens taken from a case of Pulmonary Valvulitis The patient was a child, aged 11 years; she was quite well until five years of age when she had her first attack of rheumatic fever. At the age of eight years she had hæmoptysis and developed pulmonary tuberculosis. The following year she had another attack of rheumatic fever complicated by acute pneumonia. During her last illness there was a loud rushing bruit heard along the second left intercostal space and the case was diagnosed to be one of pulmonary stenosis. After death there was found to be a narrowing of the pulmonary orifice around which was a fringe of vegetations. The ductus arteriosus, septum ventriculi, and foramen ovale were all closed. Dr. Churton suggested, in view of the researches which Dr. Poynton and Dr. Paine had brought before the society, that the pneumonia which complicated the rheumatic fever might have been of rheumatic nature.

Dr. O K. WILLIAMSON showed specimens of Sarcoma of the Lung and Suprarenal Capsule, remarking that there was no pigmentation of the skin during life.—Dr. A. F. VOELCKER remarked that it was very rare to find pigmentation of the skin associated with disease of the suprarenal capsules.

CLINICAL SOCIETY OF LONDON.

Presidential Address.—Acute Actinomycosis.—Gastrotomy for Hæmatemesis.

THE first meeting of the present session of this society was held on Oct. 12th, Sir RICHARD DOUGLAS POWELL, Bart., who had been elected President for the second time, being in the chair.

The PRESIDENT delivered his opening address, and after

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tl of the Transactions of the Clinical Society of London. He remarked that on looking back over the past three decades the work of the society had completely justified its existence and afforded encouragement for its future development. In his inaugural address in 1868 Sir Thomas Watson laid it down as the great object of the society to attain to "more exact *knowledge, and therefore more direct and intelligent* purpose and more successful aim, in what is really the end and object of all our labours—the application of remedies for the cure and relief of disease." While rational therapeutics must follow in the wake of advancement in pathology and etiology it was remarkable how often the employment of a remedy had preceded an adequate knowledge of the malady for which it was used. In illustration of this the President quoted the use of mercury, which had been administered for syphilis for nearly four centuries, of digitalis, which had been in use for over a century, of cinchona, of arsenic, and of salicin which had been more recently given in cases of rheumatic fever. Sir William Jenner only 25 years ago spoke at a meeting of that society of "the contagious quality of acute specific diseases as something which was given off from some part of the sick which can, when properly applied, excite the same disease in another person, and which can excite no other disease" During the past 15 years that "something" of which Sir William Jenner spoke had been rendered clear in many of the specific diseases. The triumphs of surgery that had ensued upon an increasingly exact recognition of the organism which was responsible for suppuration were such that they were scarcely able to realise the "dark ages" that ended less than a century ago. The President then referred to the prophylactic measures that were now being adopted and hoped that during the session there would be some contribution on the results of preventive inoculation against enteric fever. The question of artificial immunity was becoming one of increasing importance to the military, naval, and civil servic

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which must for long remain

tropical regions of our vast empire. He then referred to a series of cases in which phlebitis and secondary embolism had occu could in no way be

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sanitary Perhaps the cases were explained by an unpreparedness of the patient for surgical injury which caused a morbid reaction to local damage During the life-time of the Clinical Society of London the use of electricity for diagnostic purposes had made great progress, and in the last few years radiography had been used with excellent results. One of the most valuable contributions to the science of medicine, and one to which the society had largely contributed, was the description and thorough elucidation of the disease now known as "myxœdema." Described first by Sir William Gull, it was afterwards thoroughly investigated and reported on in a special volume of the Transactions of the Clinical Society of London by a committee presided over by Dr. W. M Ord The subsequent treatment by thyroid extract gave an impetus to the investigation of the influence of internal secretions upon mental and physical health and upon formative symmetry, and the most recent and suggestive outcome in this category was that of the relationship between disease of the pituitary body and that want of control of growth which characterises acromegalous disease. The President concluded by remarking that a glance through the records of work done by the society gave encouragement and suggestions for work in the present and future.

Sir DYCE DUCKWORTH read notes of a case of Acute Actinomycosis occurring in a youth aged 19 years, who was admitted to St Bartholomew's Hospital on Sept. 28th 1899, complaining of pain and swelling on the lower part of the chest. There was a history of gastric pain after food some months previously, but this had passed off. On admission the temperature was 99° F. and the pulse was 100. The respiratory movements were deficient in the left lower lateral region of the chest, where a bulging gradually became apparent, which was more prominent in the left hypochondriac region. There was dulness on the left side in the axillary line below the sixth rib, where the breath sounds were absent. There was also dulness for four inches behind on the left side with friction crepitus. The bulging was partly thoracic and partly abdominal and appeared to involve the left lobe of the liver. The tumour was very tender on palpation. It moved to some extent with the diaphragm. On Oct. 25th the temperature rose to 102·2° and on the 26th to 102·8°. Abscess of the left lobe of the liver was suspected and attempts were made to locate the abscess but without success. Sir Dyce Duckworth suggested the possibility of its being case of actinomycosis, but a diagnosis could not be made. The patient was then transferred to the care of Mr. Howard Marsh who carried out further explorations but without result. On the 25th laparotomy was performed and a swelling situated below and behind the left lobe of the liver was found but no pus was reached. The patient's condition became worse and ultimately he died. At the necropsy a softened patch was found near the cardiac end of the stomach and a probe readily passed through it into a mass of spongy actinomycotic growth in the left lobe of the liver. The growth had evidently spread indiscriminately, involving the liver, the diaphragm, the left lung, and other parts. There was a subphrenic abscess of considerable size containing pus of a yellowish-green hue with numerous dark green or black granules which proved to be masses of ray fungus. No septic organisms were present. In the absence of data enabling the diagnosis to be made during life iodide of potassium was not given Sir Dyce Duckworth questioned the probability of the infection having taken place through the gastric ulcer, since if that had been the case other infective matter must have entered also. He recalled a very similar case in the St. Bartholomew's Hospital Reports for 1895. Both of these cases showed that the form of this disease as met with in man might be attended by considerable burrowing and some suppuration internally.—Mr. Howard Marsh remarked that considerable attention had lately been directed to the subject of sub diaphragmatic abscess. This was the first case of that condition depending upon actinomycosis which had come under his notice, although there had been cases recorded where actinomycosis had started in the appendix and spread upwards to the lower surface of the diaphragm, to the lungs, and even to the pericardium. He thought that in the present case it was quite possible that the infection might have been introduced through the gastric ulcer in the stomach. It must be considered a rare condition to find actinomycosis in the subdiaphragmatic space. The present case seemed to show that the ray fungus must be a very active pyogenic organism and capable of giving rise to acute infective inflammation. There had been considerable elevation of temperature and constitutional disturbance, yet after death little or no suppuration had been found. From his knowledge of the disease it would appear to be more dangerous in man than in the lower animals. The chief clinical importance of this case lay in its obscurity. Sir Dyce Duckworth's suggestion of actinomycosis seemed probable during life, but there was no actual confirmation of it. The case under discussion seemed to show that but little good was to be derived from surgical measures in such cases.—Mr. Rickman J. Godlee could not agree with the previous speaker that surgical measures were not available in actinomycosis, for when it occurred in the cæcum, the abdominal wall, the face, or the neck the diseased tissues could be scraped and cases recovered. He had come across 15 cases of the disease. There were two points of interest in Sir Dyce Duckworth's case. The first was the involvement of the pericardium, which was probably very rare though not surprising, because the disease spread indifferently among all tissues. The second point was the acuteness or rapidity of the process. Mr. Godlee referred to a case resembling it in this respect. In that instance the disease began in May and the patient died in December. The earliest symptoms pointed to pleurisy which was followed by empyema, the pus being evacuated. Soon afterwards an abscess appeared in the forearm and finally another over the front of the sternum. In the latter position there was dulness and after death a tumour was found there in which the ray fungus was discovered. The treatment by iodide of potassium in some cases was very disappointing, though in others it was very successful. A few months ago he saw a case of empyema which resisted treatment. Subsequently a tumour appeared in the abdomen which was incised. It contained but very little pus but the hæmorrhage was very free, and these features were always suggestive of actinomycosis. The abdominal lesion was scraped and large doses of iodide were given, and the patient made a good recovery.—Mr. W. G. Spencer remarked that in some cases of intestinal actinomycosis a grain of corn had been found which had been the carrier of the infection, and he asked if search had been made in the case under discussion. He had recently seen a case in consultation with Dr. Blake Maurice of Marlborough which resembled one published by Professor Illick in his treatise and he was thus able to identify the condition. In this case also the process has been very rapid. It started as a swelling and soon resulted in a large brawny induration down the neck. On examining the throat under chloroform the mass was found to protrude into the pharynx. Several sinuses with ragged bluish edges formed in the neck, but they contained only a small amount of pus and a large amount of spongy material giving rise to extreme hæmorrhage. These were the features which belonged to the sinuses of actinomycosis. In two months the patient became very much worse. The sinuses were scraped and iodide of potassium was given but no improvement took place until a month later when 40 grains of iodide were given three times a day. Then the constitutional symptoms improved and the sinuses rapidly disappeared, and the patient was quite well at the present time though there were many scars in his neck. He believed that the disease was much more common among cattle than was generally supposed, and when they presented swellings on the jaw the veterinary surgeon was called in who treated them with iodide of potassium, and the animals were then fattened up and sold for meat. He thought that it was an important question whether in the public interest such procedures ought to be allowed. In Germany such animals were slaughtered and not allowed to be used for food and he thought that that was the proper course.—The President asked what doses of the iodide of potassium had been given in Mr. Godlee's case. It was no use giving small doses. He remembered a case which he had seen with Mr. Godlee in which that remedy was very freely given internally and applied locally without success.—Mr. Godlee replied that the patient, a girl, aged 19 years, had taken one-drachm doses thrice daily.—Mr. Marsh, in reply, said that his remarks as to the inapplicability of surgical treatment referred, of course, only to deep-seated lesions. In making a diagnosis of these cases it was important to bear in mind that the clubs of the fungus were not always found in man and the diagnosis had to be made by the presence of the mycelium alone.—Sir Dyce Duckworth, in reply, spoke of the necessity for care in avoiding confusion of these growths with syphilomata—a mistake which was liable frequently to occur in view of their curability by iodide of potassium.

Mr. C. W. Mansell Moullin read the notes of three cases in which he had performed Gastrotomy for Hæmatemesis. They will be found in full at page 1125 of our present issue.—The discussion of these cases was postponed for some future occasion, when it was suggested that a debate on the surgical treatment of hæmatemesis should take place.

A vote of thanks to the President for his address terminated the meeting.

BRITISH GYNÆCOLOGICAL SOCIETY.

Treatment in Gynæcological Cases.—Exhibition of Specimens.

A meeting of this society was held on Oct. 11th, Dr. W. J. Smyly, the President, being in the chair.

Dr. Heywood Smith read a paper on Treatment in Gynæcological Cases. He considered that so much predominance had been given to the surgical aspect of gynæcology during recent years that it might not be unprofitable to discuss it from the medical standpoint. First of all he defined his use of the word "treatment" in its technical significance, illustrating it by the remark frequently made, "I did not have an operation but only treatment." He pointed out several difficulties in the classification as to medical and surgical, general and local, and of operations and treatment, whether major or minor. As to operations he said that with their present asepsis some major operations in skilled hands might be less risky to the patient than some minor operations conducted, it might be, with less scrupulous care. So with regard to time it was often a matter of importance to patients to run a little extra risk to have the prospect of cure in a few weeks by some operation rather than to lie up for months while undergoing some prolonged treatment. An organ, as the mamma, which had not been called into active use was, he contended, more often attacked by serious disease than one that had passed through a galactiferous activity, while in the case of the uterus it was the organ that had been impregnated that was more amenable to disease than one which had not passed through that condition. Dr. Heywood Smith then went briefly through the various maladies in which patience and "treatment" might often bring about a desirable result without subjecting the patient to the (to her) dread of an operation, such as misplacements of the uterus in their earlier stages, chronic inflammations, whether of the endometrium or the cervix, fibrous tumours of the uterus at their commencement, and ovaritis and salpingitis where not gonorrhœal or so chronic as to tend to chronic invalidism. He combated the error that many practitioners fell into of calling granular inflammation of the lips of the uterus "ulceration" of that organ, and with regard to the origin of fibrous tumours he suggested that in many cases they were due to the suppression of sexual impressions, and as to these tumours and inflammatory affections of the appendages, taking into consideration the sexual elements, he prescribed physiological rest. In all these he gave an outline of what the treatment should be before they severally developed into the stage that necessitated surgical interference In considering cancer—that opprobrium of medicine, inasmuch as all operations for its extirpation were often not necessarily final—as invading both the uterus and mamma, he thought that some method of treatment might be found which would arrest the disease in its earliest stages. He pointed out the necessity of examining every woman complaining of intermenstrual bleeding, contending that the patient's friends and her medical attendant were not infrequently the cause of fatal delay by making light of such premonitory symptoms. With regard to the mamma he contended that morbid conditions of that organ were often secondary to affections of the uterus, and when these latter were cured the mammary trouble subsided. He trusted that the consideration of this subject as tending to prevent the pendulum of practice swinging too much to the surgical side might not prove to have been misspent.

Mr. SKENE KEITH remarked that the society rather tended to ignore the medical side of gynæcology and the paper which they had heard was a welcome change. And yet it was noticeable that in the paper there was evidence of a continual hankering after surgical interference except in the direction [illegible]d to be resorted to early—namely, [illegible] disease. In the case of cancer, [illegible] of the uterus, no "treatment" of any kind was permissible in the early stages except removal. Dr. Heywood Smith had mentioned a case in which sarcoma of the ovary was followed by a tumour in the breast, but there was no evidence in the history of the case to show that the breast tumour was sarcomatous. It was a noteworthy point that after operations for sarcoma the patient often remained quite well for nine months and yet succumbed with a return of the disease within 13 months.

Dr O. H. F. ROUTH compared the various types of gynæcologists to the political types of extreme conservative, extreme radical, and moderate, and said that this personal factor had an influence on the question of operation. There were other points to be considered, such as the wishes and the circumstances of the patient. He related three cases to illustrate the close sympathy which existed between the uterus and the breasts.

Mr. F. BOWREMAN JESSETT commented on Dr. Heywood Smith's statement that cancer of the breast was more common in single women than in married women and said that he would like to know the source of Dr. Heywood Smith's information, for experience at the Cancer Hospital, Brompton, showed the reverse to be the case He agreed with Dr. Heywood Smith's remarks about cystic breasts. He had found no treatment of any use for this condition and his practice was to send the patient away to the seaside for some months, and if then there was no improvement he advised the removal of the breast, because these cysts were often the precursors of cancer He had tried oöphorectomy with the administration of thyroid in four or five cases of inoperable mammary cancer, but in none was there any improvement.

Dr. INGLIS PARSONS said that endometritis was often due to prolapse of the uterus, and the erosion and discharge frequently cleared up if the uterus could be kept in position with a pessary. For local application in these cases he had tried pure carbolic, iodised phenol, and liniment of iodine, and had found the last to give the best results For menorrhagia sometimes no organic cause could be found, and curetting showed no thickening of the endometrium. Some operators under these circumstances had resorted to hysterectomy, but he had obtained very good results from the constant current.

Dr. HERBERT SNOW protested against any "treatment" for tumours in the breast in women after middle age even in the case of cysts, for in his experience such cysts always developed into cancer sooner or later. He agreed with Mr. Jessett that cancer of the breast occurred more often in married women than in single women.

Dr. HENRY JELLETT (Dublin) drew attention to the statement in the paper that the prophylaxis of tuberculosis of the Fallopian tubes was fresh air, and asked if this was so how did Dr. Heywood Smith diagnose the condition? Did he first open the abdomen to make his diagnosis and then use the fresh air cure? Dr. Heywood Smith had also stated that tuberculosis of the tubes was very rare; yet the French school, which attributed the majority of suppurative affections of the adnexa to the gonococcus, admitted that one out of every four cases of pyosalpinx was due to tubercle. The experience at the Rotunda Hospital, Dublin, confirmed the view of the frequency of tuberculous salpingitis.

Dr. H. MACNAUGHTON-JONES agreed with previous speakers that such a paper as this was of peculiar value. From the chair he had repeatedly emphasised the importance of having more medical papers at their meetings. If the purpose of Dr. Heywood Smith's paper was to put a sort of curb on gynæcological operations it was not possible to discuss it exhaustively and in detail, but they must be content with general principles They must ask, "What is gynæcology doing now?" and the answer would be that it was advancing in proportion as it was based on an accurate pathology; for methods of treatment that were not so based were being discarded, whilst those that had a pathological basis were increasingly successful. True conservatism in gynæcology consisted, not in tampering with disease, but in proceeding at once with radical measures in every case in which there was no definite prospect of cure by milder means.

After some remarks by Dr. FREDERICK EDGE (Wolverhampton) Dr. HEYWOOD SMITH briefly replied.

Mr. F. BOWREMAN JESSETT showed: (1) A large Fibromyoma of the Broad Ligament removed by Hysterectomy; (2) a Fibro cystic Tumour of the Uterus removed by Hysterectomy; and (3) a large Hydronephrosis mistaken for an Ovarian or Hydatid Cyst.

Dr. HERBERT SNOW showed a specimen of Uterine Fibromyoma removed by Hysterectomy.

Dr. FREDERICK EDGE showed a Myoma of the Broad Ligament removed by Enucleation, the uterus being left behind

In the discussion on these specimens the PRESIDENT, Dr. F. A. PURCELL, and Dr. SEPTIMUS SUNDERLAND took part

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FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held on Oct. 5th in the University College, Dundee, Mr. C. S Young, Vice-President, being in the chair —The Chairman referred to the loss the association had sustained in the death of the President, Dr. Aymer of Bervie—a man struck down in the prime of life, who had endeared himself to all his patients and would be mourned by all the country side. The Chairman moved:—

[illegible] of the Forfarshire Medical Association desires to [illegible]

Dr. R C. Buist seconded this and drew attention to the fact that though not resident in the district of the association he had become a member and was rarely absent from their annual meetings.—The motion was agreed to.—Dr. A Don then showed a specimen of Epithelioma of the Penis and of Sarcoma of the Tibia. This latter was removed by amputation through the lower third of the [illegible] from a patient aged 30 years. A section of the [illegible] shown under the microscope.—Dr. J. Gray showed a Cast of Hydrocephalus in a boy, aged six and a half years, and also a specimen of Malignant Stricture of the Sigmoid which he had removed by operation. A [illegible] section of the tumour was shown, being that of [illegible] lumen of the [illegible] of the sigmoid [illegible] explained

Bedrest the object of which was to keep the patient warm while sitting up. This was effected by means of hot pans passed into the framework. He stated that it was the invention of a lady and read her description to the meeting.—Dr. Buist gave notes of four cases of Abdominal Tumours on which he had operated. In all of these more than one lesion existed. In one case he removed a multilocular ovarian cyst and a second tumour, sausage-shaped, which proved to be a dilated appendix. The patient did well. From a second case he removed gall-stones from a distended [illegible] ovary, and also sutured the crural canal [illegible] had protruded. In a third case he removed the uterus for retroversion and a mobile tumour of the size of a child's head, but this case was still under treatment.—Dr. G. Halley spoke and Dr. Buist replied.—Professor J. A. C. Kynoch gave notes of a case of Henoch's Purpura and made some remarks on this form of purpura. His case was that of a girl, aged eight years, in whom there was first a stage of lethargy followed in 12 or 24 hours by severe abdominal pain and purpuric spots, which then subsided and the patient remained well till another attack. This child had six attacks in two months.—Dr. C. McVicar said he had attended two similar cases, in one of which the heart was affected, and he wished to know if there was any such affection in Professor Kynoch's case, and thought the condition of the heart might explain the symptoms.—Professor Kynoch replied.

Folkestone Medical Society.—A meeting of this society was held on Oct. 5th at the house of Mr. W. F. Chambers.—Dr. Percy Lewis read a paper on "Local Hospitals with Special Reference to Our Own." [illegible] hospitals were that cases of sudden [illegible] treated at once and that a certain nu[illegible] in the locality could be kept trained [illegible] ready to deal with such emergencies. They also served as a valuable means of increasing the knowledge of the local profession who should be encouraged to attend operations and see [illegible] Opportunities should also be afforded [illegible] who wished to conduct any special [illegible] He advocated making temporary appointments on the staff if any local medical man happened to be specially qualified in [illegible]thalmic surgery. The staff should [illegible]rit and not by favouritism and th[illegible] helped in every way by the local profession by sending in interesting cases with the history fully detailed. Financial loss generally resulted by being on the staff, owing to the time spent in unremunerative work. To be on the staff of a hospital it was advisable that a man should work harmoniously with his colleagues, should not be injudicious in his conduct, lazy, or apt to use the appointment solely as a means of advertisement. Dr. Lewis considered that a local hospital should always have a nursing institute attached, as it would insure only well-known reliable nurses being engaged.—A most interesting discussion took place, in which the following took part: Dr. T. Eastes, Dr. W. J. Tyson, Dr. P. V. Dodd, Mr. W. F. Chambers Dr. C Latter, Mr. Thornton Gilbert, Dr. C. E. Perry, Mr. W. P Barrett, Mr. H. A. Powell, Mr. Randall Davis, Mr. A. J. Gore, Dr. J. Hackney, and Dr. A. E. Larking.

West Kent Medico-Chirurgical Society.—The first meeting of the forty-fifth session of this society was held on Oct 5th at the Royal Kent Dispensary, Greenwich. The chair was taken at first by the outgoing President, Mr. C. J. Parke, and afterwards by the newly-elected President, Dr. Septimus Sunderland.—The treasurer's accounts and the council's annual report having been adopted and three ordinary members and one honorary member having been elected, a ballot was taken for the election of officers and council for the session 1900-1 The following were elected:—President: Dr. Septimus Sunderland. Vice-Presidents: Dr. George Herschell and Dr. Thomas C Meggison. Council: Mr. Charles J. Heath, Mr. Arthur E Joscelyne, Dr John Matheson, Mr. William Henry Payne, Dr Robert E. Scholefield, Mr. G. Chisholm Williams, and Dr. H. Bowen Williams. Treasurer: Mr. John P. Purvis. Secretary: Dr. John P. Henry Librarian: Dr. F. S Toogood.—Dr. Scholefield showed cases of Tabes Dorsalis and of [illegible] and two cases of Lupus, one of [illegible]ured and the other much benefited by treatment by the Roentgen rays.—Dr. Toogood showed a case of Excision of the Knee-joint and a case of Cirrhosis of the Liver with Extreme Ascites which had been very much improved by Morison's operation.—Mr. Chisholm Williams showed cases of Hallux Valgus with Casts, Skiagraphs, and Specimens.—A discussion followed and the meeting adjourned.

Reading Pathological Society.—The fifty-ninth annual meeting of this society was held at the Royal Berkshire Hospital on Oct. 11th.—Mr. J. Bland-Sutton gave an oration on Some Points in the Diagnosis and Treatment of Uterine Fibroids. The orator stated that uterine fibroids were never recognised clinically before the age of 25 years, though they did occur between 20 and 25 years. Uterine fibroids had to be diagnosed from almost every tumour occurring in the abdomen. He dwelt on the difficulty in diagnosis and said that mistakes [illegible]tant and dangerous when the diagnosis [illegible] made in mistake f[illegible] these cases operations were not [illegible]d gone about in great misery suffering from sarcoma, dermoid cysts, hydatid cysts, and [illegible]ed correctly, would have been [illegible]nce of a venous hum on auscultation and metrorrhagia were strong evidence of fibroids. Wandering spleens had a remarkable tendency to get into the pelvis and to cause difficulty in diagnosis. Tumours more or less incorporated with the uterus and accompanied by menorrhagia and metrorrhagia were particularly difficult to diagnose, such as enlarged tubes, retroversion of the gravid uterus, &c.—A hearty vote of thanks was accorded to Mr. Bland-Sutton for his oration and the members and visitors to the number of 40 afterwards dined together at the Great Western Hotel.

Pathological Society of Manchester.—The annual meeting of this society [illegible] Owens College on Oct. 10th, the President, Mr. W. Thorburn, being in the chair.—The reports of the treasurer and committee having been adopted officers for the ensuing session were elected as follows:—President: Dr. A. T. Wilkinson. Vice-Presidents: Dr. A. Brown and Mr. J. Collier. Treasurer: Dr. T. A Helme. Secretary: Dr. T. N. Kelynack. Committee: Mr. G. O. C[illegible] Dr. J. G. Clegg, Dr. F. J. H. Coutts, [illegible] Dr. W. E. Fothergill, Dr. F. C. [illegible] E. Platt, and Mr. J. H. Ray. Auditors: Dr. A. H. Hopkinson and Dr. M. P. Ledward.—The meeting was mainly devoted to the exhi[illegible] Delépine gave a [illegible]s of Plague.[illegible]tions illustrat[illegible]n.—Dr. C. H. Melland showed Preparations of Blood presenting Malarial Parasites.—Dr. Moore showed preparations showing Various Lesions of the Liver.—A lantern demonstration of the Pathology and Morbid Histology of General Paralysis of the Insane, by Dr. David Orr and Dr. T. P. Cowen, was postponed until the next meeting of the society.

Hospital Sunday in Plymouth.—Oct 21st is to be observed in Plymouth as Hospital Sunday. The amount received in 1899, as a result of 258 collections, was £809, and from 72 children's collections £67.

Kashmir Mission Hospital and State Leper Hospital.—From the report of the Kashmir Mission Hospital for the year 1899 it is evident that the medical officers, Mr. Arthur Neve, Dr. Ernest F. Neve, and two native house surgeons, have been very busy. The "surgical summary" is as follows: operations, 4148; chloroform administrations, 871; new out-patients, 19,161; total visits, 41,629; medical in-patients, 108 (with three deaths); and surgical in-patients, 1220 (with eight deaths). As usual, the proportion of surgical cases requiring operation was very high: 856 operations were performed for entropion alone and 240 for pterygium. 93 cataracts were extracted, of which 86 were successful. There were 250 operations for bone disease, of which 65 were for necrosis of the tibia. 304 tumours were excised. There were 29 cases of epithelioma of the thigh and 15 of the abdominal wall due to burns and subsequent irritation from the heat of the portable brazier (*kangri*) which the people carry under their clothes in the winter. There were 24 cases of sarcoma. At the beginning of 1899 there were 65 patients in the State Leper Hospital; in the course of the year there were 132 admissions and four deaths. The Maharajah and the State Council made a grant of Rs.5996 to the Leper Hospital.

Reviews and Notices of Books.

The Structure and Functions of Bacteria. By ALFRED FISCHER, Professor of Botany at the University of Leipsic. Translated into English by A. COPPEN JONES. Oxford Clarendon Press. 1900. Pp. 198.

ONE of the most noteworthy features of this excellent work and translation is, perhaps, the suggestions that are made for a new classification of bacteria. We fear that the change in nomenclature would be so inconvenient, the present names being so deeply fixed in our minds, that the suggestions, admirable and scientific as they are, will be very slowly realised, if realised at all. Professor Fischer suggests that the classification of bacteria might be arranged into two orders: (1) haplobacterinæ and (2) trichobacterinæ, divided and subdivided into families. Under the first order would come the coccaceæ with the sub-families of allococcaceæ (including most cocci and, of course, the pathological staphylococci) and the homococcaceæ, which would include the streptococcus. The second family of the order of haplobacterinæ would be the bacillaceæ, which embraces as sub-families the bacilleæ (including the bacillus typhi and [illegible]

pernicious types. [illegible] word
indicates the shape [illegible] the
arrangement of oil [illegible] ely,
t[illegible] come the trichobacteriaceæ
[illegible] classification, however, according to nutrition of bacteria seems more convenient
a[illegible] accord-
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organisms), [illegible]
but all othe[illegible]
biological divisions,

As to the origin of these first forms of life the author says that it seems probable that the first organisms did really arise from inorganic matter by spontaneous generation and that, as the evolutionary theory assumes, all other living beings have been gradually evolved from them in continued series. The doctrine of evolution once admitted on these lines it must also be conceded that the evolution of new species is still going on, new organisms arising continually by spontaneous generation. This reflection is enough to stagger the bacteriological student in his endeavour to capture all known species for culture and differentiation.

So far we have referred only to the subject-matter of the first five chapters of Professor Fischer's undoubtedly classical work. Leaving the considerations of morphology, taxinomy, and the distribution and origin of bacteria, we come to some most interesting chapters (Chapters VI. to IX.) on the chemical composition of bacteria, the food-stuffs of bacteria, the respiration of bacteria, the influence on bacteria of physical agents, and, lastly, the action of chemicals upon bacteria and the nature of such action. Then follows the story of bacteria in their relation to the circulation of nitrogen and carbon dioxide in nature. We doubt if the [illegible] XVIII.) refer to bacteria in relation to disease, and the interest of the reader is still maintained by the lucid presentation of the subject. Professor Fischer is astute enough to observe in his opening observations on the pathogenic species of bacteria that the descriptions will be confined to the general biological characters of the organism, purely medical questions being left to the specialist who alone is entitled to discuss them. As one of our highest authorities on botanical questions Professor Fischer's account of the pathogenic species remains a masterly piece of writing in spite of this disclaimer.

It is interesting to learn that Professor Fischer discounts somewhat the researches of Buchner on alcoholic fermentation without yeast cells—a series of researches which threatened to overthrow all our notions of fermentation. Fischer says that so far the statement is too incomplete to upset existing theories, and he adds that solid proofs of the existence and activity of the zymase are wanting. He considers that further researches are necessary to show whether a genuine enzyme is the cause of the fermentation, or whether it is not rather due to the pressure extract itself "which is, indeed, nothing more or less than a concentrated infusion of protoplasm squeezed out of the cells and preserved, as it were, in its own juice."

It may confidently be said that Professor Fischer's book is of first importance and that there is no work in the English language which deals so ably with the present position and extent of bacteriological science. The German work has for its title "Vorlesungen über Bakterien," and the lectures were intended by the author to be an introduction to general bacteriology. The German edition is recognised as a standard work upon the subject and we are sure that the English edition will be just as favourably regarded. The work of translation is done with great ability and skill, and it is not difficult to recognise in the English rendering the clear and masterly method of exposition of the German author.

Treatise on Orthopædic Surgery. By EDWARD H. BRADFORD, M.D., Surgeon to the Children's Hospital and to the Samaritan Hospital, Assistant Professor of Orthopædic
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L[illegible]
p[illegible]
Illustrations. [illegible]
Tindall, and C[illegible]

ALTHOUGH this is the second edition of this work the progress of orthopædic surgery since the appearance of the first edition has necessitated such large alterations that a great part of the book has been re-written, and it may be looked upon as almost a new treatise. The scope of orthopædic surgery has never been very clearly defined and has varied gr[illegible] The authors of this work have inc[illegible] expected in such a treatise [illegible] not properly come within t[illegible]

The descriptions of [illegible]
and exact, and altho[illegible]
treated with much gr[illegible]
said that any lacks the full consideration which it deserves. The account of congenital dislocation of the hip is especially good. With regard to its etiology the authors do not favour the view that it is due to an arrest of development of the acetabulum, for they hold that the deficiency of development which is met with is no more than should result from the absence of the head of the femur from the cotyloid cavity; they do not, however, offer any more feasible explanation.

In the account of caries of the spine we are told that a retro-pharyngeal abscess resulting from cervical caries is best opened by using a partly protected bistoury through the mouth. This is directly in opposition to modern surgical teaching; for when the abscess is thus opened it is hardly possible that the abscess cavity should not become contaminated by micro-organisms from the mouth, with the result that the morbid process in the vertebræ is accelerated and that sapræmia occurs. A retro-pharyngeal abscess should be opened by an incision along the posterior border of the sterno-mastoid; in this way the contents are readily evacuated and the chance of septic infection is much lessened.

In the account of rickets the statement is made that "Hutchinson's teeth" are met with in that disease. Certainly in rickets the teeth may be, and often are, malformed, but the typical teeth described by Mr. Hutchinson are not met with in rickets. In the account of "housemaid's knee" the bursa which lies beneath the ligamentum patellæ is called the "deep prepatellar bursa"; this is surely a misnomer, for the bursa is not prepatellar in the least degree. The chapter on flat foot gives a very good account of the causation, pathology, and treatment of this condition, and many other portions of the book might be named which are deserving of high praise. The only objection that might be brought forward is that in treatment the authors are not always sufficiently definite in saying what methods they themselves consider to be the best.

The book is adequately and even profusely illustrated, but some of the plates which have been reproduced photographically show very little detail.

A Short Practice of Gynecology. By Henry Jellett, B.A., M.D Dub. London: J. & A. Churchill. With 125 Illustrations. Crown 8vo. 1900. Pp. 436. Price 7*s.* 6*d.*

This little manual is a worthy companion to the author's "Short Practice of Midwifery," a second edition of which has already appeared. Like that book, as Dr. Jellett tells us in the preface, it represents in its essentials the practice of the Rotunda Hospital, Dublin, and it has on that account an added interest. The book consists of two parts. The first 15 chapters treat of the affections of the genital organs and the remaining eight of the various gynæcological operations.

In considering amenorrhœa and menorrhagia the author adopts the division of their causes into those arising (1) in the genital system, (2) in the nervous system, and (3) in the circulatory system. This classification we can from experience commend for teaching purposes. In classifying vulvitis, as also in the case of vaginitis and endometritis, the author has endeavoured to adhere to an anatomical classification and accordingly he divides the different forms of vulvitis into (1) catarrhal, (2) exudative, and (3) phlegmonous. This division is no doubt a good one, but the word "anatomical" hardly expresses its exact character.

In describing the various forms of displacement of the uterus use is made of an artificial position of equipoise, as it were, of the uterus, which is defined as follows: "When the axes of the body and of the cervix of the uterus coincide and are vertical the uterus may be regarded as being neither in a position of version nor of flexion." Departures from the position are considered to represent the various conditions of version and flexion. This scheme should tend to obviate some of the difficulties met with by students in understanding displacement of the uterus. A good description is given of the important subject of chronic endometritis and the author assigns as its causes congestion of the uterus and bacterial invasion. The debateable question as to the conditions under which fibro-myomata of the uterus should be operated upon is not very definitely answered, and no doubt the author is wise in not attempting to lay down hard-and-fast rules upon a matter with regard to which there is so much difference of opinion. The chapter upon Malignant Growths of the Uterus, and that upon Ovarian Cysts are both good. The pathology of mucoid and dermoid cysts of the ovary is particularly clearly described. From a perusal of the section upon the Operative Treatment of Inflammatory Conditions of the Appendages we gather that the practice at the Rotunda Hospital is to employ either the abdominal or vaginal route impartially under varying circumstances.

The last eight chapters contain clear descriptions of all the most important major and minor operations of gynæcology. The book is clearly arranged and well written. It is evidently the work of one who is accustomed to teach with method, and it should prove of considerable value to the student.

A Manual of Physiology, with Practical Exercises By G. N. Stewart, M A., D.Sc., M.D. Edin., Professor of Physiology in the Western Reserve University, Cleveland, U S A. With 336 illustrations and five coloured plates Fourth edition. London: Baillière, Tindall, and Cox. 1900. Demy 8vo. Pp 894. Price 15*s.* net

The present edition of Professor Stewart's well-written treatise has undergone revision and has been augmented by the addition of about 50 pages. The alterations and interpolations in the course of the first 400 pages are but slight and scarcely more than verbal. The sphygmometer of Hill and Barnard is, however, given with a drawing, and a description, with woodcut, of Dr. R. E. Dudgeon's ingenious little sphygmograph is introduced. Dr. Pawlow's experiments on gastric secretion, showing the direct influence of the nervous system on the discharge of the secretion, are described in fuller detail than in the previous editions. A section has been introduced giving the characters of the sediments in acid and alkaline urine respectively. The origin of the urea of the urine is discussed at great length and much evidence is adduced rendering it probable that it is formed in the liver by a process of oxidation of the proteids The isolation by Professor Abel of a benzoyl compound in the juice of the medullary portion of the adrenals, apparently causing the rise of pressure when that juice is injected into the vessels, is mentioned. The changes occurring in the contraction of muscle as illustrated by Rutherford and Schafer are fully described The chief additions that Professor Stewart has made are under the headings of muscle and nerve, but even here the main body of the text has been but little altered. We venture to advise Professor Stewart to abstain from materially increasing the size of the volume: it has reached the limits of one volume. His efforts should be directed to compression rather than to expansion. As it stands at present it will serve to give the student or practitioner a very sound knowledge of modern physiology.

JOURNALS.

Revue de Gynécologie et de Chirurgie Abdominale. Tome IV., No 4, July—August, 1900. Paris: Masson et Cie. —This number contains the following original articles. An Anatomical Study of the Fascia Enveloping the Hypogastric Arteries, by M Paul Petit; the Remote Results of Abdominal Hysterectomy for Cancer of the Cervix of the Uterus, by M. C. Jacobs; Pulmonary Embolism following Operation for Fibro myomata of the Uterus, especially Hysterectomy, by M. G. Michel; Medullary Anæsthesia or Sub-arachnoid Injections of Cocaine, by Professor T. Tuffier; and, lastly, an elaborate article upon the Use of Autoplastic Sutures in the Operation for the Radical Cure of Hernia and in Laparotomy, by M. L. Dartigues.

Practitioner.—All the original communications in the October number deal with plague, the individual contributors and their subjects being as follows. Mr James Cantlie writes on the Symptoms, Pathology, and Treatment of Bubonic Plague. He recommends Haffkine's fluid for inoculation as a prophylactic, and says that plague patients are infective for at least one month after the subsidence of the fever. Dr. Patrick Manson describes six cases of plague which came under observation at the Seamen's Hospital, Albert Dock, on the Thames, two in 1896 and four in 1900. Three patients died in the hospital, one was dead on arrival, and two recovered. Dr. R. Tanner Hewlett has an illustrated article on the Bacteriology, Bacteriological Diagnosis, Dissemination, Prophylaxis, and Serum-Therapy of the disease. Mr. David C. Rees writes on Plague in English Seaports, and Dr. A. K. Chalmers of Glasgow on the Preventive Aspects connected with the Occurrence of Cases of Plague. Finally, Dr. W. Collingridge describes the methods adopted for the medical inspection of vessels entering the Port of London and the precautions used for the discovery of infectious disease.

Edinburgh Medical Journal.—In the October number Dr. H. Macnaughton Jones publishes a long paper on Affections of the Female Genitalia as Causal Factors in the Etiology of Neuroses and Insanity. He mentions that he has never seen any injurious mental consequence follow a gynæcological operation in a healthy woman; he has met with only two cases of post-operative insanity, one of the patients having previously been in an asylum, and the other, an official in a private asylum, having been a typical neurasthenic for some years. Under the heading of Recent Advances in Medical Science Dr. A. Lockhart Gillespie notes some of the latest contributions to the symptomatology and treatment of plague. Dr. R. T. Williamson writes on the Clinical Forms and Pathological Anatomy of Spinal Syphilis, and Dr. S. W. Carruthers publishes an instalment of his papers on the Mechanism of Articulate Speech. Medical Education in the United Kingdom is dealt with in an Appendix of 36 pages.

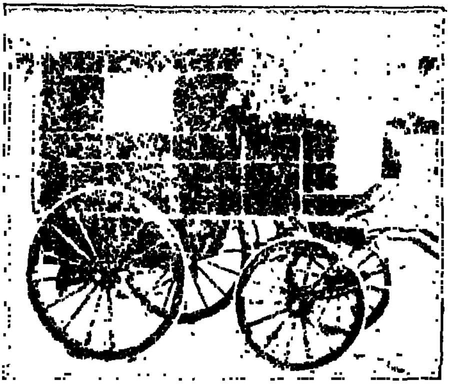
Scottish Medical and Surgical Journal.—In the October number Dr. W. Leslie Mackenzie writes on the plague with special reference to its appearance in Glasgow. Dr. Th Shennan gives a *résumé* of our knowledge of diseases missible from the lower animals to man, the exa instanced being tuberculosis, diphtheria, scarlet glanders, farcy, anthrax, plague, foot-and-mouth d and rabies. Professor Thomas Annandale writes in of excision of aneurysms of the limbs, provided th tolerably circumscribed and free from complicatior considers that for important arteries a properly prepar ligature is the safest and best. Mr. C. W. Cathcart de a simple form of steriliser for surgical dressings in steam heat is applied by means of water contained outer jacket. An article on Medical Education in Sc gives copious details relative to the various education examining bodies.

New Inventions.

A NEW AMBULANCE CARRIAGE.

AN improved form of ambulance carriage, of which we give illustrations, has recently been designed and built by the St. John Ambulance Association for the Wanganui (New Zealand) Branch of the Association. In general arrangement it is a covered van fitted with a well the bottom of which is about 16 inches from the ground. At the rear of the carriage are two doors as shown in the illustration The carriage is adapted to carry two patients, one in a recumbent position on a Furley stretcher fitted with telescopic handles placed on the near side of the carriage and the other in a semi-recumbent position on a seat fixed on the off side. With a view to economise room and reduce the length of the carriage the space under the driver's seat has been thrown into the interior, and part of it gives room for the foot of the stretcher, while in the remainder a locker has been fixed in which surgical or first aid appliances can be carried. In this particular carriage a "medical companion" as approved by the Army Medical Department was placed in the locker. The carriage is built with an ash framework panelled with choice mahogany, the wheels being fitted with india-rubber tyres. It has a smart appearance, it runs lightly, and it is easy to load and to unload, the proximity of the well to the ground affording great help to the stretcher-bearers. In addition to being an excellent ambulance carriage the vehicle can be used as an omnibus and is capable of carrying five persons inside in comfort. Mr. S. Osborn, F.R.C.S., approved the design and thoroughly inspected the carriage before it was packed for shipment. A very similar carriage had previously been built by the St. John Ambulance Association for the London Hospital and it is, we are informed, giving complete satisfaction.

FIG. 1.



Side view of carriage.

FIG. 2.

Back view of carriage.

THE LANCET.

LONDON: SATURDAY, OCTOBER 20, 1900.

THE complete inefficiency of medical service in the highlands and islands of Scotland is a matter of urgent importance. The lot of the sick poor anywhere is a pitiable one, but it becomes doubly so when the medical man is at a great distance, when no nurse is available, and when all the conditions of domestic comfort are conspicuous by their absence. If our comments upon the situation seem to refer chiefly to the case of the medical officer responsible for the care of the sick poor in these remote regions, where moor and fen and crag and torrent and not seldom the stormy sea intervene between him and them, it must be remembered that to describe the disadvantages of his situation with a view to their rectification is to take an important step towards the better treatment of the poor. We have received and published many communications illustrating the hard life of the medical officer in the highlands and islands of Scotland, but none of them has exhausted the subject. The latest of these, which appeared in THE LANCET of Sept. 29th (p. 967), from the pen of Dr. HENRY PEARSON TAYLOR of Baefirth, Mid Yell, Shetland, in the most moderate terms indicates the impossibilities, the hardships, and the injustice of the position of the medical officer whose lot is cast in these districts The burden of Dr. TAYLOR'S complaint is that the medical officer is put into a position in which he is compelled to do terribly hard work for such a scanty pittance that he is practically giving his services. He has not only to treat those who are really paupers, but he is expected to take a benevolent view of the sickness and illness of the classes above the line of pauperism. There is a happy conceit in the interesting address of Sir JOHN WILLIAMS, which we published in THE LANCET of Oct 13th, to the effect that the Good Samaritan was undoubtedly a member of the medical profession. Perhaps the Levite and the other good people, in passing by the wounded man who fell among thieves, comforted themselves with the belief that the Good Samaritan—the doctor—was behind them and would soon come up with more help than they could render. Something of the sort seems still to be the theory in the highly religious country of Scotland, where the whole weight and care of the sick poor are thrown on a medical man who gets less than a week's holiday in a year, who is expected to be a SYME in surgery, a BEGBIE in medicine, a SIMPSON in obstetrics, and a first-class specialist all round, to have all the antiseptic armamentarium of modern operative surgery at his fingers' ends, and to be a sort of paternal providence to the community—and to consider himself remunerated by the receipt, in some places, of as much as 10*s*. 6*d*. a week. This, in a country which spends millions a year for meeting the spiritual wants of its population, is a serious state of matters and is not a little discreditable to all responsible for it, who may be considered to be the State, the Established Church, and the parish council, in the order mentioned.

Unhappily this is not a new scandal. More than half a century ago, in 1846, a voluntary association of medical men was formed, with the public-hearted Dr. ALISON as chairman, whose object was "to express sympathy with their brethren in remote country districts of Scotland in regard to their unremunerated attendance on paupers and to collect accurate information on this subject." An account of this association is given by Dr. JOHN BROWN in his paper, "Our Gideon Grays," from which the following is a quotation:—

> "Out of 325 returns 94 had received *some* remuneration for attendance and outlay. In one of these instances the remuneration consisted of 3*s* for 12 years' attendance on 70 constant and 13 occasional paupers; a fine question in decimals—What would each visit come to? But worse remains. One man attended 400 paupers for eight years and never received one farthing for his skill, his time, or his drugs. Another has the same story to tell of 350, some of them 30 miles off; he moderately calculates his direct loss from these calls on his time and his purse at £70 a year Out of 253 who report 208 state that besides attending for nothing they had to give on occasions food, wine, and clothes, and had to pay tolls, &c. 136 of the returns contain a more or less definite estimate in money value of their unrequited labours; the sum total given in by them amounts to *thirty-four thousand, four hundred and fifty-seven pounds in ten years! being at the rate of £238 for each!* They seem to have calculated the amount of medical attendance, outlay, and drugs for each pauper annually at the very moderate average of four shillings."

Some means must be found for remedying a state of matters which in most ways exactly tallies with that described by Dr. JOHN BROWN half a century ago Much assistance in the formation of a judgment as to the nature of these means will be found in a letter (published in another column) from Dr. WILLIAM BRUCE, Direct Representative on the General Medical Council for Scotland, than whom probably no living Scottish practitioner is more familiar with the wants of the medical service in the remote districts of Scotland. The hardness of the conditions is such that no adequate supply of medical help can be secured and no adequate remuneration can be given for medical service in such districts without extraneous support, and this difficulty must increase with every demand for medical service from the various parts of our ever-extending empire. There are clearly two principles in the solution of such a problem. One is the equalisation of such burdens between the State and the parish. We apply this principle in England and in Ireland. It is even in force as between the parishes of the metropolis, where the richest parishes are made to help to bear the burdens of the poorest, and all are the better for realising their mutual debts and obligations It is simply absurd that the full application which obtains in England and Ireland of so obvious a principle of political economy should still be wanting in Scotland. We venture to hope that Scotland with her rich towns and thriving industries will not much longer abstain from the honourable discharge of her duties to her own poor, whether they reside in Glasgow or in the Hebrides. If she still continues to do so we should be disposed to venture a little farther and to say that before very long these districts will be still more starved than at present and that the paupers will not be the only sufferers. Already, if we are not misinformed, the supply of medical officers in these parts is not always forthcoming. And there must also be greater security in the position of the medical officer. This has been conceded in England and Ireland and should be immediately granted in the case of Scotland. We do not mean that the local authority should have no power of removal, but that such power must be checked by the right of appeal to the central authority, otherwise, as Dr. BRUCE points out, great hardship and injustice may accrue to the medical officer. We do not deny that the character and the conduct of the medical man in these regions are even more important than in districts where there is a choice of medical men. But, on his side, the medical man practising remote from his fellows is entitled to the protection of a larger judgment than is always to be found in an intensely local body. We cannot doubt that Lord BALFOUR will take the case of the medical officers of the highlands and islands of Scotland into his consideration and secure for them a position that will maintain their efficiency and their self-respect.

WE have from time to time, even at the risk of becoming wearisome by mere iteration, adverted to the question of transport as a most important factor in war. The supply of men and materials to the front in the present war in South Africa has proved to have been a most arduous and difficult task. Even apart from interruptions of the railway lines of communication by the enemy's destructive raids delays are occasionally inevitable under the best systems of military organisation and railway management. We know what occasionally happens in this country in a time of peace in the presence of any unusual strain and can therefore form some idea of what it was in South Africa in time of war. What was the state of affairs there? The narrow gauge of the single line of railway implies diminished power of locomotives and reduced carrying capacity by the rolling stock; the steep gradients and sharp curves which are more or less present throughout the entire system, owing to the natural configuration of the country, make it necessary that the trains shall only be loaded up to the power of the engines hauling them; and the speed, which is governed by the gauge, gradients, and curves, has consequently to be *slow*. Moreover, the distances traversed were immense. Some idea may, therefore, be formed of the time required to transport and to deliver the materials necessary for the forces operating at the front. Our readers have already had the opportunity of studying for themselves the evidence of Lord ROBERTS and that of the chief of the staff, Lord KITCHENER, and others, in respect of these matters. But we would direct their attention to some remarks on hospital administration which were made by Lieutenant-Colonel RYERSON, M.D., Canadian Commissioner of the Red Cross Society in the South African War, in the course of an address delivered at the annual convention of the Canadian Medical Association at Ottawa, inasmuch as they strike us as both pertinent and interesting at the present time.

The Orange Free State (now Orange River Colony), he says, produced little towards its own support in men and horses. The main artery of communication through the remorseless and arid veldt is a narrow-gauge railway of 725 miles in length between Cape Town and Bloemfontein, where the alleged deplorable state of the sick is said to have taken place. Suddenly 100,000 soldiers and 20 000 camp followers are thrown into the country, already bare and hardly able to feed itself; add to this 25,000 horses, *mules, and oxen*; *all of them*, *men* and animals, have to be fed by this narrow-gauge railway, and all the food-supplies and munitions of war and men and animals as well as miscellaneous hospital stores have to be transported. Then an unexpected epidemic of enteric fever suddenly occurred after the troops had made their forced and rapidly-executed marches and captured Paardeberg and subsequently Bloemfontein. With this enormous increase of sick the strain on the hospital service and all connected therewith may easily be conceived. Naturally, under the circumstances, the field hospitals had to be utilised as stationary hospitals notwithstanding that they were neither equipped nor intended for such work—for which, indeed, they are not at all fitted. The field hospitals are actually with the *troops, they* accompany and take part in their movements, and have consequently to be provided with a portable equipment in order that they may move readily with the army and receive the wounded from the dressing-stations during or after an engagement with the enemy. Every field hospital should be complete in itself as regards both its *personnel* and material and it should be so constituted as to be mobile and capable of being opened and closed promptly and of temporarily providing for its inmates until they can be transferred to other hospitals along the line of communication and in the rear. Although such are the functions of a field hospital it is easy to see that contingencies may arise, such as those which have occurred in so exceptional a campaign as that in South Africa, in which a field hospital may have in cases of grave emergency to take the place of a stationary hospital for the time being. That is an additional reason why every field hospital should be a complete unit in itself and have its own transport. We have often insisted upon the importance of this provision. The field hospital should, in our opinion, be complete in every detail from start to finish of a campaign. The Royal Army Medical Corps should have their own ambulance complete, including wagons, horses, and mules. We think that the Government of the United States took a wise and absolutely necessary action during their war of rebellion in not allowing the hospital transport to be diverted to any other purpose, except in cases of emergency and under the order in writing of the general in command. There should be no requisitioning of the Army Service Corps in the field, but the necessary hospital transport should be handed over from the beginning and applied exclusively and continuously for the purpose intended. Had this been the case the evil results following Paardeberg might probably either have been averted or been materially reduced.

We quite admit that war is war. The nation has to make up its mind that in this as in all other cases it cannot eat its cake and have its cake. The more rapid

Annotations.

"Ne quid nimis."

THE REORGANISED UNIVERSITY OF LONDON.

THE administration of the new University of London is now complete It was started by the election of a Senate composed of 56 persons (including the [illegible] and the Chairman of Convocation) on Oct 12th. [illegible] of the Senate will be held [illegible]. The Senate is thus composed:- [illegible] Hon. the Earl of Kimberley Vice [illegible] oscoe, F.R.S. Chairman of Convocation: Mr. E. H. Busk. Four Crown members, including Mrs E. M. Sidgwick and Sir J. W Wolfe-Barry, F.R S. 16 members of Convocation, including Mr J. Fletcher Moulton, M.P., Sir Albert K. Rollit, Mr. Justice Cozens-Hardy, Dr. T. Barlow and Dr. J. F. Payne, Mrs. S Bryant, Sir Philip Magnus, and Professor Silvanus Thompson. The election of Convocation members was practically a large majority for the nominees of a ticket issued by Mr. Fletcher Moulton, Dr. W. J. Collins, and Mr. Willis, who secured all the seats (six) in arts and four out of the same number in science Mr. E. J. Routh, Sir [illegible] Armitage Smith, Professor Carey Foster, [illegible] Dr. S. H. Vines, and others were rejected because of their supposed approval of the changes from the old University. The Royal College of Physicians of London elected Dr W. H. Allchin and Dr. P. H. Pye Smith, F.R.S.; the Royal College of Surgeons of England, Mr. A. Pearce Gould and Mr. H G. Howse; University College, Professor G. Carey Foster, F.R.S., and Lord Reay; King's College, the Rev. the Principal, Dr. A Robertson, and Lord Lister, P.R S. The legal profession is well represented by Lord Macnaghten and Lord Davey, with other well-known names, the Corporation of London by Alderm[illegible] Dr. T. B. Crosby, J.P., and the London County Council [illegible] Dr. W. J. Collins and Mr. Sidney Webb. Sir Frederick A[illegible] epresents the City and Guilds of London Institute, and among the 16 members elected by the various faculties are: in medicine, Dr. J. Kingston Fowler, Dr. E. C. Perry, and Dr. J. Rose Bradford; whilst in science are Sir Michael Foster, M.P., and Professor W. D. Halliburton, F.R.S., Professor W. Ramsay, F.R.S., and Professor W. C. Unwin, F.R.S. Now that the *personnel* of the Senate is so well filled up and the teaching element is brought so completely in line with the institution, we would point out the largeness of the task that is before it as laid down in the statutes. The Senate is to be the supreme governing and executive body of the University and may make statutes, by-laws, regulations, and standing orders, or alter, revoke, and add to them, and in each year shall elect one of its own members to be Vice-Chancellor. There are three standing committees of the Senate to be appointed, and this will be the first duty of the new body. The Academic Council is to consist of 20 members, including the 16 elected by the various faculties, and will deal generally with the matters relating to internal students—i.e., to those who are educated in the schools of the University. The Council for external students is to be formed of 28 members, and will comprise the 16 appointed by Convocation as well as 12 others nominated by the Senate, and they will regulate and report on the standards and examinations for matriculated students who are not working in the recognised schools. The number of the members of the Board to promote the extension of university teaching is at first to be nine, but may be varied at the discretion of the Senate. It is obvious that these committees will plan most of the University work and teaching, although their functions are explicitly stated in the statutes to be merely advisory. The next duty will b[illegible] will be [illegible] by the Senate. [illegible] teachers or examiners in the faculty, or any other teachers or persons thought fit to be members of each board. These bodies are evidently the most important constituents in the reorganised University, for "the Academic Council and the Council for external students respectively, before advising the Senate upon any matter relating to courses of study, provision for teaching, or research examinations, and the appointment of examiners or the granting of degrees or certificates of proficiency, shall invite and receive reports from the boards dealing with the studies concerned." Each board may report to the Senate on these subjects or any matter referred to it by the Senate, and shall, if requested, deliberate with the Senate or any committee thereof. The faculties are composed of the teachers now approved by the Commissioners in the various schools of the University, other appointed teachers of the University, and such teachers as may be admitted into the faculty by the Senate. They have no fixed times for meeting, but can report to the Senate, and their chief object seems to be the election of representatives on the Senate as was done on Oct. 12th. They must also elect a dean in each faculty to act as chairman and to summon the meetings. Convocation has scarcely any duties or privileges, except to elect its representatives on the Senate and a Chancellor on the death or resignation of the [illegible] one.

THE NOTIFICATION OF PLAGUE.

WE are glad to have called forth by our allusion to this subject the important letters of Dr. Thomas Colvin[1] and Sir William T. Gairdner.[2] Any suggestion from Sir William Gairdner for improvements in sanitary legislation has much weight. He exposes the weak part of the Notification Acts They only require the medical man to notify when he has come to a definite opinion that the disease is one of the group [illegible] Acts. This may involve delay, longer or [illegible] to the nature of the case and partly accord[illegible] ness or the temperament of the practitioner. In the case of plague undue delay may be disastrous and in all other cases of infectious disease it is not in the public interest. Sir William Gairdner argues that the Acts should be so modified as to require the practitioner to notify not on a conviction that he is dealing with an infectious disease under the Acts but on a suspicion to that effect. Undoubtedly in many cases this would result in an earlier isolation of an infectious case, but we confess that we doubt the general expediency of sanctioning the notification of suspicions. The case of plague is exceptional and would justify every sanitary authority in special expenditure and efforts to get an early diagnosis. If the powers of such authorities do not extend so far clearly they ought to do so. It seems to us, however, that what is needed is not more notifying power but more medical attendance and, if necessary, the multiplication of medical opinions, with the provision of more isolation wards for suspected cases. The case on which Dr. Colvin and Sir William Gairdner both dwell shows that even in Glasgow as well as in the Hebrides there may be a great deficiency of medical attendance. The patient was seen by a medical man and found to have a temperature of 104° F. and to be "raving," and she was not seen again for 14 days. When Dr. Colvin visited her on Sept. 10th he had no difficulty in diagnosing plague. Obviously what is wanted in such circumstances is the multiplication of medical attendances and medical opinions—at the public expense. This has been already done in Glasgow and to this precaution doubtless, amongst others, we owe the limitation of the disease. The general notification of suspicious cases would, we fear, lead to unnecessary trouble

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[1] The Lancet, Oct. 6th, p 1040.
[2] The Lancet, Oct 13th, p 109C.

ICE-CREAM.

LOVERS of this "delicacy" [illegible] About the middle of August [illegible] rhœa in the district of Mer[illegible] Rochdale, and Dr. J. Henry [illegible] investigated the cases of 146 [illegible] ice-cream supplied by one ma[illegible] all commenced on Sunday, August 12th. The ages of the sufferers were from one to 51 years The severity of the illness varied from slight sickness and fainting to severe vomiting, diarrhœa, dysentery, and death in one case; in some of the cases the temperature was very high and there was extreme prostration. On Monday, August 13th, Dr Henry visited the premises of the ice-cream vendor and found that all the cream manufactured on the Friday and Saturday had been sold. Two vessels containing ice cream in process of manufacture were seen to be within a yard of the pail-closet, and the fine strainer used for straining the milk and cornflour after boiling was within about four inches of a dolly tub in which were babies' napkins soiled with diarrhœal excreta A baby in the house had been suffering from diarrhœa since the previous Friday but had not been medically attended. Dr. Henry is fully justified in his opinion that the contamination must have been introduced into the whole bulk of cream after the boiling process and before the freezing and that the cause of the contamination was probably infection from the diarrhœal motions or from the offensive closet. Considering that the ingredients of ice-cream are admirably adapted for the growth of many kinds of bacteria and that the vitality of these organisms is not destroyed by the lowest attainable [illegible] ous risk to the health of the con[illegible] prepared in close proximity to [illegible]

RADICAL MEASURES IN THE UNITED STATES TO PREVENT THE PROPAGATION OF THE UNFIT AND THE DEGENERATE.

THE [illegible] Journal in its issue of [illegible] In an editorial article to the [illegible] practical measure for prevent[illegible] types of confirmed criminality [illegible] o the relative fecundity of the [illegible] nerate or criminal progeny it says: "It requires no mathematician to discover that the shiftless, the thriftless, the indigent poor—the class which produces relatively the greatest number of criminals and paupers, if not of the mentally deficient, are increasing out of all proportion to the thrifty, the well-to do—the class which produces relatively few of the paupers and criminals. ...... Recent years have added an additional cause—viz , the lavish free treatment by hospitals, dispensaries, and lying in institutions to all who apply." The result is that the weakling, [illegible] threatens serious consequences for the future. Among the fruits of our life-saving and life-multiplying measures are the idiot, the pauper, and the congenital criminal. The article maintains that while our duty to humanity will not allow us to refuse medical aid, there remains a means under proper circumstances of preventing the multiplication of certain of these wrecks and derelicts of humanity. If the confirmed criminal, the pauper, the degenerate—who are incapable of regard for law and society and indifferent to the consequences of their own acts—must be supported by the State, then society certainly has the right to say that such at least shall not propagate their kind. "It is stated that Michigan [illegible] It is contended that a measure like this would at first affect only to a small extent the increase of the population of the degenerate and criminal sort, but it is pointed out that once this measure begins to be put into effectual operation its efficacy will increase year by year. Asexualisation will be regarded by some as a harsh measure, but nothing better has been offered by those who would seek to discourage it, and the future will (it is argued) compel us to take some step to prevent the increase of the hosts of degeneracy and criminality. Regulation of the marriage law would be ineffectual because these individuals have ceased to have respect for the law and the consequences of their own acts. It is known [illegible] already legislated on the ques[illegible] (Pennsylvania) is preparing special legislative enactments in the matter of preventing th[illegible] l and degenerate. [illegible] these measures as interesting signs of the times, and emphasises the fact that the problem of the propagation of insanity and criminality is assuming an acute phase in some of the States in the Union.

THE BRISTOL ISOLATION HOSPITAL.

THERE is no portion of the equipment of a public health department the advantages of which are more universally recognised than a well ordered hospital for the isolation of cases of infectious diseases In most of the largest municipalities of this country su[illegible] years past been doing exce[illegible] lessening, and frequently of [illegible] It has only been necessary in some towns—for example, in Liverpool, Manchester, and Bradford, where commendable foresight has been displayed by the sanitary authorities—to supplement established buildings with suitable additions as the exigencies of an increased population have rendered extension necessary. In others, again, too much reliance has been placed in the past upon the ability of boards of guardians to provide isolation accommodation for those in need of it, so that when it came to be recognised that isolation was necessary not only in the interest of the individual sick person but also of his immediate neighbours these municipalities found themselves in the position of having to erect extensive buildings that ought to have been established years ago. It is remarkable to find among these latter so progressive a city as Bristol, where for years provision for isolation has been most meagre and is even now comparatively of the scantiest. It appears that up to such a recent date as 1886 the sanitary authority of the city shared the responsibility of providing isolation accommodation with the boards of guardians, in what unequal proportions may be gathered from the statement that at one time the boards of guardians could furnish 120 beds and the city authorities only 24, and this small number even in temporary wooden buildings. Latterly, however, the corporation has undertaken the entire responsibility of caring for those who are infected and receives from the board of guardians an annual sum of £300, in return for which all pauper patients are received and treated in the city isolation hospitals. In 1892 the corporation with praiseworthy energy set about the carrying out of its responsibilities and erected at Nover's Hill a permanent administrative block and a small pavilion, and on account of a sudden outbreak of small-pox in 1893 two temporary buildings were erected with accommodation for about 22 patients In 1896 there was begun the erection of more extensive buildings upon an estate which is situated at Ham Green, some three miles from the city boundaries, 100 acres in extent, and which had been recently purchased by the corporation together with a large mansion for the sum of £8695. There is accommodation in five pavilions which have been in use for nearly 15 months for 76 patients. It will be observed, therefore, that Bristol can at the present time isolate only 100 infected persons, although the population of the city is considerably over 300,000, a number necessitating, according to the experience of competent authorities, a hospital or hospitals with at least 300 beds. The cost of the Ham Green Hospital, which, by the way, was erected by corporation workmen and without the intervention of contractors, exceeded £500 per bed, and this sum, which is certainly high, appears to have alarmed the citizens of Bristol and to have delayed the carrying out of the completion of the entire scheme by the erecting upon the very ample site a sufficient number of pavilions to meet the requirements of the city; indeed, it would seem that in some quarters the medical officer of health, Dr. D. S. Davies, has been reproved for asking to have the institution "extended" almost before it is completed, whereas in point of fact there has not been strictly any completion. It cannot be too often emphasised that the cost per bed of a hospital always decreases within certain limits as the accommodation is increased. If the number of beds at the Ham Green Hospital were doubled the cost per bed would be reduced probably to a little over £300, for the outlay upon purely administrative buildings, such as laundry, disinfecting, mortuary, and stabling is not duplicated with a duplication of pavilions. We feel sure that those who have really at heart the prosperity and the well-being of the inhabitants of Bristol will not be led away by any motives of false economy, but will give full effect to the recommendations of responsible officials—recommendations which are tendered with a full sense of the gravity of the interests involved.

MENTAL DISEASES AFFECTING THE YOUNG.

DR. F. MAGNIER, in his *Thèse de Paris*, 1900, shows that apart from idiocy and imbecility there are well-marked and characteristic mental diseases affecting the young before adult life is reached. Among these affections dementia præcox, as already shown in these columns,[1] holds a prominent place. The others include acute mental confusion, acute delirium, *folie périodique*, menstrual psychoses, and paranoia. As regards acute mental confusion it is pointed out that whereas Meynert considered the age of election of this disease to be between 20 and 30 years, several cases have been recorded of its occurrence earlier. Thus Trenel has recorded its occurrence at nine years of age in a girl, of alcoholic and neurotic parentage, consequent upon fright, and Mannheimer has recorded other cases in girls below the age of 20 years. Acute delirium with high temperature and adynamia ending fatally is recorded in two cases by Dr. Magnier, both of which occurred in females of the age of 19 years and 26 years respectively. Periodic insanity in 80 per cent. of cases begins before the age of 25 years, the depressive form occurring especially in the decade between 20 and 30 years of age. Dr. Magnier points out that an insane heredity is present in 80 per cent. of the cases, and he cites the case of a girl with periodic insanity which had its onset at the age of 14 years and was marked by agitation, insomnia, and mutism, while in a second case the disease began at the age of 12 years and was marked by suicidal impulses. Two other cases commenced at the age of 18 years and one at the age of 19 years and a month after parturition. The menstrual psychoses are characterised by agitation, loquacity (singing and talking incessantly), and hallucinations of sight and hearing. They occur during menstruation and subside soon after and recur with the menses. The clinical type is that of adolescent insanity. Though paranoia is a disease of adult life yet transitory excitement may occur in youth from time to time as a prodrome. Thus in one case symptoms of suspicion and auditory hallucination began at the age of 22 years and three years later the delusions became well marked. Another commenced at the age of 21 years. From the facts and cases recorded in Dr. Magnier's *Thèse* it thus appears that the period of youth and adolescence is liable to develop a variety of mental affections.

SANATORIA FOR PHTHISICAL PATIENTS.

IN a report on tuberculosis recently presented to the West Riding County Council, Dr. J. R. Kaye, the county medical officer, makes the suggestion that county councils should provide sanatoria for phthisical patients belonging to the middle classes and that a small fixed charge for maintenance should be made to each sanitary authority sending a patient. This, he says, need not necessarily come out of local rates if the sanitary authority were empowered to obtain it from the patient or by local effort. If 50 beds were provided, and each patient received three months' treatment, then nearly 200 persons could be treated annually. Phthisical patients who are either very poor or actually belong to the pauper class ought to be dealt with by the boards of guardians and the rich have a choice of institutions both in this country and abroad, but nothing has up to the present been done to make the advantages of sanatorium treatment available for members of the working middle class. From inquiries made at various establishments Dr. Kaye finds that the cost of maintenance of each patient receiving treatment in a sanatorium varies from 5*s*. to 6*s*. 6*d*. per day. He also quotes figures as to the cost of erection and maintenance derived from the German sanatoria at Ruppertshain, Worms, Spessart, Munich, Brunswick, Nuremberg, Marcel, Falkenstein, Grabowsee, Bremen, and Würzburg. The ordinary charges made to patients at Grabowsee, Bremen, and Ruppertshain are from 2*s*. to 3*s*. per day.

MOSQUITOES AND MALARIA.

MR. E. E. AUSTEN has published by order of the Trustees of the British Museum an interesting report upon the results of the expedition of Major Ronald Ross, I.M.S., to study the causes of malaria in West Africa. The headquarters of the expedition were at Freetown, Sierra Leone, and cases of fever were studied in neighbouring villages. Immediately after the arrival of the expedition an outbreak occurred at the village of Kissy. In the asylum where the outbreak took place mosquitoes of the genus anopheles were found upon the walls of the building, and Mr. Austen takes occasion to point out that this genus can be easily differentiated from culex by its characteristic attitude when at rest; it appears, in fact, to be standing upon its head, since the body is maintained at an angle of "at least 45°" to the surface upon which the fly is resting. A drawing of the insect in this characteristic position was published in THE LANCET of Sept. 30th, 1899, p. 912. In another place—at Wilberforce—the presence of this particular mosquito was associated with the existence of fever. The coincidence of the fly and the fever was proved by Major Ross to be a real instance of cause and effect, for at Wilberforce the bodies of the anopheletes were found to contain "malaria parasites in various stages." It is, of course, desirable for more than one reason to kill the larvæ as well as the perfect insect, and the work of the expedition was partly concerned with the discovery of the larvæ and with experiments as to the easiest way of killing them. Like other gnats the larvæ are hatched out in quite tiny puddles. As has been shown by other observers the puddles must contain some green weed to serve as food to the developing larvæ. The easiest way of killing them seems to be by pouring a little kerosene, which forms a film on the surface of the pool and thus chokes the insects which must come to the surface to breathe. Stimulated by the economic importance of these investigations upon the connexion of mosquitoes with malaria the Trustees of the British Museum have issued a short report upon the collections of these flies recently received. This work has been entrusted to the well-known dipterologist, Mr. F. V. Theobald.

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[1] THE LANCET, Feb 10th, 1900, p. 397.

HOSPITAL ABUSE AND THE MEDICAL GUILD.

WE give elsewhere (p. 1157) the report of the Medical Guild on the question of hospital reform. The prefatory remark of the Guild only raises our appreciation of their work. They begin by saying that they are impressed with the difficulties surrounding the question. It is obvious, however, that these difficulties will only increase with the lapse of time and that no honest criticism on the subject should be resented or refused by hospital authorities. The Guild does not regard the present inquiries into the fitness of patients as adequate or satisfactory. They are of opinion that by far the greater number of those attending the out-patient department do not require any special treatment and only waste the time and energy of the hospital staff. They consider that the charges exacted from patients are wrong in principle and bad in effect. The profession generally will agree in these conclusions. Meantime the really pitiable and proper cases suffer from inadequate help owing to the presence of crowds of the unfit.

BLOOD-PRESSURE IN ITS RELATION TO ANÆSTHESIA PRODUCED BY CHLOROFORM OR ETHER.

IN the August number of the *Archives Générales de Médecine* Professor Simon Duplay and Dr. Louis Hallion have published a long article on the changes produced in the blood-pressure during anæsthesia from inhalation of chloroform or ether. The object of the investigations which they made on dogs anæsthetised with these substances was to study the respiration and pulse considered in relation to the blood-pressure, the carotid or femoral artery being for this purpose connected with a François-Franck registering manometer and a sphygmoscope, while the respirations were counted by means of a Marey's pneumograph. As is well known the blood-pressure occasionally rises at the commencement of chloroform inhalation and in all cases falls when anæsthesia supervenes. The important, constant, and lasting phenomenon of chloroform inhalation is the fall of the blood-pressure, and the great danger in this form of anæsthesia is the reduction of the blood-pressure below certain limits. Under ether, on the other hand, even when this anæsthetic is given continuously and in relatively large doses, the blood-pressure remains for a long time at about normal or even above normal. In fatal cases of chloroform toxæmia, in certain cases, probably in most, the respiration ceases before the heart's action stops. Many have thought that the stoppage of the respiration was the cause of the stoppage of the heart, so that death under chloroform was really due to asphyxia. Under ether, however, primary heart failure is very rare. Even respiratory failure only occurs, if we omit cases in which mechanical causes for it are present, when the anæsthesia is so profound that the medullary centres are deeply narcotised. In these cases the blood-pressure falls and the mechanism of respiration passes into abeyance owing to the cessation of nerve stimuli from the poisoned centres. In practice these perils practically never occur unless as a result of pre-existing disease or of the oversight of the most obvious signs of danger. Professor Duplay and Dr. Hallion maintain, on the contrary, that in the case of chloroform deaths are never due to failure of the respiration, relying on several arguments, one of which is as follows. When syncope is fully established let artificial respiration be substituted for the natural respiration (currently supposed to be insufficient when the animal is profoundly under the influence of the anæsthetic) and at the same time let the administration of the anæsthetic be continued. If the failure of the circulation which caused the syncope were really due to the anæsthetic interfering with the respiration the syncope ought to be recovered from under artificial respiration, but this, according to Professor Duplay and Dr. Hallion, never happens, for the circulation does not improve and finally stops altogether. M. C. Richet has pointed out that when alarming symptoms are induced by the anæsthetic administered for a surgical operation, artificial respiration and rhythmical traction of the tongue are resorted to the air thereby thrown into the lungs is more than sufficient to prevent death from asphyxia. The real cause of death in such cases is that the cardio-vascular apparatus has been paralysed by the anæsthetic at the same time as are the respiratory centres. Stoppage of the respiration, although not serious in itself, is nevertheless an extremely important symptom, for it indicates the near approach of irremediable interference with the circulation. The patient almost always survives if the anæsthetic is stopped and artificial respiration practised as soon as the natural respiration has ceased, but if at this stage the cardio-vascular apparatus happens to be so affected that the blood-pressure has fallen nearly to zero the case is hopeless. Professor Duplay and Dr. Hallion hope that they will be able before long to describe a method of ascertaining the blood-pressure during surgical operations under anæsthetics.

STREET RUFFIANISM.

WITH the waning of the hours of daylight the Hooligan seems to have taken for his motto the old verse, "Uprise ye, then, my merry men, it is our opening day." His "bag" so far includes a man named Schafer, aged 32 years, knocked down and kicked in Gibraltar-row, Bethnal-green, on Oct. 7th, with the result that he died on Oct. 11th; a boy named Hiscoke, aged 17 years, fatally stabbed in Harwar-street, Kingsland-road, on Oct. 9th; and a man in Hackney killed by a blow on the jaw. To this list may be added an assault upon the landlord of the King's Arms in the Westminster Bridge-road, a murderous assault upon a man named George Acton in Commercial-road, a highway robbery on Hampstead Heath, and two faction fights in Clerkenwell. The inquest upon the body of Hiscoke was held on Oct. 13th, when the coroner's jury returned a verdict of "Wilful murder against some person unknown" and left the matter in the hands of the police. A like verdict was given on Oct. 16th in the case of Schafer. As long as the Hooligan confines himself to pure faction-fighting it would, perhaps, be a pity to stop him, in the hope that by a process of exclusion the contending gangs might gradually be weeded out, but it is a different matter when a gang sets upon an inoffensive passer-by. The law, of course, is to blame, in that the punishment which it inflicts for simple assault, so long as the victim is robbed neither of a few pence nor of his life, is most inadequate. In the former case the assailant gets a long term of imprisonment and possibly in addition a flogging, and in the latter he is, or can be, hanged; but for the ordinary assault a short term of imprisonment is considered enough, and even so magistrates very often do not give as heavy a sentence as they are entitled to. A month or ten days' hard labour, or a trifling fine, which latter is paid by a "whip round" of the gang, is a trivial penalty. It is true that simple imprisonment has no terrors for the rough. There are only two ways of dealing with him—one by inflicting physical pain, the other by making him work, and work hard. All perpetrators of brutal assaults should be soundly flogged. It would be a good thing, too, as was suggested by one of the morning papers, to levy a sort of blood tax upon the inhabitants of the district in which such outrages take place. A vigilance committee would doubtless be formed and very soon the Hooligan would find the district too hot to hold him. But though no mercy should be shown to the full-blown Hooligan the tender shoot of the same plant should be treated with consideration The growing boy in London is beset with temptations of every kind, and, despite the enormous sums wasted by the school board in giving an education which they were never meant to give, there are far too many truants. Neither are parents blameless in the matter. As was well shown, however, by a correspondent of the *Times* of Oct. 15th, it is the fatuous way in which the school board selects cases for prosecution for non-attendance which feeds the criminal classes. Mr. C H. Eliot, the writer of the letter, puts the case very clearly as follows :—

> "For instance, guided solely by the registered attendance, the board will apply for a summons against the widow whose eldest son has left school a few weeks too soon, to take advantage of a promising opening and help his mother; while the young *gamin* of 11 who is fast learning the life of the streets escapes for months, and often altogether. Here is the reason. The boy who catches the infectious wandering instinct so common among London boys begins by staying out late at night; then he is away from home all night; next, after an interval of regular school attendance (he is a sharp lad), he is out for three nights; then, after another interval, a week; then a fortnight. During all this time his attendance is but little below the average demanded, and no inquiry is made. So he will go on for months, and then perhaps he is convicted of stealing. All the time he has been an associate of thieves and so becomes one himself. The school board has never found it out, because his average attendance was good enough. But all the time he is a criminal in the making, and it is obviously better that the law should be enforced against him and his parents than against the respectable son of the widow who leaves to help his mother"

Prevention is better than cure: by all means let the murderous rough meet with due punishment, but let us do what can be done to stop him in the making. It is fair to add that a letter appears in the *Times* of Oct. 18th from Sir C. A. Elliott directly traversing Mr. C. H. Eliot's statements.

POST-OPERATIVE HÆMATEMESIS.

The *Boston Medical and Surgical Journal* of Sept. 27th contains an important paper by Dr. K. Winslow on this obscure subject. Post-operative hæmatemesis is not described in the text-books and is scarcely recognised in surgical literature. In his lectures on the Surgery of the Stomach Mr. Mayo Robson[1] alludes to the subject. He states that he has observed hæmatemesis after operation in cases of intestinal obstruction and tuberculous peritonitis, and after cholecystotomy, choledochotomy, herniotomy, ovariotomy, and simple exploratory laparotomy. Two cases were fatal. In one case cholecystotomy was performed under cocaine for cancer of the common bile duct Violent hæmatemesis set in on the day after operation and proved fatal in three days. At the necropsy nothing was found in the stomach to account for the bleeding. Dr. Winslow relates the following case. A very stout woman, aged about 65 years, had for many years an umbilical hernia as large as an infant's head. Vomiting and colic occurred, which lasted six hours Unsuccessful attempts at reduction were made by taxis and ice bags. Under ether an elliptical incision dividing all the structures in the abdominal wall down to the peritoneum was made, according to the method of Condemin. The peritoneum was opened on the left side and the finger was introduced into the hernial ring from the abdominal cavity. The sac was completely divided from within by a transverse incision through all the tissues The contents—the transverse colon, the small intestine, and the omentum—were exposed. There were many adhesions which were readily separated. A small portion of the omentum was ligatured and removed. The whole sac was excised. The wound was approximated with difficulty and was closed by interrupted silkworm-gut sutures passed through all the layers of the abdominal wall The operation occupied a little over an hour and the patient rallied well. Some vomiting followed but progress was satisfactory. The temperature rose a degree on the second day, but fell to 99° F. on the third. In the evening the patient began to vomit. The nurse noticed for the first time that dark fluid was coming up. About midnight the patient vomited an enormous quantity of dark blood and then suddenly died. At the necropsy much dark clotted blood was found in the stomach and intestines, but no lesion was discovered. There was no evidence of infection. The wound had healed by first intention. A typical instance of post operative hæmatemesis is recorded in this issue of The Lancet by Mr. Mansell Moullin. A young man, aged 23 years, died from hæmatemesis within 48 hours after a small incision into the left iliac fossa The cause of post opeatrive hæmatemesis is unknown. Vomiting after the anæsthetic will not account for it, for it has occurred in cases where such vomiting was absent. Eiselberg, however, seems to have established some connexion between it and injury of the omentum. In six cases observed by him the omentum was ligatured. In an experiment on an animal multiple hæmorrhages into the stomach followed twisting of the omentum. But Rodman failed to get this result in four experiment. He believes that sepsis is the cause of the hæmatemesis, since sepsis favours disintegration of red corpuscles and the gastric mucous membrane is specially liable to congestions. As to treatment, Mr. Mayo Robson recommends free purgation with calomel and rectal feeding. He has not ventured to operate because the indications were not clear and the patients were not, as a rule, fit to bear a second operation.

FATIGUE PRODUCTS.

The eating of "high" game is undoubtedly attended with risks and the poisonous effects are probably due to the toxins produced in the earlier stages of the putrefactive process. The advantage, of course, of hanging game is that the flesh becomes tender and decidedly more digestible than when it is quite fresh. The ripening process, however, may mean the elaboration of toxins. It has been stated that the production of the characteristic flavours of game is related directly to the amount of sulphuretted hydrogen or sulphur-alcohol set free, but it is rather repulsive to think that the delicate flavour of game is dependent upon that invariable product of decomposition of rotten eggs—sulphuretted hydrogen. The smell evolved during cooking of "high" game is even more disgusting. It is a curious fact, however, that game can be made to look "ripe" and green by injecting into the fresh flesh potassium sulphide. The poisonous properties of high game are probably not due to such simple putrefactive products but rather to very complex bodies possibly of the nature of alkaloids. Fresh game, however, sometimes sets up mysterious poisonous symptoms which have been attributed to the fact of the game having been over-hunted and fatigued. Fatigue products indeed have been separated from over hunted game which, when injected into a healthy animal, have produced marked poisonous effects There is no doubt that fatigue products under certain circumstances are also elaborated in the human body and give rise to a species of self-poisoning, characteristic symptoms of which are headache, stupor, and gastric and intestinal pains The flesh of over driven [illegible] Liebig, [illegible] of a [illegible] been caught in a snare gave rise to symptoms of poisoning when partaken of. Again, fatal results ensued when pigs were fed upon the flesh of a horse which had died during its struggles when being broken in This curious formation of poisonous products in the flesh of animals through a state of terror or exhaustion is a question well worth considering in relation to the wholesomeness of animal foods and emphasises the importance of slaying animals intended for food in the most humane way and without inducing terror or fatigue

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[1] The Lancet, March 10th, 1900, p 671

THE ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

[illegible] will be made on July 14th, 1901, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered Essays intended for competition may be upon any subject in medicine, but must not have been published and must be received by the secretary of the College on or before May 1st, 1901 Each essay must also be sent without signature, be plainly marked with a motto, and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author It is a condition of competition that the successful essay or a copy of it shall remain in the possession of the College, other essays will be returned upon application within three months after the award The Alvarenga Prize for 1900 has been awarded to Dr David De Beck of Cincinnati, Ohio, for his essay entitled "Malarial Diseases of the Eye"

THE GENERAL ELECTION.

THE General Election has now (with one exception) decided who are and who are not to represent the country in Parliament, and we have to congratulate the following members of our profession upon their election —R Ambrose, L R C P & S Edin (Mayo West), John Dillon, L R C S Irel (Mayo East); Sir R B Finlay, Q C who was at one time a medical practitioner (Inverness Burghs), R Farquharson, M D Edin (Aberdeenshire), Sir M Foster, K C B M D Lond (London University), Sir W Foster, M D Erlang, L R C P Lond (Derbyshire, Ilkeston), F Rutherford Harris, L R C S Edin (Monmouth District), M A MacDonnell, M D R U I (Queen's Co Leix), R J Price, M R C S Eng, who like Sir R B Finlay, long since deserted the profession of medicine for that of the law (Norfolk East), C K D Tanner, M D, M Ch R U I (Mid Cork), and Sir J Batty Tuke M D Edin (Edinburgh and St Andrews Universities) With the exception of Mr Rutherford Harris whose connexion with the British South Africa Company is well known, all these gentlemen were members of the preceding House of Commons Sir Charles Cameron, we regret, did not seek re election at the hands of his Glasgow constituents The following medical candidates were defeated G B Clark M D, F R C S Edin, J Court L R C P Lond, M R C S Eng, A Conan Doyle, M D Edin, J I Fox, M D Univ Cincinnati, F R C P Kingston, Canada, A P Hillier, M D Edin, J King Kerr M D R U I, Chas O'Neill, M D R U I, V H Rutherford, M B Cantab L R C P & S Edin, E C Thompson, M B, T C D, F R C S Irel, and Sir George Pilkington, M R C S Eng, L S A Of these Dr Clark Dr Fox and Sir George Pilkington sought re election Mr Marshall Hall, Q C, who has been returned for the Southport division of Lancashire, defeating Sir G Pilkington, is a son of the late Dr Alfred Hall of Brighton who attended the late Mr Wakley, M P, the Founder of THE LANCET

BACTERIOLOGICAL DIAGNOSIS AND ITS RESULTS

THE Islington Vestry has set a good example to other vestries in offering to examine the sputum and blood of persons suspected to be suffering from diphtheria phthisis, and enteric fever In the second quarter of this year in 57 instances medical practitioners availed themselves of this valuable offer The results are interesting In regard to diphtheria 19 *examinations were made*, of which eight resulted in a positive diagnosis and 11 in a negative, in regard to enteric fever the blood of 21 persons was examined, in four cases it gave positive results and in 17 negative, in regard to phthisis, the sputum was examined in 17 instances and the bacilli were discovered in only seven specimens The medical officer of health gives the figures of the Jenner Institute for each of these diseases in the examinations since 1898 Of 171 cases suspected of diphtheria the results were negative in 95 Of 161 cases of supposed enteric fever 93 were negative, of 127 cases *examined for tubercle 70 were negative* The public provision made by the Islington Vestry follows logically from the Notification and Isolation Acts and will be much appreciated by the profession until bacteriological work is simplified

AT the funeral of the late Mr J F France, formerly ophthalmic surgeon to Guy's Hospital whose death we announced last week, the Royal Medical Benevolent College was represented by Dr C Holman, the treasurer, and Mr J Bernard Lamb, the secretary, while the Royal Asylum of St Anne's Society was [illegible] the secretary The lat[illegible] presentations for fema[illegible] presentations being he[illegible] school of St Anne's S[illegible] tioners being entrusted by deed to the Council of Epsom College

THE first meeting of the session 1900-1901 of the Odontological Society of Great Britain will be held at 20, Hanover-square, W, on Monday, Oct 22nd, when the President, Mr John Ackery, will deliver his inaugural address The chair will be taken at 8 P M Casual communications will be given by Mr Walter Harrison, on Abnormal Roots; Mr Sim Wallace, on Twisted Roots, and Mr W A Rhodes, on the Mechanical Treatment of Superior Protrusion Mr A F Baker will show and present to the museum some interesting old operating instruments

THE death is announced, at the age of 61 years, of Dr. David Young, formerly resident in the Via Venti Settembre, Rome The deceased was M D of the University of Aberdeen and a Fellow of the University of Bombay and also Examiner in Midwifery For some years he was, in addition, Professor of Botany at Grant Medical College He was the author of a work upon Italian climatology called "Rome in Winter and the Tuscan Hills in Summer"

AT the opening meeting of the Cardiff Medical Society, held on Oct 12th, Dr Edward Walford read his presidential address upon Reforms in the Procedure of Death Certification Dr W G Savage gave some interesting details of the methods which were adopted in the bacterioscopic examinations conducted in connexion with the fatal case of plague which recently occurred in the Cardiff Sanatorium

THE medical service in state at St Paul's Cathedral under the auspices of the Guild of St. Luke was held on Oct. 17th. The Bishop of Rochester preached the sermon and the London Gregorian Choral Association—the choir consisting of 300 voices—rendered the musical part of the service in a most impressive manner.

WE regret to learn that Professor A. W. Hughes of King's College, chief superintendent of the Welsh Hospital, now returning home on board the *Saxon*, is suffering from an attack of enteric fever. He is reported to be progressing favourably.

ON the occasion of the Annual Public Night of the Medical Society of University College, London, held in the College on Wednesday evening last, an interesting address was given by Dr. Judson S. Bury on Bias in Clinical Medicine.

THE London County Council have issued a circular drawn up by Mr. James Cantlie upon the signs and symptoms of plague for the use of metropolitan medical practitioners. We shall notice this circular at length next week.

A REUTER'S telegram of Oct. 9th from Brisbane states that a fresh case of plague has occurred there.

THE WAR IN SOUTH AFRICA.

WE are still compelled to speak of the war in South Africa, although it cannot any longer be properly called so, for it has degenerated into a species of what was termed in the last Burmese war, dacoity. The remains of the dispersed Boer forces, aided and abetted by a friendly and sympathetic Boer population, continue to make raids in various directions, to wreck trains and interrupt communications, and to do everything in their power to harass the British forces. The extent of territory conquered and occupied by the Queen's troops, the nature of the country, the length of the railway and telegraphic communications, and a disaffected population, all lend themselves to operations of this irregular kind. The news during the past week is indicative of a recrudescence of a feverish activity on the part of the enemy. Lord Roberts has postponed his own departure and has delayed that of some of the colonial troops until things shall have assumed a more settled and satisfactory aspect. However annoying the present state of things may be it cannot be said to have been unexpected, and the situation has to be faced and overcome. While enteric fever has become far less prevalent than it was there is still a good deal of dysentery—happily of the mild catarrhal and more easily treated form, as a rule—among the troops in the field. The army, as a whole, however, is healthy and in excellent spirits. Lord and Lady Roberts inspected the Langman Hospital at Pretoria on Oct. 19th. Transports with invalids from the seat of war are frequently arriving in this country, and, as a rule, the health of the sick and wounded has been greatly benefited by the voyage.

The Boer prisoners at St. Helena are healthy. Very few of them are in hospital at the present time. Among the deaths that have recently occurred three have been from tuberculosis.

When the history of this war comes to be written the very gallant and plucky defence made by a small force of colonial troops shut up at Elands river camp, Brackfontein, will form one of its brightest pages. Not only is that the opinion of those acquainted with all of the circumstances but the correctness of their judgment has been since ratified and corroborated by Lord Roberts himself in highly appreciative terms. A brief statement of the facts is well worthy of being put on record. The force, composed of Australians and Rhodesians, consisted of 22 officers and 480 men under the command of Colonel Hore. They had with them one small 7-pounder muzzle-loader gun (for which there were only 100 rounds of ammunition) and two Maxims and a large quantity of provisions and stores. It appears that the small garrison held a smoking concert in camp on the night of Aug. 3rd. Early on the following morning the troops were awakened by the bursting of shells in their camp, which covered about four acres on a kopje, and they soon found themselves in a very tight place as they were surrounded by a Boer force estimated at 3000 under the command of Delarey. The only medical officer present with the besieged garrison was Captain Albert Duka, Army Medical Corps, Queensland Defence Force, who had volunteered and had been selected to accompany the Australian contingent to the seat of war. We are indebted to his father, Surgeon-Lieutenant-Colonel Duka, a retired officer of the Indian Medical Service, for the opportunity of reading a communication from his son written from Mafeking, whither he had proceeded after the relief of the besieged garrison at Elands river. We cannot do better than adhere closely to the interesting description of the siege given in this communication. Captain Duka's experience of the war was probably unique. The shelling of the camp began on the morning of August 4th and went on all day. There were 32 casualties, nearly all of which (26) were severe shell-wounds. He was told that there were 1800 shells sent in on that day and 700 on the next; then, either because the Boers were running short of ammunition or because the fighting part of the garrison were disappearing underground, the Boer fire became less lively, although not a single man could move across the square and show his head across the breastwork without having a large number of bullets fired at him. This sort of thing went on for 12 days, when Lord Kitchener arrived with his division. The Boers evidently knew that he was coming and they withdrew their guns two days before, but kept the besieged quiet by sniping. Captain Duka adds that he had no one to assist him who had had any previous training. His hospital consisted of three ambulance wagons and a small four-feet high parapet formed of biscuit boxes round two sides of it. After the second day of the siege, and when the men could be spared for the work, which was all done at night, this parapet was raised another two feet and strengthened by earth and stones thrown up at the back of the biscuit boxes. He had over 70 casualties altogether, five men being wounded in hospital a second time by shells bursting inside it. All the wagons were much knocked about, but Captain Duka fortunately escaped being hurt and was able to carry on his work throughout. There were 73 killed and wounded (51 whites and 22 natives). The great majority, 65 per cent., of the wounds were from shells, and he performed three amputations and had 48 other operations, such as the extraction of bullets, fragments of shell, &c. It must have been very gratifying to this medical officer to find himself on the day after the relief of the garrison presented by the men with the only new pipe in the camp with an inscription cut on the bowl of it and to have heard their cheers in token of their sense of the work which he had done. Nearly all the horses and cattle belonging to the force were killed during the siege. General Carrington, it will be remembered, had previously proceeded to the relief of the very hard-pressed garrison but had been unable to achieve his object. As indicative of the topographical and other difficulties of the country Captain Duka remarks, *à propos* of the attempts to surround De Wet: "In the country we are in it is no wonder that the generals cannot catch De Wet and others, as there are any amount of parallel, or nearly parallel, valleys. One day a patrol of 70 men was out; the Boers knew where we were going and sent 200 men of Delarey's force with a quick-firing gun to catch us, but we came back by another road and although it was only two miles off as the crow flies they either did not know we were passing or could not get at us." It is not hard under such conditions to realise the ease with which the Boers, who know every inch of the country, can elude us. Again, "The reason why convoys are lost is because too few men are in charge, or, as in our case, mounted troops without guns are left to take care of large stores, and although they may manage to keep the post and stores they become practically useless as their horses are destroyed and their mobility lost." In the case of the Elands river the difficulty of the defence, had the siege been prolonged, would have been want of water. There was an ample supply of stores with the force and it was the anticipated capture of these no doubt that led to the attack being made. The Boers never risk fighting in the open if they can help it, but usually keep at a long distance

1500 yards) off, unless they can secure a strong kopje and vell protected position.

MALARIAL EPIDEMIOLOGY.

A FURTHER "Contribution to the Study of the Epidemiology of Malaria in the Light of Recent Views of its Etiology," by Professor A. Celli, appears in the *Supplemento al Policlinico*, anno vi., No. 48 Researches have been carried on not only on the estate of Cervelletta in the Roman Campagna, but at various other stations in different parts of the Italian peninsula—namely, at Trinitapoli in the province of Foggia, at Argenta near Ferrara, at Mantua in the Ospedal Maggiore of Milan, and at Cumignano in the province of Cremona Observations were also made in several localities in the province of Novara (Trecate, Cerano, Vercelli, Asigliano), and in the Alpine valley of Sondrio. In this way Professor Celli was enabled to control the facts elicited by a study of the statistics and clinical reports of large hospitals, such as those of Vercelli, Novara, Mantua, and Ferrara, by observations in the Campagna and at the homes of the patients themselves. He was thus able to study not only the mild cases which never find their way to a hospital, but also those which are treated at home and those occurring among persons who leave after the field work is over. Note was taken of the following points 1 The distribution of the malarial parasite in the peninsula exclusive of Latium. 2 The occurrence of multiple infections and of relapses 3. The relations of the epidemic with mosquitoes, with agricultural life, and with the temperature.

As regards the first of these, parasites of malignant forms predominate in the provinces of Foggia and Salerno as they do in the Roman Campagna. Professor Celli was surprised to find them also common in the valley of the Po where malaria of the summer autumn type is distinguished by the peasantry as "August fever," although by medical men, including even Golgi, its existence there was not admitted He was still more surprised to find a spot in the Alpine valley of Sondrio where at the middle of September all the fever cases were of this grave type The plain of the Adda in the Lower Valtellina, at an elevation of from 400 to 700 metres, formerly very malarious, still has foci of disease—as, for instance, at [illegible] ere were bad autumn tertians [illegible] rsh larvæ of mosquitoes were [illegible] grave tertian forms, with a [illegible] which they present in the Roman Campagna, are common in the valley of the Po the cases, so numerous in Latium, of deadly pernicious malaria are rarely met with. The free use of quinine probably explains this scarcity of pernicious cases, although it has been powerless to diminish the zone of diffusion of malaria in general

The occurrence of multiple infections—that is, of two or [illegible] observed very frequently. [illegible] reat importance, is that of [illegible] listinguished from pseudo-relapses where we have to deal not with a relapse proper but with a fresh infection of a previously malarious patient. The distinction is not yet possible in the mild tertian, but in the quartan a diagnostic guide is afforded by the fact that gametes are very abundant in the circulating blood of true relapses, whereas they are absent or extremely scarce in the pseudo-relapses. In autumn tertian the differential diagnosis is still easier, the successive attacks of true relapses gradually diminishing so much in force that the patient is able to walk about during their occurrence, whereas a new infection always prostrates, even when the patient has previously suffered from malaria. In true relapses semilunar bodies are present, while they are never found in primary infections. It is interesting to note the course of true relapses in the different types of fever and in the various months of the epidemic year, which Professor Celli claims he has shown to extend from one summer to the next When the fresh infections of autumn tertian come to an end in October, as happened last year, they are at their maximum in August and September, gradually declining in number through June and July. The relapses of quartan, on the contrary, gradually increase in frequency from October on into July and August, and the summer-autumn tertian re commences before the quartan, which in Latium, as well as in northern and southern Italy, is the last to yield relapses and the last to begin them. The mild tertians have their maximum of relapses in the spring, as may be well seen in Lombardy, where they precede the development of grave tertians in June Why the period for the relapses of summer tertian should not correspond with the approach of its epidemic year, as is the case with quartan and spring tertian, has not yet been made clear Long intervals may elapse between the relapses of summer tertian and of spring tertian Quartan is more persistent and continuous in its relapses in spite of the use of quinine

As to the relation between mosquitoes and epidemics of malaria, Professor Celli found anopheles wherever there was fever. The commonest variety was the anopheles claviger, but in the neighbourhoods of Ferrara and Vercelli the anopheles pictus and the anopheles pseudo-pictus were also abundant, and in the alpine zone the anopheles bifurcatus The presence of anopheles was, however, noted in localities which were perfectly healthy and at great altitudes where malaria had never been known These insects may therefore be conveyed with man and his belongings, hay, animals, vehicles, &c, far from genuine malarious centres; and hence the geographical distribution of anopheles cannot coincide with the geographical chart of malaria Consequently it cannot be asserted absolutely that the anopheles is always and of itself a sure indication of malaria But wherever anopheles are present, and there are men with malarial gametes in their blood whom they can bite, and where at the same time the temperature is suitable for the development of the parasite in the mosquito's body, it may be confidently predicted that an outbreak of malaria will occur In this respect epidemiological studies confirm the experimental observations of Ross, Grassi, Bignami, and Bastianelli on the multiplication in the middle intestine of the anopheles of the parasite of human malaria and on the negative rôle played by the culex in the propagation of this disease The city of Mantua offers a typically demonstrative instance of this fact, its central part being infested by culex but quite free from malaria, while in some quarters at its periphery where there are innumerable anopheletes in the houses and larvæ of anopheles in the neighbouring lakes and ditches a severe epidemic of malaria has prevailed during the last two years

It is interesting, Professor Celli remarks, to note the relation in various particulars between malaria and agriculture. Epidemics may arise in connexion with the cultivation not only of the essentially malarial crops such as rice, but also of crops in themselves dry and healthy, when these latter demand the presence of work-people during the unhealthy months for the reaping and threshing of wheat, the harvesting of maize, and the cultivation and ingathering of beetroot Professor Celli distinguishes two epidemic types. To the one, with its minimum number of cases in June, belong the epidemics of Milan, Pavia, Crema, and Ferrara, and this type is, therefore, specially connected with irrigation crops; to the other, with its minimum of cases in January and February, belong those of Rome, Cagliari, Vercelli, and Mantua In the first case the epidemic, mostly of mild tertian, commences in June with the cleaning of the rice and reaches its height during the reaping and threshing, when the "August fevers" above mentioned are at their maximum. In the second type the fevers are rare in June, more common in July, and reach their maximum in August after the threshing season When the summer is prolonged, and in the warmer zones such as the Pontine Marshes, the harvesting of [illegible] and October gives rise to a late epidemic. [illegible] of beetroot under very insani- [illegible] ugment the malaria epidemic. The tanks for the maceration of textile plants (hemp and flax), with their collections of stagnant or nearly stagnant water, by favouring the development of mosquitoes likewise favour that of malaria The process of maceration itself, regarded as so dangerous that special sanitary regulations are in force regarding it, has, Professor Celli believes, a contrary effect by destroying or retarding the growth of larvæ

Finally, with regard to the relation between the atmospheric temperature and epidemics of malaria, Professor Celli says that it would appear that the latter must be preceded and accompanied by a temperature of about 25° C. (77° F) but on this point he reserves any definite opinion for the present.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on Oct. 11th, the President, Sir **WILLIAM MACCORMAC**, Bart., K C.V O., being in the chair.

The **PRESIDENT** reported that Dr. Alexander MacCormick, M.R C.S. Eng., Lecturer on Surgery in the University of Sydney, N S.W., and recently a consulting surgeon to H.M. Forces in South Africa, had, owing to a capture of the mails by the Boers, not received the invitation of the Council to attend the centenary festival for the purpose of receiving the diploma of Honorary Fellowship. Dr. MacCormick was then elected to the Honorary Fellowship and was introduced and admitted an Honorary Fellow.

The **PRESIDENT** reported that a letter had been received from the Secretary of State stating that Her Majesty the Queen had graciously received the address of condolence from the College on the death of H.R.H the Duke of Saxe-Coburg and Gotha.

It was resolved that the first volume of the Catalogue of the Physiological Series of Comparative Anatomy be offered for sale at 12s. a copy.

The Council adopted the report of the Finance Committee and passed the balance sheet which had been approved by the auditors. The chief points in the report are as follows. The gross income of the College for the past year was £25,211; this is an increase of £500 on the income of the previous year This increase was chiefly due to an advance in the amount of the fees from the examinations for the Diploma in Dental Surgery as a result of an alteration in the fee for the diploma, but in future years the effect will not be so marked, as under the new rules fees are no longer returned to unsuccessful candidates. The fees from the examinations of the Conjoint Examinations Board had diminished by £1094, and the falling off was most marked in the case of the third examination. As the expenditure for the year only differs from the amount of the previous year by £6 there is a credit balance of £1645 on the year. The extraordinary expenditure amounts to £999 and is £453 heavier than the previous year. It includes the costs of the Crown in the appeal respecting the taxation of the College, payment of Corporation Duty for five back years, and the fees for the new charter.

With regard to the regulations relating to the fees for the diploma of Fellow adopted by the Council on July 25th, 1900, the committee are of opinion that some modification is desirable in the case of candidates who commenced their course of examination before that date. The regulations previously in force contained the following provisions, viz. :—

> Provided always that no candidate for the diploma of Fellow shall be required before admission to examination or otherwise to pay altogether more than 30 guineas, and that the moneys paid by each candidate and retained as aforesaid shall be treated as the fee payable and paid by such candidate on admittance to the diploma of Fellow.

The committee think it right that candidates who entered for the examinations for the Fellowship under this condition should be allowed a reasonable time in which to obtain their diplomas without any alteration of the condition, and they accordingly recommend the Council to adopt the following regulation, viz. :—

> Candidates who have presented themselves for examination for the diploma of Fellow under the regulations in force before July 25th, 1900, will not be required to pay altogether more than 30 guineas in examination and admission fees, provided that they become qualified to receive the diploma of Fellow before October 1st 1902, or within 10 years from the date of their registration by the General Medical Council as medical students.

The Council elected Mr. Arthur S. Underwood a member of the Board of Examiners in Dental Surgery (Dental Section). Mr. J. Langton was elected a member of the Committee of Management in the vacancy occasioned by the retirement of Mr. T. Bryant. Mr. H. Morris was re-elected a member of the Laboratories Committee The Council nominated Mr. Alfred George Sworn as the eighth Jenks Scholar. Mr. Sworn was recently a student at Epsom College and is now a student at University College, London.

The arrangements for the Cartwright Medal have been completed and a scheme has been drawn up for its award; its chief provisions are as follows. The prize shall consist of a medal and a sum of money which are to be awarded quinquennially for the best essay on a subject previously selected by the Council. Candidates for the prize must be persons engaged in the study or practice of dental surgery and possessing qualifications capable of [illegible] the Medical Acts of the United Kingd

A Member of the College has been called upon by t Council to show cause why he should not be removed fro the roll of Members on account of his connexion with t "Drouet Institute," and the attention of the Gener Medical Council was directed to the advertisements of person who has illegally assumed the description "R D (R.C S Eng.)," and they were requested to take the matt into consideration with a view to action under Section of the Dentists Act, 1878.

The **PRESIDENT** reported on behalf of himself and t Vice-Presidents that in pursuance of the resolution of t Council on July 25th last they had addressed a letter to t Marquis of Salisbury again urging his lordship to appoint departmental committee to inquire into the prevalence an treatment of venereal disease among the civil population this country, and a reply was read stating that the subje would receive the consideration of Her Majesty's Government.

A vote of thanks to the Centenary Committee was carrie

THE OPEN-AIR TREATMENT OF CONSUMPTION.

A CONFERENCE of the representatives of Poor-law authorit in the metropolis was held in St. Martin's Town Hall o Oct 15th to consider the question of establishing hospital for the open-air treatment of consumption.

Mr. J. Z. **CAHILL**, the chairman of the Poplar an Stepney Sick Asylum District Board, presided and there wa a very large attendance of delegates, including medical men Members of the National Association for the Prevention of Consumption were also present, as was Dr. Downs o the Local Government Board, who was not present in a official capacity. The secretary read the following lette which had been sent to the various Poor-law authorities by the Poplar and Stepney Sick Association District Board

> For some considerable time the Board of Management have ha under consideration the subject of the open air treatment of phthisis with a view to the establishment of a hospital for the special care o such cases. The managers are of opinion that by the proper treatmen of the disease in its early stages much good would result to the patient; in many cases probably a permanent cure would be effected, and they are convinced that this would be best achieved and maintaine by the open-air method now being advocated in so many quarters. In the Poplar and Stepney District Sick Asylum on a recent occasion there were 65 phthisical cases, many of which would in the early stages of the disease probably have derived much benefit, if not actual cure, could they have had the advantage of the open-air treatment of their ailment when in its incipient stage After a conference with the representatives of the boards of guardians and medical officers and clerks of the unions comprising the district the question has taken a more practical form and has resulted in a deputation of the managers waiting on the Local Government Board on the subject In receiving the deputation the Local Government Board expressed its sympathy with the managers in their desire to provide the class of accommodation referred to, but objected to the managers taking individual action in the matter, the question, in the Board's opinion, having a metropolitan rather than a local character, and, entertaining this view, the Board intimated that provision, if made at all, should be for the metropolis as a whole and be under the management and control of a metropolitan authority. The Board also suggested that if th [illegible] to pursue the matter further a conference [illegible] Poor-law authority in the metropolis should [illegible] discuss the subject, and in the event of such [illegible] the provision of the proposed accommodation desirable it should address the Local Government Board on the subject and thus give the views [illegible] generally on the question. The managers will feel [illegible] kindly bring the matter under the notice of your [illegible] to a conference being held to discuss the subject ...

Dr. J E. **SQUIRE** said that facts furnished a strong argument in favour of a combined effort on behalf of the London Poor-law guardians to give more effective treatment to the consumptive poor, the proportion of this disease among the inhabitants of the metropolis being greater than in other divisions of [illegible] The habits of life of the po [illegible] in this respect were [illegible] but also to other members o [illegible] point to notice was that by the sanatoria treatment, whilst giving to individuals the best chance of recovery, the importance of hygienic living was impressed upon them and a knowledge of hygiene was likely to be more widely spread.

Dr. **NATHAN RAW** gave a brief outline of what had [illegible] done in Liverpool and the success which had attended [illegible] efforts of the Poor-law guardians in the sanatoria treatment

Mr. J. H. **RUTHERGLEN** (clerk to the Kensington Guar urged that the number of phthisical patients chargeable the various boards in London should be estimated and that the [illegible] ment to voluntary notification [illegible] which tended to remove the [illegible] able to consumption would al[illegible] other diseases [illegible]

Dr. BURTON-FANNING gave his experiences with regard to the open-air treatment of consumption, which were very satisfactory, and suggested that as an experiment rural infirmaries, where he was of opinion that 25 per cent. of the beds were unoccupied, should be utilised as sanatoria.

Dr. A. H. DOWNS, medical inspector to the Local Government Board, strongly supported the movement, pointing out the various advantages which would result from such treatment of the phthisical poor as was advocated.

Mr. B. A. LYON (Hampstead) submitted the following motion:—

> That this Conference of Poor-law authorities, having discussed the question of the open air treatment of [illegible] that the time has come when provision [illegible]

This was seconded by Mr. J. O'CONNOR (Stepney) and carried *nem. con.*

Several speakers having expressed the hope that no new board should be formed to carry out the proposed suggestion the following sub committee was appointed to form a deputation to the Local Government Board: Mr. J. Z. Cahill, Mr. B A. Lyon (Hampstead), Mr. E. Smith (Bethnal Green), Mr. E. A. Barton (Kensington), Mr. R. P. Long (St Pancras), and Mr. W. J. Wentenhall, J.P. (St. Pancras)

A vote of thanks to the Chairman terminated the proceedings.

THE PLAGUE.

PRECAUTIONS AGAINST PLAGUE IN LONDON.

THE occurrence of a suspected case of plague in London has served a purpose in demonstrating that the metropolis has not been unmindful of the duties which may have to be performed in the event of this disease appearing among its population. The London County Council have, as already announced, been asked by the Local Government Board if they are prepared to make provisions for "contacts" or families in which a case of plague has occurred. It would appear that the communications between the Local Government Board and the Council have proceeded a step further than could be understood by the report of the Public Health Committee of the Council which we published in THE LANCET of Oct. 13th (p. 1092). A man in East London was suspected to be suffering from plague. The medical officer of health of Limehouse was immediately notified of this case, the medical officer of health of the county of London was duly informed, and the County Council's machinery was at once brought into operation. Mr. James Cantlie, who had been retained by the Council for such purpose, at once [illegible] symptoms at the time being [illegible] was sent to Dr. Klein for [illegible] The patient was removed to a [illegible] in their possession and which [illegible] h cases and safely isolated there pending further investigation. Fortunately, Dr. Klein's examination has conclusively proved that his malady is not plague, but this occurrence has demonstrated the foresight of the Local Government Board and the London County Council in making provision before recognised plague is present in London. Our story would not be complete if we did not refer to the other steps taken to protect the population against risk of infection from this disease. The r[illegible] and complete [illegible] Limehouse D[illegible] which his tenement formed a part were kept under constant inspection, and every care was taken to insure that any extension of the disease should be known at its beginning. Although this man has not suffered from plague his illness has sufficed to show what is London's machinery for dealing with cases of plague. The only authority whose services were not needed in this particular case was the Metropolitan Asylums Board, but there is no doubt that if actual plague had been in question the patient would have been at once removed to one of the Board's hospitals. It may be said that London suffers from division of authority, but when all authorities work in accord the public is well protected. We may congratulate Mr. G J Cooper, the chairman of the Public Health Committee of the London County Council, on the fact that the present case of illness, although not plague, has shown that the necessity of being prepared has been well recognised by him and by his committee. The memorandum on plague by Mr. Cantlie, which the Council has prepared for medical practitioners and which was published on Oct. 17th, will serve a useful purpose

Dr. J. F. J. Sykes, medical officer of health of St. Pancras, has issued a circular to all medical practitioners in his district in conformity with the instruction of the Local Government Board, telling them what to do in case they encounter a case which may be plague. A personal letter has also been prepared which is forwarded to passengers who have been reported by the port medical officer of health as arriving by sea from plague-infected ports and as being resident in St. Pancras.

PLAGUE IN SOUTH WALES.

The Llandaff sanitary authorities are to be warmly congratulated upon the manner in which they have grappled with the plague. It will be remembered that one fatal case occurred in Cardiff, the patient being a man who had arrived in the Tyne from Rosario and had travelled overland to Wales. The body was cremated and no fresh cases have occurred. Death took place on Oct, 4th, and as the incubation period of plague is at the outside 10 days the Customs authorities have given the port of Cardiff a clean bill of health.

PLAGUE IN SCOTLAND.

The Local Government Board for Scotland have forwarded to the various sanitary authorities in Scotland copies of three chapters of the "General Sanitary Regulations for the Prevention of the Introduction and Propagation of Plague," adopted by the Venice Convention of 1897. The three chapters deal with "Measures to be Taken in Europe," "Disinfection," and "Preventive Measures on Board Ship"—No fresh cases are reported from Glasgow.

THE MEDICAL GUILD.

THE following is the report of the Medical Guild on Hospital Reform which we have received from the honorary secretary of the Guild, Dr. Arnold W. W. Lea:—

> The Medical Guild is impressed with the difficulties surrounding this [illegible] that reform lies along the lines indicated by [illegible] ss or otherwise of the various [illegible] ir hospitals. The fitness must [illegible] ional or medical exigencies as [illegible] nt methods of investigation [illegible] come within the sphere [illegible] could be better carried out by other means.
>
> The guild regrets that a large amount of hospital abuse is due to medical practitioners, who, particularly in country districts, send [illegible] could afford to do without medical charity.
>
> [illegible] from patients should [illegible] be discontinued and [illegible] more suitable arrangements made.
>
> G. A. WRIGHT, Chairman.
> WILLIAM GRAHAM, Convener.
> ARNOLD W. W. LEA, Secretary.
>
> March 29th, 1900.

Obituary.

SIR HENRY WENTWORTH DYKE ACLAND, BART., K.C.B., M.D. OXON., F.R.C.P. LOND., F.R.S., &C.,

LATE REGIUS PROFESSOR OF MEDICINE IN THE UNIVERSITY OF OXFORD, HONORARY PHYSICIAN TO H.R.H. THE PRINCE OF WALES, AND RADCLIFFE LIBRARIAN, &C.

WE deeply regret to announce the death of Sir Henry Acland, which occurred at his residence in Oxford on the evening of Tuesday last. The distinguished physician had been in feeble health for some time and the end was not unexpected.

SIR HENRY WENTWORTH DYKE ACLAND, BART., K.C.B., M.D. OXON., F.R.C.P. LOND., F.R.S.

Henry Wentworth Dyke Acland was born on August 23rd, 1815 He came of an ancient line of Devonshire squires a mention of whom is found in the archives of the reign of Henry III., and previously to this there is no doubt that the family of Acland was, even in Saxon times, of considerable note among the notabilities of the western counties. Sir Henry Acland's father, Sir Thomas Dyke Acland, was a Member of Parliament for the county of Devon and throughout the long and distinguished history of the family there have been many instances in which Aclands have been famous in the careers that they have adopted, Sir Henry Acland's own generation and the generation junior to him supplying several examples.

Sir Henry Acland was educated at Harrow and Christ Church, Oxford His career at Harrow was, albeit marred by somewhat poor health, signalised by several minor successes. After a few terms at Christ Church his health compelled him to take a long holiday, and a tour in the Mediterranean seemed the most beneficial to a young man in his state of health; added to this he had all a young classical scholar's ardour to visit the scenes of which he had read so much. He therefore visited the eastern shores of the Levant and set himself the task of thoroughly mapping out the site of the ancient city of Pergamos The banks of the Simois and Scamander he explored with all the enthusiasm of a young and ambitious scholar and with care and much accurate observation made out a plan of the site of Priam's capital This work, together with a descriptive treatise, was published at Oxford in 1839. His panoramic plan of the Plains of Troy was very highly spoken of by the more erudite journals of the day, and is still frequently consulted by classical students. This tour, a combination of labour and pleasure, being completed, he returned to Christ Church and completed his University career by taking his Bachelor's degree in 1840. Having satisfied the authorities, according to the statutes, that he was *bene natus, bene vestitus, et mediocriter doctus* he was elected a Fellow of All Souls. The leisure that this appointment gave him also gave him the opportunity for devoting time to the science towards which he had always leaned, that of medicine. He proceeded to St. George's Hospital, the medical school of which institution was then adorned by Sir Benjamin Brodie, and there received, as well as the ordinary instruction given to a medical student, special tuition from Mr. Bullock, Mr. Squire, and Professor Quekett, the microscopist. During his residence in London he felt most keenly the difficulties and responsibilities of a student's life and being perhaps somewhat over-conscientious in details felt them all the more keenly. This caused him to direct his attention more especially to the general progress and status of the medical student. In 1843, being apparently tired of the then somewhat unsatisfactory life and bearing of the London student, Acland proceeded to Edinburgh, where he studied for a year or two under Dr. Alison, with whom he resided during that period In 1844 he gained a gold medal for an essay on "Feigned Insanity," the theme having been set for a class prize in medical jurisprudence. The essay, when it was published later, received a considerable meed of favour in the profession as a thoroughly capable treatise on a little known and most complicated subject. The work was not published at once, but a small number of copies were printed for private circulation.

In 1846 he graduated in medicine in the University of Oxford, and having in the same year become a Licentiate of the Royal College of Physicians of London he devoted himself with characteristic thoroughness to the duties attached to the post of Lee's Readership in Anatomy to which in 1845 he had been appointed. Without delay he commenced the formation of the extensive collection of physiological specimens, in Lee's Anatomical School at Christ Church, but since removed to the Oxford Museum. To this collection he devoted much hard work and it was not until 1853 that he had sufficiently collated the materials contained in this accumulation of excellent examples to publish a synopsis In 1847 he was appointed physician to the Radcliffe Infirmary, Oxford, a post which he held for nearly 40 years and at which institution some of his most notable work was It is seldom that a physician is elected a Fellow of the Royal Society at so early an age as 32 years, but in 1847 Acland obtained that honour, and was in the same year made local secretary to the British Association when it met for the second time at Oxford. His work in this capacity was marked by a thoroughness and an attention to detail which through life were Sir Henry Acland's marked qualifications.

Sir Henry Acland was always an earnest advocate of the claims of natural science as not only an item, but an essential feature, in the education of the young, and as early as 1848 he drew the attention of his university to what he considered rightly to be its duty—namely, the introduction of elementary science, physics, and the general ideas of chemistry and mechanics, as part of the *necessary course* in proceeding to the degree of Bachelor of Arts. His belief was that the study of the chief laws of the natural world was the most excellent channel through which the training and discipline of the human mind could be conducted, and he likewise urged that the study of the natural sciences, even in their most elementary branches, formed the very best possible mental discipline in the acquirement of true scholarship. These views were expressed by him in a most cogent manner, and so great was his influence on the conduct of study at his *alma mater* that he earned for himself the praise of Dr. Pusey, who described him as one who had devoted the prime of his life to the revival of the study of the Book of God's works. Acland's motive throughout this busy portion of his career may be briefly summarised in his own words: "To point out that the student of anatomy and physiology should make it his object to acquire above all things a knowledge of the changes, and of the causes and purposes of the changes which matter undergoes in its passage through living bodies." In this task the searcher after knowledge must trace the elements of the atmosphere and earth from their inorganic condition into those states which are capable of exhibiting the phenomena of life, and must ascertain in what order the ascent is made from the lowest living organisms to the highest and most complex. Proceeding from this basis the student must attempt to grasp the formation, nourishment, and changes of the living being itself, the forces which are engaged in maintaining the continuance of life, by what steps death is brought about, and at last the final return of the organic combinations of the inorganic elementary bodies to their former state. The idea of a "cosmos," an ordered state of all natural objects, was Acland's prevailing belief, and in the exposition of this theme he had the warmest and most enthusiastic support of his deeply attached friend John Ruskin.[1] As President of the Ashmolean Society Acland did much to popularise science in the University; and although there was during most of his long academic career at Oxford a lingering suspicion of all things scientific among certain of the guiding spirits of the oldest and most conservative educational body in England he lived to see this suspicion modified almost to the point of disappearance. In 1850 he became a *Fellow of the Royal College of* Physicians of London and in 1865 delivered the Harveian Oration before that body, which was afterwards published with a graceful dedication to Sir Thomas Watson, the President of the College, of whose talents and personality Acland was a sincere admirer.

In 1854 the cholera visited Oxford and the sanitary regulations of the city were placed almost entirely in the hands of Acland. Little was known of the etiology and pathology of cholera at this period, and it fell to Acland's lot to do more towards the proper understanding of the treatment and prevention of this scourge than any previous physician had done. "Many of the people of England," said he, "have yet to wake as from a dream. Though scientific men, aided by the press, have for many years striven to rouse us to a sense of insecurity, the habits of our country, the lengthy labour of discussion which is to be gone through in most public questions, and the precarious results of the votes of public assemblies, retard improvement and too often insure mischief. From this and other causes [illegible]

closest kind. From this time onwards the name of Acland was *intimately connected with all subjects of sanitation*, and more especially with the water-supply and sewage disposal of the Upper Thames valley; and in his capacity of a great sanitarian he published some valuable monographs on sewage and was one of the chief witnesses before the Select Committee appointed to inquire into the sewage of the metropolis. In 1869 he was appointed a member of the commission to inquire into the sanitary laws in England and Wales and his share in the work of that valuable body was almost preponderant, and in 1875 he was again a commissioner upon a Government inquiry in relation to sewage matters.

In 1851, on the death of Dr. Kidd, Dr. Henry Acland became Radcliffe librarian to the University and 11 years later it was by his exertions that the medical and surgical works at the Radcliffe Library were removed to their present and more appropriate quarters in the University museum. As Lee's Reader in Anatomy at Christ Church he lectured for 12 years, and when the death of Dr. Ogle, the Regius Professor of Medicine in the University, in 1857 rendered that position vacant, Dr. Acland was offered and accepted that distinguished office. His position was now such as to enable him to apply himself to the formation of the pathological collection of the museum, in which task he was greatly aided by the purchase at his instigation of the private pathological collection of Van der Kolk. To the Oxford Museum, in fact, he stood in much the same relation as did Sir Richard Owen towards the *Hunterian Museum of the Royal College of* Surgeons of England. The task of revivifying interest in scientific matters among the fellows of colleges was a much harder one than we can at this date conceive.

Sir Henry Acland's connexion with the General Medical Council was coeval with the founding of that body—namely, in 1858, when he was elected the Representative of the University of Oxford. In 1874 he became President of the Council, which dignity he supported with much distinction until 1887 when Sir Richard Quain was elected to the chair. His work on the Council was invaluable, and as he was likewise a member of the Medical Education Committee of the Hebdomadal Council of the University his influence on the shaping and direction of the course of studies of a medical student was very great indeed, and was invariably directed towards the enlargement of the scope of scientific training. To the production of the Pharmacopœia he contributed much valuable assistance, and throughout his connexion with the General Medical Council he devoted great energies to the advancement of the popular esteem in which members of his profession should be held. He took a very wide view of his duties and responsibilities as President of the General Medical Council. Not only did he use his influence for the good of the medical profession in his own country, but he extended his interests to foreign countries and in 1879 sent an eloquent and *encouraging letter to the authorities of the* Johns Hopkins University, urging his readers to higher things and to the raising of the standard of medical education. He always placed the greatest stress upon general culture as a necessary qualification for the successful medical man, and being himself of very wide interests and a thorough man of science, displayed in himself an example of the scholarly physician the parallel of which is not often seen. His great desire was to show students the way to learn and the way to express and make use of their learning in a thoroughly manly and useful manner. With regard to the fitness of women for the medical profession Sir Henry Acland held very decided views at a time when other medical men of almost or quite equal experience with him in matters of medical education were very doubtful. He stated his belief both that women could master the hard work necessary to fit them for this arduous calling and that when their studies had been completed they had every requisite gift for successful practice. He especially recommended the *female medical practitioner* as of incalculable service in India.

Acland's connexion with the Royal Family was long and intimate and commenced by his being appointed a member of the suite of His Royal Highness the Prince of Wales when he paid his visit to Canada and the United

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[1] A passage in Ruskin's "Præterita" has immortalised a friendship
only to be severed by death.
kin, "quietly showed me the
ood sense, good family, and
ood of seeing a noble young
ur, reckless daring, and happy
y through all, like a girl's in
e he could pull me on, being
years ahead of me, yet glad of my

States in 1860. On returning to Oxford he was appointed honorary physician to His Royal Highness who entered the University in that year. In the same year he received the honorary degree of LL.D. from the University of Cambridge and was made an honorary student of Christ Church. In 1867 Dr. Acland was appointed by Government a member of the Cubic Space Committee, the reference of which was the state of the metropolitan workhouses as regards the space and area required for each pauper in the dormitories and in the wards of infirmaries.

Sir Henry Acland's literary works are both numerous and inclusive of a remarkable range of subjects, embracing not only themes intimately allied to medicine and pathology but several valuable contributions to general literature. To his first work on the "Plains of Troy," published in 1839, we have alluded above and among his other works perhaps the most notable is the useful volume on "National Health" written in 1871 at the desire of the President and Council of the Royal College of Surgeons of England. This work deals exhaustively with the essentials of public health as then understood with regard to environment, food, and water. "Village Health and Village Life" was written in 1884 for the International Health Exhibition and is characterised, as indeed are all his writings, by an ease and elegance of diction attained to only by a finished scholar. His Harveian Oration in 1865 was a very notable piece of philosophical work. It was the first of these orations delivered in English and indeed no fitter man than Acland could have been found to demonstrate that dignity and eloquence can be every whit as well blended through the medium of the English tongue as through that of the more sonorous Latin. He reviewed the opinions of the various philosophers who have discussed with greater or less exactness the doctrine of final causes and made an able refutation of Comte's arguments against design. His position was briefly and eloquently summed up in the following words: "No student of nature worthy of the name looks on the problem of this world as other than vast and inexplicable. He pretends no more than to see as by an image, darkly, and to bend before the Cause of all." Of his beautiful work on the "Oxford Museum," which he wrote in collaboration with his friend John Ruskin, several editions have appeared between the date of its first appearance in 1859 and 1893, when it was considerably enlarged and produced in sumptuous form with admirable illustrations. The last edition includes a photograph by Miss Acland of Sir Henry Acland and Ruskin taken in the garden at Brantwood in August, 1893. The two friends are seated in garden-chairs and are represented as in close commune over a book of prints or plans. Another of his works which calls for attention is his graceful and appreciative biography of his old friend and master, Sir Benjamin Brodie.

Sir Henry Acland was one of the few members of our profession not connected with the naval or military services who have received the honour of a Companionship of the Bath. To this honour he was admitted in 1883 in recognition of his services to the profession and to the cause of medicine and public health, and in the following year he was raised to the rank of Knight Companion of the Order. In 1890 he received the honour of a baronetcy of the United Kingdom, and it was acknowledged on all sides that few men had greater claims to the distinction either in the University of Oxford or in the medical calling at large. Among the numerous honours enjoyed by Sir Henry Acland were the Doctor of Laws degree of Cambridge and of Dublin, the degree of Doctor of Civil Law of the University of Durham, and likewise the titles of Doctor of Medicine of Trinity College, Dublin, Fellow of the Royal Society, member of the medical and philosophical societies of Philadelphia, Christiania, Athens, New York, and Massachusetts, and of an almost countless array of medical and scientific societies throughout England, Europe, and America. He was a Knight of the Rose of Brazil, which order was conferred on him in recognition of his great services to science in the matter of the cholera investigations to which we have before alluded.

Sir Henry Acland's stately and venerable figure will be greatly missed in the streets and quadrangles of Oxford, where he was deservedly one of the best known and most highly respected personages of the University, and beyond the respect in which all who had the honour of his acquaintance held him he was deeply beloved by many who owe much to his kindly sympathy and genial encouragement. Many generations of medical graduates of the University will remember his uniform courtesy to them and his power of setting at their ease young and undistinguished members of the University with whom he was brought in contact. On the morning of a degree day he was in the habit of asking those whom he was about to present for a degree in medicine to breakfast with him at his delightful old house in Broad-street. Before breakfast prayers were read by him, the book used being solemnly brought in upon a flat fire stained stone. (This stone, by the way, was dug up during some excavations in Broad-street necessitated by the erection of the new front of Balliol College and was supposed to have been one of the stones surrounding the stake at which Ridley and Latimer suffered the penalty of burning.) Breakfast followed, a meal hardly to be forgotten by his guests for the varied and interesting talk of the host. It was on this and similar occasions that he showed himself a type of a fashion of man now almost completely passed away. 'Courtesy and scholarship still abound, but the old-world setting of these virtues, so beautifully indicated in Ruskin's tribute to his friend,' has somewhat ceased to be. In 1846 he married Sarah, daughter of the late William Cotton, F.R.S., a philanthropist who devoted so much of his wealth and energies to the advancement of the cause of the Church of England in the East End of London. This lady, who died in 1878, brought her husband a family of six sons and one daughter. Sir Henry Acland is succeeded in the baronetcy by his son, Rear-Admiral William Alison Dyke Acland, R.N., a naval aide-de-camp to Her Majesty the Queen. One son—viz., Dr. Theodore Dyke Acland—follows his father's profession of medicine.

SAMUEL HENRY SWAYNE, M.R.C.S. ENG., L.S.A.

MR. SAMUEL HENRY SWAYNE, who died at his residence in Pembroke-road, Clifton, on Oct. 12th, in his eightieth year, was a member of an old Gloucestershire family, his grandfather being vicar of Pucklechurch and his father having practised as a surgeon in Bristol. Mr. Swayne received his medical education at the Bristol Medical School and St. Bartholomew's Hospital and qualified as M.R.C.S. Eng., and L.S.A. in 1843 and 1844 respectively. Shortly afterwards he commenced practice in Clifton, and he continued to follow his professional duties until three months ago, when he was laid aside by cardiac trouble. Mr. Swayne was delicate from childhood and was always obliged to take care of his health. He was an ex-president of the Bristol Medico Chirurgical Society, and the Bristol Naturalists' Society, a vice-president of the Bristol and Gloucester Archæological Society, and honorary secretary of the Bristol Museum. He took a great interest in Church matters and was associated with his brother, Dr. Joseph Griffiths Swayne, in the building of All Saints' Church, Clifton. Mr. Swayne lost his wife 30 years ago and leaves no children. He is survived by three of his brothers, one of whom, Dr. J. G. Swayne, is the consulting obstetric physician to the Bristol General Hospital.

RICHARD HAMILTON COWAN, M.R.C.S. ENG., L.S.A.

THE medical profession in Wigan has received a severe blow through the unexpected death of Mr. Cowan which took place on Oct. 6th after a very short illness. Mr. Cowan, who was only 42 years of age, was apparently in his usual health on Oct. 2nd, but on the following morning he was seized with a rigor; he nevertheless went to the house of a midwifery patient who had sent for him, but was soon compelled to hand over the case to a brother-practitioner and to return home to bed. Symptoms of pneumonia were then recognised by his medical friends who were called in, but all their endeavours to check the progress of the disease were unfortunately unavailing. The deceased was the son of Mr. Richard Hamilton Cowan, R.N., of Southsea. He entered as a student at the London Hospital in 1877 and in 1881 he became qualified as M.R.C.S. Eng. and L.S.A., after which he held the position of assistant medical officer in Birmingham Workhouse Infirmary, and in 1883 he went to Wigan. Two years later he entered into partnership with Mr. C. D. Shepherd of that town, and in 1897 he succeeded to the whole of the practice. Kind, genial, and sympathetic, he was beloved by his patients and held in the greatest esteem by his colleagues. In 1892 he was elected an honorary medical officer of the Royal Albert Edward Infirmary and devoted his energies to the [illegible]; he was particularly [illegible] was very successful [illegible] time of his death he was president of the Wigan Medical Society and had formerly been president of the local chess club Mr. Cowan has left a widow and three children. The funeral took place at Standish on Oct. 10th and was largely attended, the infirmary board of management and several public bodies being represented

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Max Schaeffer, a well-known Bremen laryngologist, at the age of 55 years by an Alpine accident.—Dr. Abraham Kuhn, Professor of Otology in the University of Strasburg, at the age of 62 years. He was a very skilful operator and had published numerous researches on the comparative anatomy of the ear.—Dr. Alex. Zarewicz, Lecturer on Skin Diseases in the University of Cracow.—Dr. Jacob M Da Costa, a well-known Philadelphia physician.—Dr. A. W Griggs, formerly Professor of Medicine at the Atla [illegible] T Albert, Professor of Clinical [illegible] Rudolf Arndt, Extraordinary Pr[illegible] and Director of the University [illegible] age of 55 years. He published a text-book and many monographs on psychiatric subjects. Recently he wrote some papers of a philosophical and biological character taking up a somewhat peculiar position.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6578 births and 3799 deaths were registered during the week ending Oct. 13th. The annual rate of mortality in these towns, which had been 18·5 and 17·8 per 1000 in the two preceding weeks, further declined last week to 17·1. In London the death-rate was 14·8 per 1000, while it averaged 18·5 in the 32 provincial towns. The lowest death-rates in these towns were 10·5 in Cardiff, 11·9 in Croydon, 12·6 in West Ham and in Leicester, and 13·0 in Bolton; the highest rates were 23·1 in Liverpool, 23·8 in Gateshead, and 24·8 in Manchester and in Salford The 3799 deaths in these towns included 563 which were referred to the principal zymotic diseases, against 776 and 673 in the two preceding weeks; of these 289 resulted from diarrhœa, 85 from diphtheria, 64 from "fever" (principally enteric), 59 from whooping-cough, 39 from measles, and 27 from scarlet fever The lowest death-rates last week from these diseases occurred in Cardiff, Halifax Bradford, and Newcastle; and the highest rates in Wolverhampton, Leicester, Salford, and Gateshead. The greatest mortality from measles occurred in Swansea; from whooping-cough in Derby and Gateshead; from "fever" in Plymouth, Wolverhampton, and Sunderland; and from diarrhœa in Wolverhampton, Manchester, Burnley, and Gateshead. The mortality from scarlet fever showed no marked [illegible] in any of the large towns The 85 deaths from dipt[illegible] included 26 in London, 11 in Leicester, seven in [illegible] and seven in West Ham No fatal case of small-pox was registered last week in any of the 33 large towns; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday last, Oct. 13th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2187, against numbers increasing from 1703 to 2071 on the six preceding Saturdays; 322 new cases were admitted during the week, against 269, 318, and 313 in the three preceding weeks The deaths referred to diseases of the respiratory organs in London, which had declined from 203 to 164 in the three preceding weeks, rose again last week to 173, but were 74 below the corrected average The causes of 33, or 0·9 per cent, of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Leeds, Hull, Newcastle, and 13 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, and Manchester.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·9 and 19·3 per 1000 in the two preceding weeks, declined again to 18·0 during the week ending Oct. 13th, and was 0·2 per 1000 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 14·5 in Edinburgh and 14·6 in Leith to 19·7 in Aberdeen and 21·1 in Dundee. Th[illegible] towns included 36 which were [illegible] whooping cough, seven to scarle[illegible] five to "fever" (including one [illegible] to measles, and two to small-pox In all, 74 deaths resulted from these principal zymotic diseases, against 91 and 107 in the two preceding weeks. These 74 deaths were equal to an annual rate of 2·4 per 1000, which was 0·1 per 1000 below the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had been 49 and 52 in the two preceding weeks, declined again last week to 36, of which 17 occurred in G[illegible] four in Paisley, and three in L[illegible] [illegible]ooping-cough, which had been 12 and 18 in the two preceding weeks, declined again to 13 last week, and included 10 in Glasgow and two in Greenock. The fatal cases of diphtheria, which had declined from 11 to five in the three preceding weeks, rose again last week to seven, of which four were registered in Glasgow and two in Dundee. The seven deaths from scarlet fever corresponded with the number in the preceding week, and included five in Glasgow. The deaths referred to different forms of "fever," which had increased from four to 13 in the five preceding weeks, declined again last week to five and were all recorded in Glasgow, where the two fatal cases of small pox were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 101, 100, and 98 in the three preceding weeks, rose again last week to 104, and were slightly above the number in the corresponding period of last year. The causes of 22, or nearly 4 per cent, of the deaths in these eight towns last week were not certified

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·5 and 26·0 per 1000 in the two preceding weeks, further rose to 26·4 during the week ending Oct. 13th. During the past four weeks the death-rate in the city has averaged 25·4 per 1000, the rate during the same period being 16·0 in London and 17·6 in Edinburgh The 177 deaths belonging to Dublin registered last week were three in excess of the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 25 and 36 in the two preceding weeks; of these 15 resulted from diarrhœa, four from "fever," one from whooping-cough, and one from diphtheria. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 1·9 in London and 1·0 in Edinburgh The fatal cases of diarrhœa, which had 18 and 27 [illegible] again last week to 15. [illegible] of "fever," which had [illegible] ceding weeks, rose a[illegible] which had been three, three, and [illegible]ng weeks, declined again last week [illegible] in Dublin last week included 45 of infants under one year of age and 41 of persons aged upwards of 60 years; the deaths of infants showed a marked decline while those of elderly persons exceeded the number in the preceding week Seven inquest cases and five deaths from violence were registered, and 56, or nearly one-third, of the deaths occurred in public institutions. The causes of 17, or nearly 10 per cent., of the deaths in the city last week were not certified

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

INSPECTOR-GENERAL of Hospitals and Fleets H. C Woods, M.V.O., is appointed to the *Victoria and Albert*, reappointed on promotion.

The following appointments are notified:—Surgeons: R. L Dickinson to the *Hussar* and W. P. Walker to the *Majestic*.

ROYAL ARMY MEDICAL CORPS.

Captain Watson is granted the temporary rank of Major whilst employed in South Africa. Temporary Captain J. K. Butter resigns his commission.

Surgeon-Major D. Elcum, I.M.S., retired, has been appointed for duty in the Home District. Lieutenant G. Baillie arrived at Chatham on Oct. 4th for duty. Lieutenant B. B. Burke arrived at Colchester on Oct. 3rd for duty. Lieutenant L L. G. Thorpe arrived at Dover for duty on Oct. 3rd, and has been posted to the Station Hospital, Western Heights. Lieutenant-Colonel R. Blood officiates as District Principal Medical Officer, Bombay Command, pending the appointment of a successor to Colonel Maunsell, retired.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain J. K. Butter resigns his commission.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the South Staffordshire Regiment: Surgeon-Captain J. K. Butter resigns his commission. 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment: Horace Lake Lowis to be Surgeon-Lieutenant. 2nd Volunteer Battalion the York and Lancaster Regiment: Surgeon-Lieutenant H. H. B. Wilkinson retires under paragraph 111 Volunteer Regulations, and is granted the rank of Surgeon-Captain, with permission to wear the uniform of the battalion on retirement.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Lieutenant-Colonel R. N. Campbell, I.M.S., Civil Surgeon, on return from furlough, are replaced at the disposal of the Government of India in the Home Department. Lieutenant-Colonel J. W. U. Macnamara, I.M.S., Civil Surgeon, on return from furlough, is posted to Tezpur and appointed to hold civil medical charge of the Darrang district. Captain A. Leventon, Officiating Civil Surgeon, Darrang, on being relieved by Lieutenant-Colonel J. W. U. Macnamara, is transferred to Sibsager and appointed to hold civil medical charge of that district until further orders. Major E. R. W. C. Carroll, I.M.S., Civil Surgeon, on return from furlough, is posted to Dhubri, and appointed to hold civil medical charge of the Goalpara district. Major E. C. Hare, I.M.S., Civil Surgeon, on return from furlough, is posted to Gauhati and appointed to hold civil medical charge of the Kamrup district. Captain H. C. French, R.A.M.C., has been transferred from the Mhow district to the Nagpore district, and Captain W. Tibbits, R.A.M.C., from the Nagpore district to the Mhow district.

TRANSVAAL WAR NOTES.

Most of the members of the Scottish National Hospital have arrived in England.

Professor Alfred W. Hughes, Mr. J. Lynn Thomas, Dr. E. Laming Evans, and Mr. Mills-Roberts of the Welsh Hospital are returning to England in the *Saxon*. They are expected to arrive at the end of the present week. Before their departure from Pretoria Surgeon-General W. D. Wilson, principal medical officer of the Army in South Africa, wrote to Professor Hughes as follows: "I must now thank you and your staff for your great help. You have worked loyally with us, and I believe all the Royal Army Medical Corps in South Africa have a warm place in their hearts for you, and they fully appreciate the cordial assistance you have given us." The nurses and orderlies are still at Pretoria.

Captain F. J. Wade-Brown, R.A.M.C., and Civil Surgeon C. R. Martin have been discharged from hospital for duty.

THE WAR IN CHINA.

It is quite clear that the international forces in China have an uncommonly troublesome task before them. This does not arise so much from any difficulty in overcoming the forces opposed to them, although these must be considerable where there are any number of Chinese to take the place of those slain or defeated in battle, and where human life is held to be of little value, as from the fact that military success makes no impression upon the Imperial Court and those in authority in China, located as they are in distant and inaccessible positions. It is like the case of the Irish landlord who said that if his tenantry thought to intimidate *him* by murdering his agents they were much mistaken. The Chinese puzzle consists in the fact that there is no constituted authority to dictate terms to and no reliance to be placed upon Chinese decrees and orders which are probably wholly insincere and only issued to gain time. Meanwhile the British contingent sent from India has already done excellent service. It is apparently amply supplied by the Government of India with hospitals and hospital ships and medical stores. The Maharajah Scindia has been most patriotic and generous in providing at his own expense a splendid hospital ship for the expedition. It is reported that dysentery has been very prevalent of late among the troops at, and in the vicinity of, Tien-Tsin.

WEST AFRICAN FRONTIER FORCE.

In THE LANCET of March 31st, 1900 (p. 952) some account was given of the general medical history of this force up to March 31st, 1899. A report on the health of the British troops serving with this force for the year ending Dec. 31st, 1899, has been drawn up by Mr. D. K. McDowell, the acting principal medical officer, and has been recently published by the Colonial Office. The statistical summary with which the report closes is as follows: "Average annual strength, 151; percentage of admissions, 326·5; average daily sick, 6·22; admissions for fever, 377; average duration of fever, 5·58 days; percentage of deaths from fever, 5·3; percentage of deaths from all diseases, 9·2." The 377 admissions for fever just mentioned consisted of 354 cases of malarial fever (with five deaths), and 23 cases of blackwater fever (with three deaths). The total deaths during the year were 14, consisting of the eight just mentioned, and in addition one each from dysentery, heat apoplexy, heatstroke, enteritis, ptomaine poisoning, and abscess of the liver. 37 men were invalided to England. The general health of the force was therefore anything but good.

THE ASHANTI RISING.

Good progress is being made in the war on the west coast of Africa in suppressing the rising of the Ashantis and other turbulent tribes. It is generally believed that notwithstanding the anticipation of some further fighting on the part of some of them the majority of those opposed to us will soon surrender. Major Holford's column which left Kumasi to open communication with Kintampo has returned. The column suffered severely during the rains and the health of the troops was unsatisfactory owing to their hard and fatiguing work and exposure. Although there is a good deal of the usual diseases incidental to field service in such a climate at this season, still the amount of sickness has not been anything like what it would have been among European troops under similar circumstances.

THE NAVAL VICTUALLING COMMITTEE.

The Admiralty Victualling Committee, which has been sitting at Devonport during the past week under the presidency of Vice-Admiral Rice, has now gone to Portsmouth to continue its inquiries. At Devonport several officers and men were examined, and in addition to making inquiries with the object of improving the victualling of the navy the committee are collecting information and suggestions with a view to the adoption of a reform in canteens on Her Majesty's ships. The committee consists of six members, including Deputy Inspector-General of Hospitals G. J. Irvine.

ORDER OF THE BRILLIANT STAR OF ZANZIBAR.

The Queen has given to Captain Patrick Percy Kilkelly, I.M.S., Her Majesty's Royal licence and authority to accept and wear the Insignia of the Fourth Class of the Order of the Brilliant Star of Zanzibar, conferred upon him by His Highness the Sultan of Zanzibar.

LEAN'S ROYAL NAVY LIST.

The ninety-second quarterly issue of this most useful compilation, now in its twenty-third year, has just been published by Messrs. Witherby and Co., 326, High Holborn, and 4, Newman's-court, Cornhill. No better arranged reference book to the Royal Navy could be desired.

A correspondent of the *Army and Navy Gazette* writes from South Africa:—"The foreign attachés when they came back to Cape Town were loud in praise of Lord Roberts and his methods, and on leaving the Cape united in drawing up an address expressing cordial gratitude to his lordship for his proverbial courtesy. Every attaché signed his name and added an expression of appreciation of the consideration he had received. As one of the officers remarked to me: 'It has been a revelation to see on all hands so much kindly feeling—not forced, but real thoughtfulness and soldierly generosity. I do not exaggerate in the least; I mean what I say. We have been made very

good-tempered and
iomies your soldiers

. N., invalided from
miah Sugrue, R N.,
station, landed at
Plymouth on Oct. 6th.

Lieutenant-Colonel P. F. O'Connor, I.M.S., has been appointed principal medical officer to the troops at Shanghai.

Correspondence.

"Audi alteram partem."

MEDICAL SERVICE IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

To the Editors of THE LANCET.

SIRS,—To meet the undoubted hardships of certain Poor-law medical officers in Scotland, the first remedy is to put the Scottish Poor-law Medical Grant on the same footing as it stands in England and Ireland—that is, that Scotland should get one-half of the actual expenditure instead of a fixed contribution which is less than that moiety. The second, that the Poor-law medical officers should not be dismissed unless with the sanction of the Local Government Board for Scotland. The third, that manses for the doctors should be provided in the remote districts of the Highlands and islands. The fourth, that they should have the right to be superannuated on a fair scale, founded on proper principles. The fifth, that they be entitled to an annual holiday, the parish council giving a fair allowance for providing a substitute.

The first of these points is really a ratepayers' question, and there can only be one answer if Scotland is to get equal justice when compared with other parts of the United Kingdom. Against the second proposal there are certain objections which are more or less valid, and it would be very difficult, unless the Government take full charge of a Bill to alter the present status of the medical officers, to get it passed, seeing that most of the parish councils would naturally be opposed to any such restriction. If this be so, then some other method must be thought of. The hardship scarcely applies in any cases except in those where the subsidy is really given not merely for attendance on paupers but as a guarantee for securing the services of the local doctor. The result of this arrangement is that if the doctor loses his parochial appointment he is really deprived of his means of living and must abandon the struggle

Seeing that the public at large really helps to pay for medical attendance to all and sundry in these parishes, it ought in all fairness to have its say, both in making and unmaking such appointments A precedent is fortunately at hand in the case of the schools in certain island parishes where, in the case of extraordinary grants, H.M. inspector of schools acquires a right to sit at the school board. If the

ad the same right, then
was done to the parish
doctor, and would likewise take care that only competent men were appointed and that proved incompetent men were dismissed.

With regard to the third point, all that is wanted is that permissive power be given the parish councils for such purposes to borrow money to be repaid on the same terms as similar loans granted to local authorities. It is not necessary to argue in favour of some form of superannuation, or as to giving permissive powers to parish councils to grant holidays to their medical officers. Seeing that these are already given in Ireland, surely Scotch Poor-law medical officers are entitled to the same privilege, a privilege which on every ground is likely to be for the good, not only of the doctor, but also of his patients

I am, Sirs, yours faithfully,

WILLIAM BRUCE, M D. King's Coll., Aberd.,
Direct Representative for Scotland on the General Medical Council.

Oct 16th.

A SUGGESTION FOR THE EXTERMINATION OF THE MOSQUITO FROM COLONIAL HOSPITALS AND DWELLINGS.

To the Editors of THE LANCET.

SIRS,—It behoves all who are interested in the relation of the mosquito to malaria to offer any suggestion which may be of service to the residents in malaria-stricken districts. I have no personal knowledge of the mosquito or his habitat, but I should like to tell a story which in the hands of those acquainted with both may perchance prove of value. As I have always four or five horses in my stables I built a large corn-loft, on the most approved principles to keep out vermin, to enable me to buy in the cheapest market by purchasing 50 quarters of oats at a time. Many years ago I found my horses were not up to the mark, and on inquiry ascertained that they refused their corn. I immediately went into my corn-loft and discovered that many bushels of oats were simply husks, the corn having been consumed by the ravages of moths. This was such a new experience to me that it required some consideration to cope with it in the future. As the mischief was all done for that season I removed the destroyed corn, and when the remainder was consumed I had the walls and ceiling washed with fresh slaked lime, so that it was put on hot, into which was stirred sufficient sulphur to make it somewhat yellow. This is renewed every few years and causes no unpleasant smell. But into the precincts of my corn-loft no moth or fly ever dares to enter. Would this plan similarly affect the mosquito is the suggestion I would offer for what it is worth?

I am, Sirs, your obedient servant,

Rugby, Oct 15th, 1900. CLEMENT DUKES.

THE INCUBATION PERIOD OF MALARIA.

To the Editors of THE LANCET.

SIRS —The following case may be of value in settling the incubation period of malaria.

A man, aged 32 years, left Grandola in Spain on July 25th, 1900, in the afternoon. He arrived at Alcacer do Sal at 8 o'clock in the evening and left again on the top of a diligence for Poicerão at 10 30, which he reached at 4 A.M. to catch the 4 20 train. Alcacer do Sal has a very bad reputation for malaria; it is a salt swamp and mosquitoes abound. From 8 P M. on July 25th to 4 20 A M. on July 26th my patient was badly bitten by mosquitoes, and this is the only occasion on which he has been in a malarious district. On arriving at Southampton about 10 P M. on August 12th he did not feel very well; he remained on the boat and left by the morning train for London on August 13th. About 4 P.M. that afternoon he began to feel very ill and could hardly walk and at 8 o'clock, while trying to have some dinner, a definite attack came on. This was at once recognised by a friend who had been many years in China as ague. The patient had a very bad night but was comparatively well next day. A second attack came on about 8 o'clock on August 16th and as my patient became slightly delirious and was very feverish a medical man was hastily summoned. The blood was unfortunately not examined and the patient since then has had several much milder but irregular attacks. The incubation period, therefore, in this instance seems to have been 18 days—from the night of July 25th-26th to the evening of August 13th

I am, Sirs, yours faithfully,

W FRANK COLCLOUGH,
Medical Officer to the British Hospital, Oporto

Oporto, Portugal, Oct 9th, 1900

THE ORANGE RIVER COLONY AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—Now that winter is approaching and the profession and public alike are once more turning their attention to South Africa as a health resort, I venture to opine that first-hand information from those who have been there may not be unacceptable to those who propose to go. My own experience is limited to the Harrismith district of what was the Orange Free State, about which I will say no more than that it is second to none in point of suitability for cases of threatened or early tuberculosis. My object in writing is not to advocate this above any other locality, but to make known the existence, about 10 miles from the town of Harrismith, of what is a considerable rarity upon the high veldt—a large and comfortable farmhouse where paying guests are welcome. Of this house and its hospitality I had in the early part of last year two months' personal and happy experience; and I have lately heard that the host and his wife, both loyal English Afrikanders, have survived the dangers and hardships of the war and are once more in a position to do their best for a limited number of visitors. It would give me pleasure to impart to anyone, medical or lay, all that I know about this house and its surroundings.

I am, Sirs, yours faithfully,
W. LEE DICKINSON.

9, Chesterfield-street, Mayfair, W., Oct. 12th, 1900.

THE CAUSATION OF SCURVY.

To the Editors of THE LANCET.

SIRS,—Being much interested in scurvy I read with great expectation the article by Dr. Vaughan Harley and Mr. F. G. Jackson in THE LANCET of April 28th, 1900, p. 1184, and that by Staff Surgeon W. E. Home, R.N., in THE LANCET of August 4th, p. 321, and I regret to say that I am disappointed, for the following reasons.

Dr. Harley, as the result of feeding monkeys with bad meat, came to the conclusion that scurvy is caused by some poison in tainted (flesh) food. Now this may or may not be correct, but it quite fails to account for the disease in men who only eat good grain stuffs. I have seen a good deal of scurvy amongst non-meat-eating Indian troops both on service and in peace time, and have always found it to be caused solely by a diet containing too little fresh vegetables or fruits. I am of opinion that the disease was so caused as it was always cured by the addition to the diet of fresh potatoes, or dates, or limes, without any change being made in the food and water the patients were originally taking, without change of locality or circumstances, and without drugs. I am unable to give an opinion as to the prophylactic or curative powers of tinned milk, of pressed vegetables, of onions, of preserved limejuice, of fresh meat, or of fresh milk, though a recent experience of mine seemed to show that those men who could afford to buy milk were not attacked, while others under exactly the same conditions, but without milk, were attacked, and as regards fresh meat Nansen has proved that a diet of that alone is quite sufficient.

Staff-Surgeon Home suggests that scurvy is "an infection of the mouth with micro-organisms out of decayed food." I do not think that this is so, as in large outbreaks I have seen amongst non-meat-eating men, the various grains which formed the food staples were excellent, and the affection of the gums was not the first symptom observed. Also the gums are not in a state of inflammation—gingivitis. At a certain stage of the disease—generally early, very occasionally late, and I have read sometimes not at all—they become swelled by the scorbutic fibrinous infiltration (except places where teeth are absent), and any ulceration which may supervene later is quite unspecific. With reference to the "orthodox view" given by Staff Surgeon Home let me give a typical case. A healthy sepoy, living in cantonments, wishes to save money. He has to pay for and eat the flour, rice, or dhal cooked by his company cook, so he saves by depriving himself of extras such as milk and vegetables, and meat if a meat eater. In two or three months that man will be in hospital with scurvy, and in a fairly short time he will, by the simple addition of fresh limes or potatoes to his original diet, be quite fit for duty. "Preceding hardships" are not required for the production of scurvy, and I think it a good working rule to fear that men will become scorbutic if they cannot get either green vegetables, or fruit, or fresh milk, or fresh meat.

I am, Sirs, yours faithfully,
C. B. MAITLAND, F.R.C.P. Edin.,
Lieutenant Colonel I.M.S.

Grantown-on-Spey.

"TWO CASES OF ARTERIO-VENOUS ANEURYSM."

To the Editors of THE LANCET.

SIRS,—I am much interested in the two cases of arterio-venous aneurysm reported in THE LANCET of Oct. 13th, (p. 1073) by Lieutenant-Colonel J. T. Lewtas, I.M.S. The result of the first case, treated by ligature of the vein by means of two ligatures applied one above and one below the opening into it and by ligature of the artery above the opening into it, is eminently satisfactory, for the disease was cured and the limb was saved. The result of the second case is, I should consider, eminently unsatisfactory, for the limb was amputated. I have on one occasion tied the artery above the opening into it for the cure of arterio-venous aneurysm of the popliteal artery and vein with the same unfortunate result as that following Colonel Lewtas's operation and it is curious how frequently gangrene has followed this procedure. Gangrene is much more common in cases of femoral arterio venous aneurysm after ligature of the artery by a single ligature applied to the vessel above the opening into it than when a ligature is applied above the aneurysm for the cure of popliteal aneurysm (Hunter's operation). I do not know that this is to be wondered at, but it is certainly true. On the other hand, tying both artery and vein above and below the opening into them and dissecting out the sac has been attended by most satisfactory results. This is undoubtedly a severe and sometimes a difficult operation, but it can usually be performed. In one case reported by Dr. Keen where the common carotid and the jugular veins were involved it was found impossible to dissect out the sac, but even this case was cured.—I am, Sirs, yours faithfully,

FREDERICK PAGE,
Professor of Surgery, Durham University.

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"THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY AND THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—In reply to Mr. T. Bryant's letter, dated May 5th, published in THE LANCET of Oct. 13th (p. 1097), I beg leave to say that I still regard as accurate the statement contained in the second paragraph of that letter. The paragraph is printed between inverted commas and is quoted from the last annual report of my society. I know no reason why anyone should accept as convincing Mr. Bryant's expression of his personal opinion concerning the cases to which he refers; and I see nothing more in his letter than a mere expression of his personal opinion.

I am, Sirs, yours faithfully,
HUGH WOODS,
Honorary General Secretary.

Oct. 15th, 1900.

"THE SMOKE NUISANCE."

To the Editors of THE LANCET.

SIRS,—In answer to the letter from Mr. F. W. Alexander on the above subject which appeared in THE LANCET of Oct. 13th, (p. 1098) I should like to point out that the coal Smoke Abatement Society is well aware that it or any individual may prosecute in a case of smoke nuisance, but that having considered the matter in all its bearings the committee of the society has determined, at any rate for the present, not to institute proceedings itself. The principal difficulty in the society instituting proceedings is that the society would have to prove in court a nuisance by the smoke, a not always easy thing to prove to the satisfaction of a magistrate, whereas if the vestry prosecutes it only has to prove that black smoke was emitted, which under Section 23 and 24 constitutes a nuisance. Where there are public authorities constituted for the purpose of suppressing these nuisances my committee considered that it would be unwise of them to commence legal proceedings in cases which now number some thousands.—I am, Sirs, yours faithfully,

H. A. DES VŒUX.
Hon. Treasurer, Coal Smoke Abatement Society.

Oct. 17th, 1900.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Medical Staff for the China Expeditionary Force.—The Hospital Ship Gwalior.—Beri-beri on H.M.S. Sphinx.—The Pasteur Institute at Kasauli.—Further Increase of Plague in India.

ONE hundred and thirty medical officers (all but eight of whom belong to the Indian Medical Service) having been detailed for duty with the China Expeditionary Force there

has been a great strain on the medical service. Many [illegible] ment have found it necessary to engage the services of purely civilian and unofficial practitioners.

The hospital ship *Gwalior* which has been provided by the Maharajah Scindhia is to sail on Sept. 22nd. She is one of the boats of the British India line. Extensive and costly alterations have been made. She was first carefully surveyed in the dry dock and was then dressed in a coat of light-grey paint with red crosses on her bows, sides, stern, and funnel. She is now lighted throughout by electricity and she has electric fans. There will be separate accommodation for convalescents and a completely isolated infectious ward on the poop. A simple and efficacious method of taking the sick on board has been fitted by means of a large port in the ship's side with a conveyance by a light trolly to the beds. For fracture and certain surgical cases swinging beds have been provided. Electric stoves have been furnished and with these water can be boiled in a few minutes. The *Gwalior* has been fitted not only with all the necessary apparatus of ventilation for use in [illegible] China. The vessel is a three-masted steamer of 4200 tons register and she closely resembles the hospital ship *Carthage*. There will thus be, including the *Maine*, three vessels in Chinese waters, so that with the three base hospitals the sick and wounded should be well provided for. The expenses of the *Gwalior* will probably exceed £100,000 and she will have to be restored to her owners in her original condition.

Five cases of beri-beri have occurred amongst the bluejackets on board H.M.S. *Sphinx*, which left Muscat on Sept. 13th and arrived in Bombay on the 17th. The vessel has been placed in quarantine and has been thoroughly disinfected and the patients have been removed to hospital.

In consequence of the artificially-induced opposition to the Pasteur Institute at Kasauli it is advisable to record the success which has attended the institution since its opening on August 9th. There have now been 42 admissions, and 31 patients have completed the course of treatment. During the past week a British soldier and two native civilians were admitted, while four officers from Bombay, a British soldier, and two native civilians are on the way. The native patients include both Mohamedans and Hindoos, and all appear only too anxious to avail themselves of the treatment.

While plague is again on the increase the numbers under famine relief [illegible] al figures have decreased [illegible] week and at present there [illegible] on relief works and two and a half millions on gratuitous relief. This week's plague returns show a further increase, the total [illegible] en to 1136. Bombay city [illegible], Calcutta 81 (including [illegible] In the Mysore State the [illegible] now indications that the disease is again developing i[illegible] mortality (1084, equal to 66 44 [illegible] very high, but the recorded [illegible] increased. In Calcutta, altho[illegible] tinue much the same as for many weeks past, the general mortality is increasing. The districts of Poona, Nasik, Surat, Thana, and Belgaum give cause for great anxiety. Cholera is raging severely in Kashmir, especially in Srinagar and the surrounding districts. It has rapidly gone down in Bombay city and very few cases are now occurring in the army. The principles to be observed in connexion with plague [illegible] been finally settled by the [illegible] reigned in Bengal, so that it is not surprising to hear that the Lieutenant-Governor considers that the work of the Bengal Plague Commission is no longer necessary. The Local Commission has therefore been dissolved.

Sept. 20th.

BRISTOL EYE HOSPITAL.—The committee of the Bristol Eye Hospital have received £1263 as a result of the recent *fête* held at the Zoological Gardens, Clifton.

THE UNIVERSAL EXHIBITION OF PARIS.

(FROM OUR SPECIAL CORRESPONDENT.)

THE BELGIAN HYGIENE SECTION.

DRAWN away from the Exhibition by the long succession of International Congresses I feel, now that the eleventh hour is approaching, how little I have seen and described of this most marvellous accumulation of the world's wonders. Every visit means the discovery of something new, something which had been missed on a previous occasion. It suffices in travelling over almost the same ground to bear a few yards more to the right or to the left and the whole aspect changes and the range of subjects is altered. It is doubtful if anyone, however patient and insensible to fatigue, will be in a position to say that he has really seen the whole of the exhibits. Even if only a limited number of subjects are selected for study and examination the exhibits relating thereto are so scattered and so far apart that it requires much time and patience we find them all out. For instance, in regard to hygiene there is a part of the American sanitary exhibits at the farthest end of [illegible] Then, though the buildings [illegible] sections of hygiene and of [illegible] he river side beyond the Po[illegible] Avenue of Nations in the pavilions of Monaco, Finland, Roumania, and Luxembourg plans for draining various towns, &c. Again, all that relates to the sanitation of Paris, as I have already described, is exhibited in a large, separate, and interesting pavilion, but this is on the other side of the river. Then the medical ar[illegible] exhibits are ever so far away by the Eiffel Tower, [illegible] several foreign countries are [illegible] ss village above the food products and at the extreme end of the old Gallery of Machines. To go to these different hygiene exhibits—and I have not mentioned them all—means a walk of some four miles, and on the road many other subjects would attract the attention of a medical man or a sanitary reformer as bearing indirectly on the questions taken in hand. For instance, in the hygiene section there is a specimen of an hotel bedroom. This is an invasion of the sanitary department by the furniture department, and yet what could be more appropriate? The exhibit is made by the French Touring Club and a very excellent idea it is. The Touring Club intend their exhibit to be an object-lesson to hotel proprietors, especially in Alpine districts where there is a constant flow of tourists who rarely remain more than a night or two. The exhibit shows how bedrooms should be furnished so as to secure the highest degree of cleanliness and the greatest immunity from vermin and from disease. The walls, of course, are rounded off at the angles and covered with a glazed material that can easily be washed, the bed is of iron, the furniture is simple, and the windows are contrived so that they may be opened at the top. Here, by the way, wire gauze should be provided, so that while the air is let in the mosquitoes may be kept out. The most original suggestion is with regard to the floor. Underneath the boards the plaster of the ceiling of the room below is covered over with a bituminous coating which prevents the plaster from disintegrating and the dust from rising up through the chinks of the flooring. Here, then, the connexion between furniture and hygiene is demonstrated, and thus, indeed, all that relates to our homes, whether it be the furniture in the rooms or the way these rooms are built, forms part of the science of hygiene. The same may be sai[illegible] just as anxious that the [illegible] underwear should be [illegible] of our rooms should not be heavily [illegible]

DUST AND LUNG DISEASES.

Take another example. A surgeon proceeds direct to the medical section in the great westerly wing of the main building on the Champs de Mars. He emerges therefrom and at once comes upon the exhibits of the means of transport. This is not medicine or surgery, but how important is the question of transport to most practitioners. Here there are the very latest devices in regard to motor-cars, and here also are ideal broughams and an endless variety of bicycles. Then, having seen the latest improvements, who could resist going a step further to review the retrospective exhibits—the

not to advocate this above any other locality, but to make known the existence, about 10 miles from the town of Harrismith, of what is a considerable rarity upon the high veldt—a large and comfortable farmhouse where paying guests are welcome. Of this house and its hospitality I had in the early part of last year two months' personal and happy experience; and I have lately heard that the host and his wife, both loyal English Afrikanders, have survived the dangers and hardships of the war and are once more in a position to do their best for a limited number of visitors It would give me pleasure to impart to anyone, medical or lay, all that I know about this house and its surroundings.

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DRAWN away from the Exhibition by the long succession of International Congresses I feel, now that the eleventh hour is approaching, how little I have seen and described of this most marvellous accumulation of the world's wonders. Every visit means the discovery of something new, something which had been missed on a previous occasion. It suffices in travelling over almost the same ground to bear a few yards more to the right or to the left and the whole aspect changes and the range of *subjects* is altered. It is doubtful if anyone, however patient and insensible to fatigue, will be in a position to say that he has really seen the whole of the exhibits. Even if only a limited number of subjects are selected for study and examination the exhibits relating thereto are so *scattered* and so far apart that it requires much time and patience we find them all out. For instance, in regard to hygiene there is a part of the American sanitary exhibits at the farthest end of the Esplanade des Invalides. Then, though the buildings specially denominated as the sections of hygiene and of warming and ventilating are on the river side beyond the Pont de l'Alma, there are in the Avenue of Nations in the pavilions of Monaco, Finland, Roumania, *and* Luxembourg plans for draining various towns, &c. Again, all that relates to the sanitation of Paris, as I have already described, is exhibited in a large, separate, and interesting pavilion, but this is on the other side of the river. Then the medical and surgical exhibits are ever so far away by the Eiffel Tower, while the sanitary exhibits of several *foreign* countries are still further off by the Swiss village above the food products and at the extreme end of the old Gallery of Machines. To go to these different hygiene exhibits—and I have not mentioned them all—means a walk of some four miles, and on the road many other subjects would attract the attention of a medical man or a sanitary reformer as bearing indirectly on the questions taken in hand. For instance, in the hygiene section there is a specimen of an hotel bedroom. This is an invasion of the sanitary department by the furniture department, and yet what could be more appropriate? The exhibit is made by the French Touring Club and a very excellent idea it is. The Touring Club intend their exhibit to be an object-lesson to hotel proprietors, especially in Alpine districts where there is a constant flow of tourists who rarely remain more than a night or two. The exhibit shows how bedrooms should be furnished so as to secure the highest degree of cleanliness and the greatest immunity from vermin and from disease. The walls, of course, are rounded off at the angles and covered with a glazed material that can easily be washed, the bed is of iron, the furniture is simple, and the windows are contrived so that they may be opened at the top. Here, by the way, wire-gauze should be provided, so that while the air is let in the mosquitoes may be kept out The most original suggestion is with regard to the floor. Underneath the boards the plaster of the ceiling of the room below is covered over with a bituminous coating which prevents the plaster from disintegrating and the dust from rising up through the chinks of the flooring. Here, then, the connexion between furniture and hygiene is demonstrated, and thus, indeed, all that relates to our homes, whether it be the furniture in the rooms or the way these rooms are built, forms part of the science of hygiene. The same m[illegible] anxious [illegible] wear sh[illegible] rooms should not be heavily loaded with arsenic.

DUST AND LUNG DISEASES.

Take another example. A surgeon proceeds direct to the medical section in the great westerly wing of the main building on the Champs de Mars. He emerges therefrom and at once comes upon the exhibits of the means of transport. This is not medicine or surgery, but how important is the question of transport to most practitioners. Here there are the very latest devices in regard to motor-cars, and here also are ideal broughams and an endless variety of bicycles. Then, having seen the latest improvements, who could resist going a step further to review the retrospective exhibits—the

not to advocate this above any other locality, but to make known the existence, about 10 miles from the town of Harrismith, of what is a considerable rarity upon the high veldt—a large and comfortable farmhouse where paying guests are welcome. Of this house and its hospitality I had in the early part of last year two months' personal and happy experience; and I have lately heard that the host and his wife, both loyal English Afrikanders, have survived the dangers and hardships of the war and are once more in a position to do their best for a limited number of visitors. It would give me pleasure to impart to anyone, medical or lay, all that I know about this house and its surroundings.

I am, Sirs, yours faithfully,

W. LEE DICKINSON.

9, Chesterfield-street, Mayfair, W., Oct. 12th, 1900.

THE CAUSATION OF SCURVY.

To the Editors of THE LANCET.

SIRS,—Being much interested in scurvy I read with great expectation the article by Dr. Vaughan Harley and Mr. F. G. Jackson in THE LANCET of April 28th, 1900, p. 1184, and that by Staff Surgeon W. E. Home, R.N., in THE LANCET of August 4th, p. 321, and I regret to say that I am disappointed, for the following reasons.

Dr. Harley, as the result of feeding monkeys with bad meat, came to the conclusion that scurvy is caused by some poison in tainted (flesh) food. Now this may or may not be correct, but it quite fails to account for the disease in men who only eat good grain stuffs. I have seen a good deal of scurvy amongst non-meat-eating Indian troops both on service and in peace time, and have always found it to be caused solely by a diet containing too little fresh vegetables or fruits. I am of opinion that the disease was so caused as it was always cured by the addition to the diet of fresh potatoes, or dates, or limes, without any change being made in the food and water the patients were originally taking, without change of locality or circumstances, and without drugs. I am unable to give an opinion as to the prophylactic or curative powers of tinned milk, of pressed vegetables, of onions, of preserved limejuice, of fresh meat, or of fresh milk, though a recent experience of mine seemed to show that those men who could afford to buy milk were not attacked, while others under exactly the same conditions, but without milk, were attacked, and as regards fresh meat Nansen has proved that a diet of that alone is quite sufficient.

Staff-Surgeon Home suggests that scurvy is "an infection of the mouth with micro-organisms out of decayed food." I do not think that this is so, as in large outbreaks I have seen amongst non-meat-eating men, the various grains which formed the food staples were excellent, and the affection of the gums was not the first symptom observed. Also the gums are not in a state of inflammation—gingivitis. At a certain stage of the disease—generally early, very occasionally late, and I have read sometimes not at all—they become swelled by the scorbutic fibrinous infiltration (except places where teeth are absent), and any ulceration which may supervene later is quite unspecific. With reference to the "orthodox view" given by Staff Surgeon Home let me give a typical case. A healthy sepoy, living in cantonments, wishes to save money. He has to pay for and eat the flour, rice, or dhal cooked by his company cook, so he saves by depriving himself of extras such as milk and vegetables, and meat if a meat-eater. In two or three months that man will be in hospital with scurvy, and in a fairly short time he will, by the simple addition of fresh limes or potatoes to his original diet, be quite fit for duty. "Preceding hardships" are not required for the production of scurvy, and I think it a good working rule to fear that men will become scorbutic if they cannot get either green vegetables, or fruit, or fresh milk, or fresh meat.

I am, Sirs, yours faithfully,

C. B. MAITLAND, F.R.C.P. Edin.,
Grantown-on Spey. Lieutenant Colonel I M S.

"TWO CASES OF ARTERIO-VENOUS ANEURYSM."

To the Editors of THE LANCET.

SIRS,—I am much interested in the two cases of arterio-venous aneurysm reported in THE LANCET of Oct. 13th, (p. 1073) by Lieutenant-Colonel J. T. Lewtas, I.M.S. The result of the first case, treated by ligature of the vein by means of two ligatures applied one above and one below the opening into it and by ligature of the artery above the opening into it, is eminently satisfactory, for the disease was cured and the limb was saved. The result of the second case is, I should consider, eminently unsatisfactory, for the limb was amputated. I have on one occasion tied the artery above the opening into it for the cure of arterio-venous aneurysm of the popliteal artery and vein with the same unfortunate result as that following Colonel Lewtas's operation and it is curious how frequently gangrene has followed this procedure. Gangrene is much more common in cases of femoral arterio venous aneurysm after ligature of the artery by a single ligature applied to the vessel above the opening into it than when a ligature is applied above the aneurysm for the cure of popliteal aneurysm (Hunter's operation). I do not know that this is to be wondered at, but it is certainly true. On the other hand, tying both artery and vein above and below the opening into them and dissecting out the sac has been attended by most satisfactory results. This is undoubtedly a severe and sometimes a difficult operation, but it can usually be performed. In one case reported by Dr. Keen where the common carotid and the jugular veins were involved it was found impossible to dissect out the sac, but even this case was cured.—I am, Sirs, yours faithfully,

FREDERICK PAGE,
Professor of Surgery, Durham University.

Newcastle-upon-Tyne, Oct. 15th, 1900.

"THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY AND THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—In reply to Mr. T. Bryant's letter, dated May 5th, published in THE LANCET of Oct. 13th (p. 1097), I beg leave to say that I still regard as accurate the statement contained in the second paragraph of that letter. The paragraph is printed between inverted commas and is quoted from the last annual report of my society. I know no reason why anyone should accept as convincing Mr. Bryant's expression of his personal opinion concerning the cases to which he refers; and I see nothing more in his letter than a mere expression of his personal opinion.

I am, Sirs, yours faithfully,

Oct. 15th, 1900. HUGH WOODS,
Honorary General Secretary.

"THE SMOKE NUISANCE."

To the Editors of THE LANCET.

SIRS,—In answer to the letter from Mr. F. W. Alexander on the above subject which appeared in THE LANCET of Oct. 13th, (p. 1098) I should like to point out that the coal Smoke Abatement Society is well aware that it or any individual may prosecute in a case of smoke nuisance, but that having considered the matter in all its bearings the committee of the society has determined, at any rate for the present, not to institute proceedings itself. The principal difficulty in the society instituting proceedings is that the society would have to prove in court a nuisance by the smoke, a not always easy thing to prove to the satisfaction of a magistrate, whereas if the vestry prosecutes it only has to prove that black smoke was emitted, which under Section 23 and 24 constitutes a nuisance. Where there are public authorities constituted for the purpose of suppressing these nuisances my committee considered that it would be unwise of them to commence legal proceedings in cases which now number some thousands.—I am, Sirs, yours faithfully,

H. A. DES VŒUX.

Oct. 17th, 1900. Hon. Treasurer, Coal Smoke Abatement Society.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Medical Staff for the China Expeditionary Force.—The Hospital Ship Gwalior.—Beri-beri on H.M.S. Sphinx.—The Pasteur Institute at Kasauli.—Further Increase of Plague in India.

ONE hundred and thirty medical officers (all but eight of whom belong to the Indian Medical Service) having been detailed for duty with the China Expeditionary Force there

has been a great strain on the medical service. Many officers (87) have been taken from civil employment and others holding civil stations have been given charge of native troops in addition to their own duties. Besides this the Government have found it necessary to engage the services of purely civilian and unofficial practitioners.

The hospital ship *Gwalior* which has been provided by the Maharajah Scindhia is to sail on Sept. 22nd. She is one of the boats of the British India line. Extensive and costly alterations have been made. She was first carefully surveyed in the dry dock and was then dressed in a coat of light-grey paint with red crosses on her bows, sides, stern, and funnel. She is now lighted throughout by electricity and she has electric fans. There will be separate accommodation for convalescents and a completely isolated infectious ward on the poop. A simple and efficacious method of taking the sick on board has been fitted by means of a large port in the ship's side with a conveyance by a light trolly to the beds. For fracture and certain surgical cases swinging beds have been provided. Electric stoves have been furnished and with these water can be boiled in a few minutes. The *Gwalior* has been fitted not only with all the necessary apparatus of ventilation for use in a tropical climate but with all the necessary warming arrangements to cope with the severe winter months of Northern China. The vessel is a three-masted steamer of 4200 tons register and she closely resembles the hospital ship *Carthage*. There will thus be, including the *Maine*, three vessels in Chinese waters, so that with the three base hospitals the sick and wounded should be well provided for. The expenses of the *Gwalior* will probably exceed £100,000 and she will have to be restored to her owners in her original condition.

Five cases of beri-beri have occurred amongst the bluejackets on board H.M.S. *Sphinx*, which left Muscat on Sept. 13th and arrived in Bombay on the 17th. The vessel has been placed in quarantine and has been thoroughly disinfec
o hospital.

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success which has attended the institution since its opening on August 9th. There have now been 42 admissions, and 31 patients have completed the course of treatment. During the past week a British soldier and two native civilians were admitted, while four officers from Bombay, a British soldier, and two native civilians are on the way. The native patients include both Mohamedans and Hindoos, and all appear only too anxious to avail themselves of the treatment.

While plague is again on the increase the numbers under
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works and two and a half millions on gratuitous relief. This week's plague returns show a further increase, the total deaths throughout India having risen to 1136. Bombay city returns 72, Bombay districts 593, Calcutta 81 (including suspected), and Bengal districts 22. In the Mysore State the deaths numbered 363. There are now indications that the disease is again developing in Bombay city, the general mortality (1084, equal to 66.44 per mille) not only remaining very high, but the recorded deaths from plague having increased. In Calcutta, although the plague deaths continue much the same as for many weeks past, the general mortality is increasing. The districts of Poona, Nasik, Surat, Thana, and Belgaum give cause for great anxiety. Cholera is raging severely in Kashmir, especially in Srinagar and the surrounding districts. It has rapidly gone down in Bombay city and very few cases are now occurring in the army. The principles to be observed in connexion with plague operations have apparently been finally settled by the recommendations of tl
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reigned in Bengal, so that it is not surprising to hear that the Lieutenant-Governor considers that the work of the Bengal Plague Commission is no longer necessary. The Local Commission has therefore been dissolved.

Sept. 20th.

BRISTOL EYE HOSPITAL.—The committee of the Bristol Eye Hospital have received £1263 as a result of the recent *fête* held at the Zoological Gardens, Clifton.

THE UNIVERSAL EXHIBITION OF PARIS.

(FROM OUR SPECIAL CORRESPONDENT.)

THE BELGIAN HYGIENE SECTION.

DRAWN away from the Exhibition by the long succession of International Congresses I feel, now that the eleventh hour is approaching, how little I have seen and described of this most marvellous accumulation of the world's wonders. Every visit means the discovery of something new, something which had been missed on a previous occasion. It suffices in travelling over almost the same ground to bear a few yards more to the right or to the left and the whole aspect changes and the range of subjects is altered. It is doubtful if anyone, however patient and insensible to fatigue, will be in a position to say that he has really seen the whole of the exhibits. Even if only a limited number of subjects are selected for study and examination the exhibits relating thereto are so scattered and so far apart that it requires much time and patience we find them all out. For instance, in regard to hygiene there is a part of the American sanitary exhibits at the farthest end of the Esplanade des Invalides. Then, though the buildings specially denominated as the sections of hygiene and of warming and ventilating are on the river side beyond the Pont de l'Alma, there are in the Avenue of Nations in the pavilions of Monaco, Finland, Roumania, and Luxembourg plans for draining various towns, &c. Again, all that relates to the sanitation of Paris, as I have already described, is exhibited in a large, separate, and interesting pavilion, but this is on the other side of the river. Then the medical and surgical exhibits are ever so far away by the Eiffel Tower, while the sanitary exhibits of several foreign countries are still further off by the Swiss village above the food products and at the extreme end of the old Gallery of Machines. To go to these different hygiene exhibits—and I have not mentioned them all—means a walk of some four miles, and on the road many other subjects would attract the attention of a medical man or a sanitary reformer as bearing indirectly on the questions taken in hand. For instance, in the hygiene section there is a specimen of an hotel bedroom. This is an invasion of the sanitary department by the furniture department, and yet what could be more appropriate? The exhibit is made by the French Touring Club and a very excellent idea it is. The Touring Club intend their exhibit to be an object-lesson to hotel proprietors, especially in Alpine districts where there is a constant flow of tourists who rarely remain more than a night or two. The exhibit shows how bedrooms should be furnished so as to secure the highest degree of cleanliness and the greatest immunity from vermin and from disease. The walls, of course, are rounded off at the angles and covered with a glazed material that can easily be washed, the bed is of iron, the furniture is simple, and the windows are contrived so that they may be opened at the top. Here, by the way, wire gauze should be provided, so that while the air is let in the mosquitoes may be kept out. The most original suggestion is with regard to the floor. Underneath the boards the plaster of the ceiling of the room below is covered over with a bituminous coating which prevents the plaster from disintegrating and the dust from rising up through the chinks of the flooring. Here, then, the connexion between furniture and hygiene is demonstrated, and thus, indeed, all that relates to our homes, whether it be the furniture in the rooms or the way these rooms are built, forms part of the science of hygiene. The same may be said with regard to clothing, and we are just as anxious that the dyes used in making our clothes and underwear should be non-poisonous as that the wall-paper of our rooms should not be heavily loaded with arsenic.

DUST AND LUNG DISEASES.

Take another example. A surgeon proceeds direct to the medical section in the great westerly wing of the main building on the Champs de Mars. He emerges therefrom and at once comes upon the exhibits of the means of transport. This is not medicine or surgery, but how important is the question of transport to most practitioners. Here there are the very latest devices in regard to motor-cars, and here also are ideal broughams and an endless variety of bicycles. Then, having seen the latest improvements, who could resist going a step further to review the retrospective exhibits—the

first bicycles and many quaint old carriages and coaches. While engaged in this department the visitor will come upon the sanitary exhibits of Belgium. These are situated against the wall nearest to the Avenue de Suffren and face the carriages and coaches, the sledges, the sedan chairs, &c. Why Belgian sanitation should be amid the means of transport while the sanitary exhibits of Germany, Austria, England, and other countries are placed over and above the food supplies of the world, is one of those mysteries which is not easily explained. As, however, Belgium is among the most progressive of European countries in regard to sanitation, it is to be hoped that visitors have found their way to this section in spite of its inappropriate localisation. In any case, it has not escaped the attention of the jury, for they have awarded to the Belgian sanitary exhibits no less than two grand prizes, nine gold medals, seven silver medals, seven bronze medals, and three honorary mentions. The Belgian Government deputed Dr. Bonmarriage, founder of the Brussels Institute of Hygiene, to organise this section, and he has succeeded in gathering together a great amount of useful informative matter. From his own institute he sends, among other things, sections of the lungs of rabbits and micro-photographic slides of the same. These rabbits were exposed to the action of various forms of dust which in divers industries workmen have to breathe. We are thus able to see the lesions produced in the lungs by coal-dust, the dust of mills, of hemp, of cement, &c. He hopes by these means to demonstrate the necessity of greater care and better ventilation, and thus to reduce the prevalence of diseases of the chest in various industries. Professor Henri and Professor Albert Bergé of the Brussels University exhibit their method of sterilising water by the oxidising effects of a mixture of chlorate of potash and a weak solution of sulphuric acid. A current of air carries the gas evolved into a small quantity of water, and this latter is mixed with the water that has to be purified. This process can be employed both for small quantities of water and for large quantities. At Ostend 5000 cubic metres of water per day are thus sterilised. On the other hand, travellers can carry a small bottle of the solution with them, and with the aid of a pipette can sterilise a glass of water as it stands on the table while they are dining.

THE PRESERVATION OF CORPSES.

Close by, Dr. G de Richter and M. F. de Recher, a civil engineer, exhibit their method of preserving dead bodies with formalin. The system is based on the penetrating powers of this antiseptic. To ensure this penetration the case in which the body is placed is divided into two. The body is placed in the upper portion, over a chamber or partition for the evaporation of the formalin. The formalin of commerce is employed. There are four recipients automatically fed and a slight current of air is provided to facilitate the evaporation The formalin runs along channels over which wicks are suspended which take up the liquid and still further help its evaporation. Thus a minimum amount is spread over a maximum surface, and this maintains the air in a constant state of saturation. The body absorbs the formaldehyde (CH_2O), but it is constantly renewed by the evaporation of the formalin. One litre of formalin suffices for the treatment of a human body, therefore the process is much cheaper than that of refrigeration. On the other hand, it does not in any way interfere with any toxicological researches that may subsequently have to be made. The most remarkable fact is that when a body has been treated in this manner for four weeks it is not only sterilised but it will not decompose and it may be kept in the open air for an indefinite period. Thus a photograph is shown of a man who died from tuberculosis on Oct. 10th, 1898. The body was placed in the apparatus from Oct. 12th to Dec. 6th, and then laid out on a table in the open air. The photograph was taken in May, 1899, five months after the body had been thus exposed, and it was unaltered. This is, then, a great improvement on the old process of embalming as it does not necessitate the mutilation of the corpse. The process can also be applied to an ordinary coffin, and if the lid is partially of glass the body or the face may be seen intact years after death. Thus there is a photograph of a person who was placed in a coffin of this description on Dec. 8th, 1898. The photograph was taken in the month of May last. The body was then intact and it is stated that it remains in that condition at the present day. The process will render great service in medico-legal matters and for the preservation of anatomical material or of the bodies of animals and for the sterilisation of the bodies of persons who have died from infectious diseases, or for keeping the bodies of persons who have died at sea.

COMPRESSED AIR IN MINES.

M. Hanarte, civil engineer, exhibits an apparatus for the economic production of compressed air which is extensively used in the Belgian and French coal-mines. By special methods he dispenses with the aid of heat and thus reduces the first cost. The most ingenious device is the application of this compressed air as the motive power for working the drilling and other machinery used in the mines, so that the cost of compression is compensated by the economy of the cost of motive power, but from the health point of view the invention is still more important. The discharge of the compressed air provides a supply of pure air and this takes place precisely where the usual or general ventilation of the mines is least efficacious. Where there is a gallery that is open at both ends ventilation is comparatively easy, but miners generally work in holes, caves, or passages that have no opening at the other end and where it is not possible to establish a through draught. The discharge of compressed pure air at the head of such drillings is of the greatest benefit to the workers. It forces the foul air out of the hole and replaces it with pure air. The force supplied can also in many instances be used instead of that of explosives and thus the risk of accidents is reduced. The same system may be applied to workshops and factories and the motive power may be made to serve for ventilation as well as for manufacturing the goods produced.

OTHER BELGIAN EXHIBITS.

The Compagnie Générale des Conduits d'Eau of Liège give some indication of the vast public works which they have undertaken in various countries. The company are amongst the largest manufacturers of metallic pipes for the supply of gas or of water. They can make pipes that will resist a pressure of 150 atmospheres and which vary in diameter from two centimetres to one and a quarter metres. From 70 to 80 per cent. of the pipes they produce are exported to Holland, France, Spain, Roumania, Germany, Bulgaria, Turkey, Egypt, Japan, Siberia, South America, and other countries. The waters supplied to the suburbs of Paris, to the city of Rome and to many Italian towns, to Barcelona and to other Spanish towns, to Bremerhaven, to Utrecht, to Arnheim, to Bucharest, and to Vienna, pass through such pipes. It would be difficult to find a firm with a greater experience of the problem of the distribution of water in large towns. There are many other exhibits here that deal with water-supply, and notably full details are given in respect to the derivation of the springs or watershed of the Bocq for the supply of Brussels, which is the largest of such undertakings. Then, as the municipalities of several towns have made exhibits, these naturally include their system of water-supply. Perhaps the most interesting exhibit of this description is that of the town of Spa. This fashionable pleasure and health resort was formerly so badly drained and so deficient in its water-supply that severe epidemics resulted. As several English visitors were the victims of these unhealthy conditions the British Government made some diplomatic representations on the subject which, with the pressure of public opinion, ultimately produced the desired result and now the town authorities of Spa are quite proud of their new and good water-supply and are anxious to show that they have secured a complete system of sewers and that the branch sewers are all provided with automatic flush-tanks. The vital statistics of the town bear witness to the excellent effect of these reforms. There are any number of plans and drawings of hospitals, asylums, sanatoria, and the like, notably that of the Society of Israelite Mothers presided over by Madame de Rothschild, now Baroness Lambert. There is, first, a lying-in hospital where women, without distinction of creed and whether married or not, are received, but the special feature is that this institution continues to help both mother and child for many years. After the birth outdoor assistance is given, then there is a *crèche* for the child when he is three years old and a school when the age of six years is reached, and every effort is subsequently made to teach him a trade and enable him to earn an independent living. There is likewise an orphan asylum. Every contingency is provided for, and the poor mother and child who are fortunate enough to gain admittance to this institution may consider that they have reached a permanent haven. The jury awarded the gold medal to this charity. The various bacteriological [illegible] s from which a very [illegible] of research may be [illegible] photographs to be [illegible] been attained. Alto- [illegible] conveys a favourable [illegible] gress which has been achieved in that country in regard to sanitation.

Paris, Oct. 15th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Volunteer Medical Staff Corps.

[illegible] W. COATES, command- [illegible] lical Staff Corps, appeals [illegible] dation. "To secure the [illegible] rs with a drill hall are absolutely essential." There is now an opportunity of acquiring land, but to carry out the scheme a sum of £12,000 is required. The appeal is based on the following very good grounds: (1) That companies of the Volunteer Medical Staff Corps are a necessary complement of the volunteer force of the kingdom; (2) that it is an immense advantage to the community that there should be in our midst thoroughly trained men capable of affording efficient assistance in the emergencies of accident and illness in civil life; and (3) that by this means a valuable opportunity is given to the youth of Manchester and district to follow a recreation which should improve both their physical, intellectual, and moral development. The use of the term "recreation" is quite correct, and this one has [illegible] er forms of recreation that the [illegible] is not confined to, or centred [illegible] s shown not only other nations but our own somewhat sceptical people that the volunteers are not merely play soldiers whose exploits are confined to peaceful promenading, but that they form a valuable part of our insurance against foreign aggression, which would not be complete without a due proportion of the medical staff corps. Bearing in mind what has already happened, and also that it is the unexpected that does happen, the Manchester people will surely pay this modest insurance premium.

Early and Improvident Marriages.

At an inquest held recently Mr Smelt, the Manchester coroner, made some remarks on "early and improvident marriages." The mother of a child who had come to his death through burns said that she had been married 17 years and was married at 17. She went out to work for 6*s.* a week, and left the child to take "pot luck," as her husband was earning nothing. Mr. Smelt said that on account of these marriages the English race was a degenerating and miserable race. A Zulu could not marry till he was 25 and possessed a certain amount of property. "In a fight under equal conditions he would back 50 Zulus against 100 men such as some who applied to be admitted into the British army." Whatever may be the value of this special statement there is no doubt of the degeneracy and deterioration of the masses of our town-bred population. It is saddening to see the pallid, stunted, ill set up lads and girls, many of them married, streaming out from the factory gates at closing time, and [illegible] infants, of perhaps [illegible] and the weary carev [illegible] their ill-developed n [illegible] hospitals. Apart from the pity of it, the prospect of a large proportion of the next generation born of such a stock and living under the conditions at present prevailing in our large towns is a serious one for the nation. It suggests the question as to whether the heavy infant death-rate we deplore is a curse or a blessing. How to prevent this decay of our race is a problem which will not be solved under present conditions. Whether our system of education will do anything to give more correct views and to bring about a better mode of living seems more than doubtful.

Manchester Port Sanitary Authority.

A careful watch is maintained against the importation of plague by the Ship Canal. During September last the inspector at Eastham made inquiries as to the health of all on board the 197 vessels that passed through the lock into the port. Of these, 166 were British, 13 were Norwegian, and the rest were German, French, Swedish, and Belgian. On Sept. 3rd Dr. J. H. Crocker, the medical officer of health of the Port of Manchester, paid a special visit to Glasgow, examined all the cases of [illegible] with the houses and areas fr [illegible] the sanitary chambers and [illegible] of the sanitary authority. On his return, after consultation with Dr. J. Niven and Dr. C. H. Tattersall, the medical officers of health of Manchester and Salford respectively, he decided that a medical examination of everyone on board a vessel coming from Glasgow should be carried out. It was arranged with Dr H. A. Bold of Trafford-road, Salford, close to the docks, that he should board the vessels at Mode Wheel and inspect the crews and passengers on the way to the docks During the month 19 vessels from Glasgow and two from foreign infected ports entered the canal, but no case of infectious sickness was found.

Manchester Royal Infirmary.

The Manchester Royal Infirmary loses, in accordance with the rule as to the age-limit, the services of Mr. Walter Whitehead as a member of the active staff, and at a meeting of the board of management he was appointed an honorary consulting surgeon to the institution. Mr. William Thorburn, the senior honorary assistant surgeon, was unanimously appointed honorary surgeon.

Oct. 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Inaugural Address by the New Professor of Medicine of the University of Edinburgh.

ON Oct 16th, at two o'clock in the afternoon, in the McEwan Hall, Dr. John Wyllie, the recently appointed Professor of Medicine in the University, delivered his inaugural address before a large concourse of students and others. Professor Wyllie was supported by a number of his colleagues in the Senatus, while the chair was occupied by Sir William Muir, Principal of the University, who briefly introduced the new Professor. Professor Wyllie devoted his opening lecture to the memory of the distinguished men who had occupied the chair in time past He began his address by appreciative notice of the work and influence of Sir Thomas Grainger Stewart, his immediate predecessor. He then considered separately the seven occupants of the chair who preceded Sir Thomas Grainger Stewart—namely, John Rutherford, John Gregory, William Cullen, James Gregory, James Home, William Pulteney Alison, and Thomas Laycock. Having given a brief and judicial summary of the position held by these men he concluded his address as follows: "I feel that it is a very great honour to me that I have been elected to the Chair of Medicine. I feel also that I have taken upon me in accepting the office a very great responsibility. The history of the chair is all too splendid to be studied with perfect comfort by one who now comes for the first time to occupy it. But I trust that the example of the eminent men who have in the past been its occupants will be an inspiration to me and not by its very brilliancy a discouragement. I confess to you that it is to me a matter of great satisfaction that by my appointment to this chair it is determined that in the future my life shall be devoted to the teaching of medicine as it has been in the past and that my charge of wards at the Royal Infirmary will enable me to work towards the advance of medical science. The welcome which to-day you have so kindly given me encourages me to hope that I may be able to discharge my duties in such a manner as may be to the advantage of my students and to the satisfaction of my Principal and my colleagues in the University." The address was listened to in perfect stillness by the large audience, and the outburst of applause at its conclusion was convincing proof of the interest which it had aroused and of the popularity of the new Professor.

Professor Chiene on his Experiences in South Africa.

Professor Chiene opened the winter session of the class of surgery in the University of Edinburgh by an address in which he gave an outline of his experiences as a consulting surgeon in South Africa. The address was delivered in the McEwan Hall on Oct. 16th, when the Professor was given a most enthusiastic welcome by his students. One could better appreciate, he said, after even a short absence immediate relief. There was defective accommodation in the day-rooms, and it was pointed out that the responsibility for the providing of suitable accommodation rested with the committee and that it was necessary for them to satisfy the Lord Lieutenant that the requisite accommodation and buildings had been provided before the rate-in-aid could be paid. The temporary buildings, which were to have been completed in the spring of 1899, had not yet been occupied, nor had the furniture been obtained for them. The overcrowding of the asylum was not only disastrous to the treatment of patients but menaced their safety should any epidemic occur.

Winter Session of the Belfast Medical School.

The winter session (1900-1901) of the Medical School in Belfast began on Oct. 16th. In the morning Dr. H. L. McKisack gave the introductory address in the theatre of the Royal Victoria Hospital when there was a large audience of students and members of the medical and surgical staff. After welcoming the students on behalf of the staff Dr. McKisack referred to the recent losses which they had suffered by the death of Dr. Strafford Smith and by the retirement of Dr. Henry O'Neill. The new Royal Victoria Hospital, of which the foundation-stone is to be laid early in 1901 by H.R.H. the Prince of Wales, was described, and while the advantages to be expected from a thoroughly well-equipped modern hospital were fully acknowledged it was impressed upon the audience that earnestness on the part of teachers and students was the essential, and it was pointed out that much of the real progress had been effected with very simple and often imperfect apparatus. The importance of educating the senses thoroughly was therefore emphasised, whilst the mental education and the use of scientific diagnostic instruments were not to be neglected. The students were advised to strive to grasp the case in all its bearings and not to be content with discovering the pathology of an affected organ. After commenting on the difficulty of erecting a typical case as a standard for comparison and on the constant occurrence of variations, the lecturer summarised the advisory part of his remarks to the students as follows:—"(*a*) Follow the course mapped out for you during the session, without straying aimlessly from ward to ward. (*b*) Learn thoroughly how to examine a case and to take notes of it in a methodical and orthodox manner. (*c*) Follow up your cases perseveringly, examining them frequently and keeping notes of their progress. (*d*) Be as regular and punctual in your attendance at the hospital as at your meals, or, if anything, be rather more so. Come early and do not be in a hurry to get away. You cannot be better employed anywhere else. (*e*) Do not miss any opportunity of coming into the hospital as resident." College lectures began also on Oct. 16th.

Royal Victoria Hospital, Belfast.

Owing to the sad death of Dr. R. S. Smith and the regretted resignation of Dr. H. O'Neill, two important vacancies have occurred, one on the medical side, the other on the surgical side, of the Royal Victoria Hospital staff at Belfast. Dr. H. L. McKisack will succeed to Dr. Smith's place and become full physician, and up to the present Dr. W. B. McQuitty is the only candidate for the position of assistant physician vacant by Dr. McKisack's promotion. On the surgical side, Dr. A. B. Mitchell will become full surgeon, Dr. T. S. Kirk will become senior assistant surgeon, and Mr. Robert Campbell is the only candidate for the junior assistant surgeoncy. For the position of surgical registrar, vacated by Mr. R Campbell, there will be a sharp contest, as already several candidates are in the field.

Oct. 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Giving of Medical Certificates by Hospital Internes.

THE Association of Medical Practitioners in the Department of the Seine has for some time past over and over again had to consider some of the many difficulties which arise concerning the application of the new law dealing with accidents to workmen, especially where the wounded man is taken to a hospital. The insurance companies naturally enough demand a medical certificate as to the extent of the injuries given as soon after the accident as it is possible to form an opinion, so that they shall know whether to impute liability for the accident to the originator of it or to the employer. The administrative body of the hospitals, however, place great difficulties in the way of the medical officers of the insurance companies with regard to their entry into the hospitals for the purpose of satisfying themselves as to the condition of the wounded man. In a recent case a medical student who was employed as *interne* of the ward refused to give entry to the insurance company's medical officer, saying that a recent circular of the director of the Assistance Publique gave *internes* the sole right of giving certificates with regard to hospital cases and that, therefore, he had no information to give. The medical officer of the insurance company remarked that he only wanted a certificate for the company so that it might be able to ascertain when the wounded man would be able to resume work and in particular how much compensation it ought to pay to the family of the workman. The *interne*, however, stuck to his guns and refused any information. The administrative council of the Medical Association of the Seine took up the matter and protested strongly against the attitude of young practitioners who begin their medical career with such an unbrotherly mode of action. It also went into the point whether a certificate granted by a student although an *interne* should be considered really valuable from a medical and legal point of view. Such students are only authorised to perform medical acts inside the hospital by a tolerance established by force of circumstances, but they have no legal right, without paying the proper tax (*patente*), to take responsibility for a written document which will go out of the hospital and eventually come on for discussion in a court of law. Such an act would come under the head of illegal practice of medicine, especially, as must be remembered, when the certificate has to be paid for. A letter was therefore sent to the Minister of Commerce dealing with the subject, and the Minister, who obviously found himself in a tight corner, replied that such a certificate as would be given by an *interne* was not a real certificate, that it was not designed to establish the right as between two adversaries at law, but simply to give an exact account from the beginning of the condition of the wounded man and by giving some indication of the probable results of the accident to enable the alderman of the ward (*maire*) to decide as to whether an inquiry should take place before a magistrate or no. The Medical Association protested against the hair-splitting of this distinction, for it argued that the certificate *was* a certificate and one moreover which was very important, dealing as it did with the conditions existing immediately after the accident—a state of things which certainly could not recur later, and so would be the most important piece of evidence at the trial. Besides, supposing that further explanations were necessary and that the *interne* were called upon to give evidence before the magistrate, would he have to be paid the regular fee due to a medical witness—namely, five francs? If so—and this was a course of events which was quite likely to happen—the reception of this sum, together with that already paid for the certificate, would be a second act of illegal practice. Unfortunately it is much to be feared that the Government, to get out of finding a solution of so difficult a problem, will accept the dangerous ruling of the Minister. On the other hand, it must be remembered that the law of Nov. 30th, 1892, granted certain concessions to *internes* and certain other students which were full of peril to medical practitioners. This law laid it down that such students should be allowed to practise medicine in time of epidemics or while acting as the *temporary* locum-tenent of a medical officer. Practice in the first case can be easily explained; the second concession was demanded by medical men themselves who feared that if ill or very tired they would not be able to get a substitute if they had to employ a qualified man. This, however, is only a temporary concession which has to be obtained previously from the prefect and which lasts for only three months, although renewable at the end of that time. It is this first clause of the law which is the cause of abuses. As a matter of fact, a prefectural order authorises every three months a certain number of students to perform acts of medical practice even when there is no epidemic and no question of filling the place of an absent medical officer. The object is to assure immediate attendance for urgent cases, so that they should not have to wait unattended for the visit of the surgeon of the day or until the following morning when the chief medical officer of the ward pays his visit. This, however, is no ground for arguing that such students have the right to give certificates in case of accident for use outside the hospital. An injured workman or his employer has 48 hours' grace before he must hand over certificates at the Mairie. Such a certificate could easily be given on the following morning by the principal medical officer of the ward, at least in all cases where an immoveable dressing did not prevent a clear statement as to the injuries being drawn up. The president of the Medical Association is of opinion that "the hospital medical officer cannot be considered to be replaced by his *interne* while he continues to practise in the same town." The replacing can only be considered as genuine if the medical officer is really absent or has left off work for the time being. Unless such is the case it would be inconceivable that a practitioner with one diploma and who had paid only his own tax should be able to practise by means of an intermediary. In these circumstances the Medical Association has appointed a committee which after due inquiry will decide as to whether the order of the Prefect of the Seine giving to *internes* the right to practise in hospitals should not be annulled by the Conseil d'Etat.

The Prophylaxis of Plague.

A recent order of the Minister of the Interior decrees that ships [illegible] recognised as infected with [illegible] ch has come indirectly from [illegible] or discharge cargo at any port of France or Algeria, except Dunkirk, Havre, St. Nazaire, Pauillac, Marseilles, or Algiers. The Minister of the Interior will from time to time give notice of other ports which may under exceptional circumstances be thrown open to the above-mentioned description of vessels, due regard being had to the ship's bill of health and the bill of lading.

Oct. 16th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Health of New South Wales.

THE report of the Board of Health of New South Wales for 1693 has just been presented to Parliament. "The population "is increasing at a rate such as to have led to its having become more than trebled during the 30 years covered by the censuses; the increase is partly due to natural increment and partly to immigration. The mean annual birth-rate for 10 years was 32·61 per 1000 of the population," but the Board noted with regret a continued fall in the mean annual birth-rate. The general death-rate had, however, also diminished, but the Board

regrets that while the death-rate of children under one year is [illegible]

native birth who had never left New South Wales, and two were Chinese males.

The medical officer of health of the Hunter River combined sanitary districts, Dr. Robert Dick, has also sent in his report for the year 1899. He stated that the local authorities in the district had shown more activity in sanitary matters, though deficient in regard to thorough disinfection after cases of infectious disease and in systems of refuse removal, &c. Fewer deaths occurred from typhoid fever, influenza, measles, diarrhœa, and respiratory diseases other than phthisis. In many towns in the district cesspits still existed and the greater incidence of typhoid fever in houses with cesspits was very marked. In the town of Wickham the ratio was 1 case of typhoid fever to every 100 houses where pail-closets were used and 1 to every 48 houses where cesspits existed. An inspection of the whole of the dairies in the district showed a steady improvement in their sanitary conditions.

Isolation Treatment of Consumption.

A deputation recently waited on the Government of Queensland with a request that measures should be taken to provide for the isolation and separate treatment of persons suffering from consumption. The deputation pointed out that all that could be done at present was the establishment of hospitals for the reception of a percentage of those afflicted with the disease.

Regulations for Patent Medicines.

The same deputation also urged the Government to take some steps to regulate the sale of patent medicines and to insure the public against fraud. It was suggested that the Government should see that all proprietary medicines were analysed and their exact composition made known, and that the sale of such as were dangerous should be suppressed.

The North Sydney Hospital.

Some years ago a small cottage hospital was established in North Sydney. Since then the population of this division of the metropolis has increased to between 50,000 and 60,000 inhabitants, but nothing has been done to increase the hospital accommodation, which is utterly inadequate, and patients have to cross the harbour to the other hospitals which are also overcrowded. A deputation recently waited on the Government to ask for a grant of £20,000 for the erection of new buildings. The Colonial Secretary gave a favourable reply and promised to put this amount on the estimates. In his reply the Colonial Secretary observed that notwithstanding the liberal expenditure on hospitals recently the demand continued to outstrip the supply, and he "was afraid the hospitals were being made too attractive and were abused, patients preferring the treatment available to that which they could get at their own homes."

Obituary.

Deep regret was felt in Australia at the announcement of the death in England of Dr. Alfred Shewen who left Sydney about six months ago for a holiday trip to England in the hope that it would restore his failing health. Dr. Shewen came to New South Wales soon after taking his M.D. degree in 1873 and began practice as a physician in partnership with the late Dr. Fortescue. He soon reached a very high position and gained a large practice. He was one of the first honorary physicians at the Prince Alfred Hospital, Sydney, and was joint lecturer on clinical medicine at the university and a frequent contributor to the local medical societies and journals. He was extremely popular with both the public and the profession and was only 56 years of age at the time of his death.—Mr. Edward Hyacinth O'Doherty died suddenly at Brisbane on July 5th and his funeral was attended by nearly every medical man in Brisbane. He was educated at the Brisbane Grammar School and studied medicine in Dublin, returning to Brisbane in 1882 and joining his father, Dr. K. I. O'Doherty, in practice. For 17 years he was medical officer to out-patients at the Brisbane Hospital and latterly he was honorary physician. For many years he was a member of council of the Queensland Branch of the British Medical Asso- [illegible] and in 1897 he was President. He was exceptionally [illegible] with all classes; full of genial good humour, uni[illegible]y courteous and sympathetic, and often brilliantly [illegible] his charm was felt by everyone. He was remarkable [illegible] loyalty to the profession, and all these qualities, combined with professional skill of no mean order, secured him success. His sudden death came as a great shock to the community.—The late Miss Dagmar Berne was one of the best known and most successful of the women practitioners in Sydney. She matriculated at Sydney University in 1888 and was a student at the Sydney Medical School for a time. She then went to London and Edinburgh, and was at the [illegible] Dublin for a year and returning to London [illegible] the Women's Hospital. She [illegible] in 1895 and continued in full [illegible] was attacked with phthisis and died suddenly from hæmorrhage on August 21st.

Sept. 8th.

Medical News.

KING'S COLLEGE, LONDON.—The following Entrance Scholarships have been awarded in the Medical Faculty:—Warneford Scholarships, £75 each: R. Taylor and A. M. Pollard. Medical Entrance Scholarship, 60 guineas: T. J. Miller. Sambrooke Medical Scholarships: £60, R. H. C. Gompertz; £40, A. D. Griffith. Open to all Faculties:—Clothworkers' Science Scholarships: £30 for two years, W. J. Marlow; and £20 for two years, O. C. Thompson. Engineering Entrance Scholarships: £15, N. G. Langrish; £10, J. H. P. Billrough; and £10, F. R. Fairmaner.

ST. GEORGE'S HOSPITAL SCHOLARSHIPS.—The following scholarships have been awarded for 1900: an Entrance Scholarship in Arts of the value of £150, Mr. Valentine Henry Blake; an Entrance Scholarship in Arts of the value of £50, Mr. James Aubrey Torrens, of St. Paul's School; an Entrance Scholarship in Science of the value of £85 Mr. Basil Nelson Tebbs, M.A., of Queen's College, Cambridge; an Entrance Scholarship in Science of the value of £42 10s., Mr. John Douglas Hope Freshwater, B.A., of Trinity College, Cambridge; and an Entrance Scholarship in Science of the value of £42 10s., Mr. Harry Bertram McCaskie, B.A., of Caius College, Cambridge.

MEDICAL FEES FOR LUNACY CASES.—The Devonport Board of Guardians consider that the sum of one guinea is too large a fee for medical men to be paid in pauper lunacy cases and recently approached the borough magistrates with a view to having the fee reduced. At the meeting of the guardians held on Oct. 12th it was reported that the magistrates did not share the opinion of the guardians. Eventually the board decided to write to the members of the medical profession in Devonport asking them if they would accept a fee of half a guinea for these cases, and the matter will be again brought before the magistrates

MEDICAL FACULTY OF UNIVERSITY COLLEGE, LIVERPOOL: OPENING OF THE WINTER SESSION.—The winter session of the Medical Faculty of University College, Liverpool, was inaugurated on Oct. 13th under auspicious circumstances The gathering included the Lord Bishop of Liverpool (Dr. Chavasse), who delivered the opening address and distributed the prizes; the Lord Mayor of Liverpool, the Earl of Derby, and other prominent Liverpool citizens. The Dean of the Medical Faculty (Professor A. M. Paterson) reported the progress made by the several departments during the past year, a *résumé* of which has already appeared in the columns of THE LANCET.[1] Each year brought additional valuable prizes for the students of the faculty. Two university fellowships, each of the value of £100 for one year, were now open to medical graduates of the Victoria University and were offered to encourage research at the close of the period of study. A colonial fellowship in pathology and bacteriology of the value of £100 a year for five years has been presented by Mr. William Johnston, and a medal in pathology, to be called the "Kanthack Medal," in memory of the late Professor Kanthack of Cambridge, a former distinguished student of the Liverpool School, was awarded now for the first time. The department under the guidance of Dr. Henry Briggs, the professor of midwifery and gynæcology, had been laudably active during the past year. Professor Briggs has brought his department to a high state of efficiency and has spared neither time nor money to effect that object. Formerly Liverpool students were forced through lack of means to seek midwifery instruction elsewhere, but now all but two students had obtained their midwifery curriculum in Liverpool. The Bishop of Liverpool, having distributed the prizes, expressed his deep interest in the fortunes of the young and vigorous University College of Liverpool, and dealt in a very interesting manner with the life and work of William Harvey, John Hunter, and Thomas Sydenham. His best wish for the students was that they might unite the culture of Harvey with the industry of Hunter and crown both with the love of truth, the love of God, and the love of man, which were the glory of Thomas Sydenham.

A NEW dog-muzzling order, enforced on Oct. 15th, has been issued for Carmarthenshire.

ACCIDENT TO A GERMAN PROFESSOR.—Professor Rieder of Bonn, who has been entrusted with the reorganisation of the Turkish Medical Department, has met with a serious accident. While superintending the building of a hospital in Constantinople he fell a distance of 45 feet which resulted in an injury to the spine and a fracture of the foot.

SCARLET FEVER IN THE RHONDDA VALLEY.—Owing to the prevalence of scarlet fever in the Rhondda Valley the district council has called upon the school board to close seven of the public elementary schools for a period of six weeks. The outbreak began about a fortnight after the schools reassembled; the weekly number of cases since then has averaged nearly 60.

WATER-SUPPLY OF FALMOUTH.—At a meeting of the Falmouth Corporation held on Oct. 9th, a resolution was passed by 11 votes to two in favour of purchasing the waterworks of the town. A meeting of the ratepayers will be called to consider the matter. It is estimated that the sum of £74,500 will be required to purchase the waterworks and to carry out the necessary improvements.

FREEMASONRY.—*The Rahere Lodge, No. 2546.*—An ordinary meeting of the Rahere Lodge was held at Frascati's Restaurant, Oxford-street, W., on Tuesday, Oct. 9th, W. Bro. Walter Gripper, M.B., being in the chair. Bro. W. E. Bennett, F.R.C.S., was admitted to the third degree and Mr. R. H. Wellington, M.R.C.S., L.R.C.P., was initiated into Freemasonry. Subsequently some 30 brethren dined together.

UNIVERSITY OF CAMBRIDGE.—The Medical and Surgical Examinations this term will begin as follows: First M.B. (Chemistry) and Second M.B. (Anatomy and Physiology), Dec. 10th; Third M.B., Dec. 11th; First M.B. (Biology) and Second M.B. (Pharmacy), Dec. 13th; and M.C., Dec. 18th. On Oct. 11th the degree of M.D. was conferred on Robert Derwent Parker, B.A., M.B., B.C., of Gonville and Caius College.

VACCINATION EXPENDITURE.—At the meeting of the Devonport Board of Guardians held on Oct. 12th the vaccination committee, reporting upon vaccination fees, stated that they recognised that if vaccinations were to be performed successfully they must be paid for, and that the notable increase in the cost of each individual case was on account of the large amount of work entailed upon the public vaccination officers by the Order of 1898.

TYPHOID FEVER IN SOUTHWARK.—Dr. F. J. Waldo, medical officer of health of St. George-the-Martyr, Southwark, has reported to the vestry—at the request of the Local Government Board—on an outbreak of typhoid fever within the parish. He said that 102 cases of fever had occurred between Sept. 14th and Oct. 8th, of which number two had already died. 97 of the cases came from an infected area situated in the north-east portion of Ward 1—the poorest part of the parish. Many of those attacked lived in Queen's-buildings, which housed upwards of 3000 persons on three acres, and in Grotto-place, which was officially represented as an unhealthy area in 1899, but which had not yet been dealt with by the county council. A large proportion of those attacked were children of school age. There was no evidence of specific pollution of the drinking water, which was drawn from two companies which supplied the infected houses in about equal proportions. The milk-supply came from various sources and was free from the specific poison of typhoid fever. Many of the house-drains were defective and the sewers were either imperfectly ventilated or were not ventilated at all. The sewers in at least three streets had been condemned by the surveyor. Dr. Waldo said that he had visited every house where fever was present and that he was still investigating the origin of the outbreak. The chief preventive measures taken were: (1) isolation of 89 of the cases in hospital; (2) disinfection and cleansing of premises and of infected goods; (3) accommodation of 25 "contacts," or persons from infected tenements, in the parish reception-house; (4) flushing of the street gullies in the infected area: (5) bacteriological and chemical examination of water, milk, ice-cream, water-ice, and shell-fish; and (6) distribution of leaflets advising householders to refrain from drinking unboiled water or milk and from eating uncooked shell-fish.

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[1] THE LANCET, August 4th, 1900, p. 352.

BOOKS, ETC., RECEIVED.

ALLEN, GEO., Charing Cross road, London.

The Child's Picture Grammar. "The Adventures of the Three Bold Babes," &c. By S. R. Praeger. 1900 Price 3*s*. 6*d*.

BAILLIÈRE, TINDALL, AND COX, King [illegible]

Manual of Physiology By G. [illegible] Edin, D.P.H. Camb. Illustrated [illegible] 15*s* net.

Manual of Surgery. By W. Rose M.B, B S Lond, F R C S., and A. Carless, M.S. Lond, F R C S. Third edition Illustrated. 1900 Price 21*s*. net.

BALE, J., SONS, AND DANIELSSON, Great Titchfield-street, London.

The Croonian Lectures on the Degeneration of the Neurone. By F. W. Mott, M.D. Lond, F.R S. 1900.

[illegible] War. By [illegible] ne, D S O. [illegible]

CHURCHILL, J. & A., Great Marlborough-street, London.

Guy's Hospital Reports Vol. liv., being vol. xxxix. of the Third [illegible] M A., M D, and W. H A. Jacob- [illegible]

[illegible] and Toxicology, as delivered at [illegible] J. Smith, M.A, M D Oxon, [illegible] 900. Price 7*s*. 6*d*.

CLAY, C. J. AND SONS, Ave Maria-lane, London.

The Temples and Ritual of Asklepios at Epidauros and Athens By Richard Caton, M.D, F.R.C P. Illustrated. Second edition. 1900. Price 3*s* net.

The Prevention of Valvular Disease of the Heart By Richard Caton, M.D, F.R.C P. Illustrated. 1900. Price 5*s* net.

CORNISH, J. E, Manchester.

The Owens College, Manchester A Brief History of the College. Edited by P. J. Hartog, B.Sc. Lond. and Vict 1900. Price 12*s*. 6*d* net.

DOUGLAS, G. A H, AND CO, Glasgow.

Ambulance Catechism; being a Series of Questions and Answers in Ambulance Work. By William Roxburgh, M B, C.M. Troon. Price 1*s* 6*d*

F. A. DAVIS COMPANY, Philadelphia.

Practical Uranalysis and Urinary Diagnosis By C W. Purdy, LL.D, M D Fifth edition. Illustrated. 1900.

GLAISHER, H. J, Wigmore-street, London, W.

Constipation and some Associated Disorders. By E Blake, M D. Second edition. 1900 Price 5*s* net.

GREEN, W, AND SONS, London and Edinburgh

The Essentials of Regional Anatomy. By R. J. A. Berry, M.D, F.R.S, F.R.C.S. Edin. 1900

KIMPTON, H, High Holborn, London.

Essentials of Surgery—Questions and Answers By Edward Martin, A.M, M D. Illustrated. Seventh edition, with an Appendix. 1900.

L'ÉDITION MÉDICALE FRANCAISE, Paris

Comment on se défend contre les Vers Intestinaux—la Lutte, la Destruction, l'Expulsion. Par le Dr. Paul Girod.

LEWIS, H. K., Gower-street, London.

Cancer of the Stomach. A Clinical Study. By William Osler, M D, F.R S, F.R C P. Lond, and Thomas McCrae, M B Tor, L.R.C.P. Lond. 1900 Price 6*s*

LONGMANS, GREEN AND CO, Paternoster row, London

Malaria. By Professor A Celli [illegible] edition by J. J. Eyre, [illegible] With an introduction by [illegible] Illustrations. 1900. Price 10*s* 6*d*.

MASSON ET CIE, Paris

Des Maladies qu'on soigne à Berck. Par F. Calot 1900

NISBET, JAS., AND CO, Berners street, London

Design in Nature's Story. By Walter Kidd, M.D, F Z S. 1900 Price 3*s*. 6*d* net

OLIVER [illegible]

[illegible] ohn Duncan, M.A, LL D Edited [illegible] Edin With memoir by John [illegible] Price 5*s*. net.

PENTLAND, Y. J., Edinburgh and London

Diseases of the Throat, Nose, and Ear. By P. McBride, M.D, F R C P. Edin. Third edition Illustrated. 1900

Text-book of Physiology. Edited by E A. Schäfer, LL D, F.R S. 1900 Vol II

PUBLISHED BY THE CATHOLIC TRUTH SOCIETY, 69, Southwark bridge-road, London.

The Catholic Temperance Reader. By the Rev. W. H. Cologan and Sir Francis R Cruise. 1900

RICHARDS, GRANT, Henrietta-street, London

The Nineteenth Century: a Dialogue in Utopia. By Havelock Ellis. 1900. Price 3*s* 6*d*

SANITARY PUBLISHING COMPANY, Fetter-lane, London, E C

Essays on Consumption, together with some Clinical Observations and Remarks on Pneumonia. By J E Squire, M D Lond, D P H. Camb With an introduction by Sir William Broadbent, Bart., M.D, F R.C.P. 1900 Price 10*s* 6*d*. net.

UNWIN, T FISHER, Paternoster-square, London.

How to Read the War News from China. A Vade mecum of Notes and Hints With a Glossary of Military Technical Terms, and a map 1900 Price 1*s*

Masters of Medicine Thomas Sydenham. By Jos F Payne, M.D Oxon. 1900 Price 3*s* 6*d*.

WILLIAMS AND NORGATE, Henrietta street, Covent-garden, London.

The "Opus Majus" of Roger Bacon. Edited by J. H. Bridges, F.R C P. Vols i, ii, and iii. 1900 Price 31*s*. 6*d*

Kurzgefasstes Lehrbuch der Kinderheilkunde. Von Dr. Carl Seitz. 1901. Price 11*s* net

Kehlkopf-, Nasen-, und Ohrenkrankheiten. Von Dr. Richard Kayser. 1901. Price 4*s*

A Case of Spleno-Medullary Leukæmia, by F. W. Mott, M.D, F.R.S, reprint, 1900 (H. K. Lewis, Gower-street, London), price 2*s* 6*d*. net.—African Lethargy, or the Sleeping Sickness, by P. Manson, F.R.S, and F. W. Mott, F.R.S, reprint (Adlard and Son, Bartholomew close, London)—A Case of Negro Lethargy, by S. MacKenzie, with a Note by F. W. Mott, F.R S, reprint (Adlard and Son), 1900.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ALLARDICE, WILLIAM C, M D. Glasg, has been appointed Certifying Factory Surgeon for Newcastle-under Lyme.

BROWN, W, M D Glasg, has been appointed Medical Officer for the Scattered Homes of the Parish of Bristol.

CARSON, STEWART, M.B, C M Edin, has been appointed Certifying Surgeon under the Factory Acts for the Alston Rural District of Cumberland

COLLIER, M. P. MAYO, M S Lond., F.R C S. Eng, has been appointed Senior Surgeon to the North-West London Hospital, Kentish Town-road.

DICKINSON, GEORGE F., M R C.S Eng, L R C P Lond, has been appointed Honorary Surgeon to the Warneford Hospital, Leamington.

[illegible] en appointed Medical [illegible] Union by the Tullamore [illegible]

[illegible] Yeovil

GERRARD, ALFRED H, M B Lond, M R C S, F R C P., has been [illegible]

[illegible] resigned

HOLLINGS, GUY, M D, B Ch, has been appointed Clinical Assistant to [illegible]

[illegible] Foulridge in Burnley Rural District

MELLERSH, W. FRANCIS, L D S R.C S Eng, has been appointed Hon. Dental Surgeon to the Royal Cambridge Asylum for Soldiers' Widows [illegible]

MOR [illegible]

RIC [illegible]

[illegible]

SMYTH, E, L R C P, L.R C S Edin, has been appointed *pro tem.* Medical Officer of the Portaferry Dispensary District, vice D S. Browne, resigned.

THORBURN, WILLIAM, F R C S Eng, has been appointed an Honorary Surgeon to the Royal Infirmary, Manchester, vice Walter [illegible]

[illegible] Surgeon under the [illegible] Medical Officer to [illegible] wards, resigned [illegible] pointed Honorary [illegible] W. A. [illegible] Health [illegible] ulting

Worth, F. J., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory Acts for the Civil Parishes of Edenbridge, Hever, Cowden, and Chiddingstone in the Sevenoaks Rural District.

Young, J., M.D. Glasg., has been appointed Medical Officer for the Scattered Homes of the Parish of Bristol.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Central London Ophthalmic Hospital, Gray's Inn-road, W.C.—House Surgeon. Salary £50 per annum, with board and residence in the hospital.

Chelsea Hospital for Women, Fulham-road, S.W.—Assistant Anæsthetist. Medical women eligible for the post.

Chelten Surgeon for two years, un-
marri oard and apartments.

Cornwal Junior Assistant Medical
Office to £150 by £10 annually,
with

County Asylum, Chester.—Junior Assistant Medical Officer, unmarried. Salary £160 per annum, with board (no liquors), lodging, and washing.

Devonshire Hospital, Buxton, Derbyshire.—Assistant House Surgeon. Salary £50 per annum, with furnished apartments, board, and washing.

Down District Asylum, Downpatrick.—Assistant Medical Officer, unmarried. Salary £150, rising £10 annually to £200, with furnished apartments, board, washing, and attendance. Apply to the Resident Medical Superintendent.

French Hospital and Dispensary, 172, Shaftesbury-avenue, London.—Resident Medical Officer (not a female), speaking French, and unmarried. Salary £80 a year, with full board.

Guest Hospital, Dudley.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, residence, board, and washing.

Herefordshire Rural District Councils.—Medical Officer of Health for the Combined Districts for three years. Salary £530 per annum including expenses and disbursements. Apply to the Clerk, Hereford.

Jarvis' Charity, Staunton-on-Wye, Hereford.—Medical Officer, to reside in house provided by the Trustees, with garden and good stabling rent free. Salary £150 per annum and certain allowances.

Jenner Institute of Preventive Medicine, Chelsea Gardens, London.—Assistant in the Department of Pathological Chemistry. Salary £300.

Lambeth Workhouse.—Assistant Medical Officer for the Workhouse, Renfrew-road, Lower Kennington-lane. Salary £100 per year, rising after two years' service to a maximum of £125 per year, with board, apartments, and washing at the Renfrew-road Workhouse. Subject to statutory deductions. Applications to the Clerk to the Guardians, Offices, Brook-street, Kennington-road, S.E.

Leicester Infirmary.—House Surgeon. Salary £120, rising £10 annually until the third year. Board, apartments, and washing provided.

London Temperance Hospital, Hampstead-road, N.W.—Resident Medical Officer for one year. Salary £200 per annum, with board, lodging, and washing.—Also Assistant Resident Medical Officer for six months. Board and residence in the hospital and washing provided, and an honorarium given at the rate of 50 guineas per annum.

Manchester Hospital for Consumption and Diseases of the Throat and Chest.—Resident Medical Officer for the In-patient Department, Bowdon, Cheshire. Salary £60 per annum, with board, apartments, and washing.

Northern Division of South Uist.—Medical Officer. Salary £77 10s. Apply to Mr. T. Wilson, Solicitor, Lochmaddy, Clerk.

North Staffordshire Infirmary and Eye Hospital, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Salary £10 at the end of that period, with board, apartments, and washing.

Northumberland County Asylum, Morpeth.—Assistant Medical Officer, unmarried. Salary £125 per annum, rising £10 yearly to £155, with board, lodging, and washing.

Parish of St. Leonard, Shoreditch.—Second Assistant Medical Officer for the Infirmary, Hoxton street, N., for six months. Salary at the rate of £100 per annum, with rations, washing, and furnished apartments in the Infirmary. Applications to the Clerk to the Guardians, 213, Kingsland-road.

Parish of St. Matthew, Bethnal Green, London.—Clinical Assistant at the Infirmary, Cambridge-road, N.E., for six months, unmarried. Salary at the rate of £40 for the six months, with board, lodging, and washing. Apply to the Medical Superintendent of the Infirmary, Cambridge-road.

Rotherham Hospital.—Assistant House Surgeon. Salary £80, with board, lodging, and washing.

Royal Free Hospital, Gray's Inn-road, London.—Two House Physicians, a House Surgeon, and a Casualty House Surgeon, all for six months. Board, &c., provided.

Royal Hospital for Diseases of the Chest, City-road, London.—House Physician for six months. Salary at the rate of £40 per annum, with furnished apartments, board, and washing.

Royal Hospital for Incurables, Donnybrook, Dublin.—Resident Medical Officer for one year. Salary £80 per annum, with board and furnished apartments.

Royal Infirmary, Sheffield.—House Physician. Salary £100 per annum, with board, lodging, and washing.

Royal National Hospital for Consumption and Diseases of the Chest, Ventnor, Isle of Wight.—Assistant Resident Medical Officer, unmarried. Salary £100 per annum, with board and lodging in the hospital. Applications to the Secretary at the London Office, 34, Craven-street, Charing cross, W.C.

Royal Sea Bathing Hospital.—Resident Surgeon. Salary £100, with board and residence. Apply to the Secretary, Royal Sea Bathing Hospital, Offices, 30, Charing cross, London.

Royal South Hants and Southampton Hospital.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with rooms, boar

St. Mary's Hospi iester.—Two Resident
Medical Officers ttend Home and Out-
patients for six £65 per annum respec-
tively, with board and residence.

Scarborough Hospital and Dispensary.—Assistant House Surgeon for six months. Salary £75, with residence, board, and washing.

Southport Infirmary.—Resident Junior House and Visiting Surgeon for six months. Honorarium at the rate of £60 per annum, with residence, board, and washing.

Taunton and Somerset Hospital, Taunton.—Assistant House Surgeon for six months. Salary at the rate of £30 per annum, with board, lodging, and laundry.

The Chief Inspector of Factories gives notice of vacancies for Certifying Surgeons under the Factory Acts at Osmotherly, in the North Riding in the county of York; and at Masham in the North Riding of the county of York.

University College, London.—Pathologist.

Wolverhampton Eye Infirmary.—House Surgeon for twelve months. Salary £70 per annum, with rooms, board, and washing.

Woolwich Union.—Assistant Medical Officer at the Infirmary, Plumstead, unmarried. Salary £120 per annum, rising £10 annually to £150, with apartments, rations, and washing. Subject to statutory deduction. Apply to the Clerk to the Board, Union Offices, Woolwich.

Worcester General Infirmary.—House Surgeon for three years. Salary £100 per annum, with board and residence.

York Dispensary.—Resident Medical Officer, unmarried. Salary £110 a year, with board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

Haines.—On Oct. 12th, at Brookside, Winfrith Newburgh, Dorchester, Dorsetshire, the wife of Frederick Haselfoot Haines, M.R.C.S., L.R.C.P., D.P.H., of a daughter.

Lillie.—On Oct. 10th, at Fairview, Albert-road, Ashford, Kent, the wife of Cecil Firmin Lillie, M.B., of a son, stillborn.

Murray.—On Oct. 12th, at Dunoran, Renton, Dumbartonshire, the wife of David Murray, M.B., C.M., of a daughter.

Pearson.—On Oct. 6th, at the Crofts, Castletown, Isle of Man, the wife of Ellis Pearson, F.R.C.S. Edin., of a daughter.

Pitcairn.—On Oct. 16th, at Parkhurst-road, Holloway, the wife of John J. Pitcairn, M.R.C.S. and L.R.C.P. of a daughter.

Roberts.—On Oct. 14th, at Clivedon-place, S.W., the wife of Edward A. Roberts, M.D., of a daughter.

Segundo.—On Oct. 15th, at Brook street, Hanover-square, the wife of C. S. de Segundo, M.B., B.S. Lond., of a son.

Vaughan.—On Oct. 10th, at Crewe Cottage, Crewe, the wife of Alfred Ellis Vaughan, L.R.C.P. Edin., of a son.

MARRIAGES.

Hawthorne—Lorimer.—At Marylebone Presbyterian Church, London, W., on the 10th inst., by the Rev. George Hanson, M.A., D.D., Charles Oliver Hawthorne, M.D., M.R.C.P., to Janie Lorimer, M.B., Ch.B., daughter of William Lorimer, Esq., Glasgow.

Oliver—Ledgard.—On the 16th inst., at Holy Trinity Church, Clapham-common, by the Rev. B. Wilson, vicar of Battyeford, cousin of the bride, assisted by the Rev. W. T. Hollins, vicar of St. James, Clapham, George Oliver, M.D., F.R.C.P. Lond., of Harrogate, to Mary, daughter of the late W. Ledgard, of Roundhay, Yorkshire.

Tinley—Lea.—On Oct. 12th, at St. Oswald's, Lythe, Yorks, Thomas Tinley, M.D., J.P., of Hildegard House, Whitby, and the Bungalow, Sandsend, to Annie Mary, elder daughter of Thomas Lea, Abbey-terrace, Whitby.

White—Randle.—On the 11th inst., at St. Andrews, Ashley-gardens, Arthur T. White, M.R.C.S., L.R.C.P., Principal Medical Officer, Nile Reservoir Hospital, Assuan, to Mabel, eldest daughter of the late N. Randle of Bombay and Mrs. Randle, of 25, Morpeth-mansions, Victoria-street, S.W.

DEATHS.

Langdon-Down.—On Friday, 5th Oct., 1900, at Normansfield, of pneumonia, Mary, wife of the late J. L. H. Langdon-Down, M.D., F.R.C.P., J.P., of Normansfield, Hampton Wick, and No. 81, Harley-street, W., in her 72nd year.

Redman.—On Oct. 8th, suddenly, J. H. Redman, L.D.S., of Wimpole-street, London, and Old Steine, Brighton.

Savage.—On Oct. 3rd, at Loudoun-road, N.W., Henry Savage, M.D., F.R.C.S., one of the Founders of the Samaritan Free Hospital, in his 91st year.

Swayne.—On Oct. 12th, at Pembroke-road, Clifton, Bristol, Samuel Henry Swayne, M.R.C.S., L.S.A., aged 79.

Young.—On Oct. 11th, at Melville Lodge, Ventnor, I.W., David Young, M.D., late of Rome, aged 61 years.

In Memoriam.

Mackey.—In memory of my dear husband, Stephen William Mackey, L.R.C.S.I., L.K.Q.C.P.I., L.M., the anniversary of whose death occurs Oct. 24th. R.I.P.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE DRUGGIST AND THE QUACK

We have received a letter from an officer in the Royal Army Medical Corps which we print below with its extraordinary enclosures The letters from Mr A J Paul reveal the fact that he has acted as a quack as much in the interests of an enterprising druggist as in his own Mr Paul's handwriting shows him to be a German, which accounts for the obscurity of his English literary style, but there is no doubt whatever about his vocation He is a dangerous quack, and a druggist who respected his calling would hesitate to assist him in his dangerous work and to make money through his agency

To the Editors of THE LANCET

SIRS,—I send some letters which came to me through the Provost Marshall of this town, as they show how a medical quack in the Transvaal has acted as commercial traveller to a druggist Please do what you think best with the letters

I am, Sirs yours faithfully,

Sept 15th, 1900 LIEUTENANT R A M C

[ENCLOSURES]

p k, Badfontein, *via* Machadodorp
24th of June, 1899

DEAR SIR —Medicines received in good order Thanks for instructions I hope to do a lot of business with you As you see the medicines do very good, and nearly daily I get more to do People dont trust much in Lydenburg doctors I send with next post p o o ad £2 16 0, as I have to send to Lydenburg for it—and the opportunities are very scarce, Badfontein is only a store 2 hours on horse back from here When you send me medicines please send me a/c at the same time I received only one a/c ad £2 15 8, but for the last 4 bottles I did not yet receive one Some times it might happen that I send you a/c a little late, according to occasions to town so I hope that you will not blame me if it happens Please send me by return —

1 For an old woman of 63 Womb comes down *every* morning and then it is very hot—like burning—a few hours after that she is getting alright again

2. For Mrs you sent me medicines for Showed me her breast—(Cra [illegible] erysipelas—so it look [illegible] ce the same (she did [illegible] e is very fat and [illegible] n the last month— [illegible] of the legs—pain under chest, left side—headache—she is very weak She has been sick for about 3 month She is mother of many children.

4 One daughter of 17 About 3 months ago in the time of her monthly discharge she came into cold water—then the sickness disappeared—sometimes does not come in many weeks, since never regularly Pain under chest left side.

5 A man caught a cold when on last commando in October—never got better—pain in his forehead and face and jaw bones He tried Ayers Pectoral—without any good

6 One Mrs about 31—7 years ago when she got last baby—the after birth did not come off well—but not taking notice she walked on She is for a very long time complaining about tooth ache, then the pain goes into her head after that under chest and back I should be pleased if you could give me the best you can find for her also for her teeth, which are hollow She tried all kinds of medicine without results

/ 3 Lung openers

You understand dear Sir that I prefer your own medecines—none of Ayers or Chamberlains Trusting that you will send as s on as possible

I remain, yours sincerely, with kind regards,

A J PAUL.

Please send at the same time a/c P

If I get your a/c to-day at Badfontein then I will make it one order! Last Sunday I drove 3 wurms out of *one* woman I regard that as a curiosity I will have a lot of it to do with those tape wurm bussiness. Kind regards P

No 8 A woman, 39, pain left side under her chest discharge regularly except once She is always very cold, even when it is a hot day She has got a dozen children She is very poor

9 A young man of 20, pain on the bottom of his stomach His life is always open, and he can eat whole day long No wurms Same man wants some to purify his blood.

Yours truly

PAUL.

P K Badfontein via Machadodorp
11 July, 1899

DEAR SIR —Please supply me with friday coach here.

G B—, 56 years —Pain in his bladder, pain under short ribs can hardly piss he remembers kept it up too long dont understand him—I never heard about that He is very painful under his breast, legs, back, etc

F N— 28 years Pain both sides of his breast and between his shoulders After meals he feels dejected Headache

V J— 1½ years—thread wurms

Mrs J C— She got medicines last week—she got a cold—she is getting better, but not recovered yet, she feels pain still, but not as it was before She is that Mrs of 36 No 3

She is very weak. Perhaps wants that tonic High family way

Mr V—, about 63 —I gave him lung opener, he feels better Got a painful place between shoulders about 4 inch diam, he feels little better When he touches his *left* arm *than* at the same time wind comes up out of his mouth any time wherever he touches that arm is painful

Mrs V— 62. I gave her long opener—feels better—gave her pain balm for shoulders—feels better Wants some more medicines for *chest* and pain in the arms from shoulder to fingers I think this is Rheumatisme

If you can manage it to send those medicines on wednesday or thursday morning—than I can have them with friday coach—please enclose your a/c—that I can settle As I wrote—if you want any security—as you dont know me—then I can let you have it, that you need not to be afraid

With kind regards

Yours sincerely

A. J PAUL

p k Badfontein, via Machadodorp,
17 July, 1899.

DEAR SIR —I have been very busy so could not answer one of your letters up till now By opening the parcels at the store I found 2 lung openers broken—it must have happened not far from the store—while on the coach, as all papers and wood wool was wet yet Further all recd in good order Lung opener for Mrs — does not do much good yet She has got that pain in shoulders and awfully headache still I got no more General mixture, otherwise I would have supplied Mrs of 36 is nearly recovered—after doctoring in Lydenburg for three months she got worse and worse your medicines therefore first class About a/c up to £10 Thanks for your confidence I shall regularly settle up Saturday I wired

Send by rail to Machadodorp further by coach 12 Lung openers 12 General Mixtures, 12 Whooping cough Whooping cough broke out Please give me some particulars about children from 5 months to 2 years Same time you might inform me for what kinds of sickness *General mixture Lung openers* and *Toric acid is to be used*

You will please send me a measure-glass and 1 syringe—those thing come in very handy

Is lung opener also good for inflammation of lungs?

Some people (women) are complaining about *darkness* in their eyes What can I do? I suppose it is in connexion with monthly discharge but I am afraid to do anything in this line as an eye is a very weak thing I think you may send me some *oog water* en een klein spuitje om oogen in te spuit At the same time you may let me have my full a/c after all these ordered medicines then I know what to charge

Very wonderful it is that people all come to me after so very good results with Mrs O—, Dr O— in Lydenburg supplied her with medicines and at last they gave it up as she was nearly dying I was very sure that your medicines after my informations would do good—so I took it on me to try my best and the result are *very* wonderful If I know now exactly, *according* to *ages* how to supply the *doses* I am well informed and can make some money out of it Lung openers as last sent are very good

With kind regards and trusting to receive all particulars about whooping cough medicines how to mix, etc

I remain, with most respects yours sincerely,

A. J PAUL.

SECRET COMMISSIONS AND THE MEDICAL PROFESSION

To the Editors of THE LANCET

SIRS —We sincerely thank you for calling attention to the circular marked "private" which was issued by us in reference to our project for visiting the thermal springs of New Zealand On Sept. 27th last our attention was called to the breach of professional etiquette committed by us when the offending circular was at once withdrawn and cancelled the precise number issued being only 32, and these were sent to specialists of high repute only Please note the class of cases proposed to be treated, and that in the interests of all we propose to take charge of such patients only who are not likely to require medical aid other than can be obtained during the voyage and for the purpose of determining this we may require in the interests of the patients themselves in cases of doubt the assistance of medical men We quote the following paragraph from the New Zealand Steam Shipping Company's Monthly Circular as it explains the service required and intended to be covered by the "secret commissions" referred to "The Company reserve the right of refusing to carry any passenger who may be mentally or physically afflicted and who must on booking state the nature of any infirmity Any passenger suffering from infectious disease will not be permitted to embark." The so-called "secret commissions" were intended to cover fees for assistance in this direction and in no way to act as a bribe or bring corrupt influences to bear, which would, indeed be a very tall order. All our arrangements are based on the assistance of only qualified medical men and their assistants. In the meantime we shall be glad if you will give the same prominence to this rejoinder as you have given to your attack upon our venture and oblige.

We are, Sirs, yours faithfully,
J. BASTOW AND SON.
Woodbine Villa, Earlsfield-road, Wandsworth-common, S.W.,
Oct. 13th, 1900.

"MOTOR-CARS FOR MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—Your correspondents upon this subject seem to be decidedly depressed. I should prescribe a good run on a good car or trike for them both. Mr. Hirsch takes a gloomy view of cars in general, apparently because he has had rather a rough time with his own in particular. Does not your other correspondent give himself away when he confesses that he judges the capabilities of autocars by the number he sees in dock? Would it be equally fair to say that humanity is diseased because a hospital was full? Admittedly cars break down, just as horses fall, kick, shy, bolt, and smash up traps. Perfection is not yet attained in anything, not even in our profession, but we do not therefore withhold our help because we cannot guarantee a cure. I began, an absolute novice, to use a motor trike last January in miserable weather and very unfavourable conditions. It gave me no trouble, cost next to nothing to run, and so far from making me late made my work seem very light and easy. This is the other side of the question.

I am, Sirs, yours faithfully,
CLAUDE A. P. TRUMAN,
Honorary Secretary, Reading Automobile Club.
Reading, Oct. 15th, 1900.

To the Editors of THE LANCET.

SIRS,—Several letters have lately appeared in your correspondence columns on the above subject. Let me say, as one who has a general knowledge of all the best known makes, that in my opinion no motor-car has yet appeared that can be said to be in every way suitable for the use of medical men—up to the present they are all too intricate. What a medical man wants in a motor is one that can be as easily controlled and managed in going from house to house as an ordinary horse and trap and not one made for speed, and I may say that one of this description will shortly be on the market—a motor moderate in price, comfortable, reliable, simple in construction, without belts, chains, or chain wheels, and capable of being understood at once, thus doing away with the necessity of having a skilled driver. Your readers may expect an announcement of this in your advertising columns shortly. I am, Sirs, yours faithfully,

Oct. 15th, 1900. MOTIST.

To the Editors of THE LANCET.

SIRS,—I have noticed with regret the letters on this subject in your paper. My experience is fortunately quite different. I have had a small car two years. In this time I have had no trouble whatever with the engine; my only worries have been tyres, chains, and wheels, &c. The car has carried me about 11,000 miles over all roads and in all weathers, including two tours, and is still going splendidly. This week I have travelled over 200 miles easily in my work The car does the work of more than two horses. It costs me altogether between £30 and £40 a year, which is certainly much cheaper than two horses and infinitely less trouble and worry. Another advantage is the speed. I can keep up a good 10 miles an hour up hill and down dale, or 12 or more miles an hour on the level, which is an immense saving of time and consequently of money. In my experience of country work a motor is a brilliant success. The only point is that one must understand the engine and take care of it, and the chains, &c, and it will repay one. For pleasure nothing can surpass it, and automobilism is a most fascinating amusement.

I am, Sirs, yours faithfully,
Oct. 17th, 1900. BENZ CAR.

A QUESTION OF BOYCOTT.

THE writer of a letter, asking if a medical man should be boycotted because of the circumstances under which he resides in a certain house, has omitted to give us his name and address.

THE PROSPECTS OF THE NEWLY-QUALIFIED MEDICAL STUDENT.

To the Editors of THE LANCET.

SIRS,—At the distribution of prizes to the successful students of St. Thomas's Hospital on Oct. 2nd Sir William Mac Cormac stated that in his opinion the present time was most favourable for entering the profession with the assurance of earning a competency; he also stated that the average increase of medical men was 450 during the last three years and 845, or nearly double the number, during the five previous years. Mr. Stansfield Collier, on the other hand, in his introductory address to the students of St. Mary's Hospital, said ..... "from the point of view of a livelihood—aye, there's the rub."

An eminent consultant like Sir William Mac Cormac cannot have the experience of a general practitioner in such matters. When one considers the large number of patients who would have paid the medical attendant a reasonable bill but who now are members of medical aid and benefit clubs, provident dispensaries, or attending the out-patient departments of special or general hospitals, the outlook is certainly anything but a bright one. The medical schools advertise largely, scholarships are offered to attract the student It is natural enough for the staff to wish their own particular school to be a success, they therefore try to get a good entry. When we consider that the staff consists mainly of men in consulting practice who, with few exceptions, know little, and in many cases care less, about the general practitioner's struggle for existence, and are mostly brought into contact with the successful practitioner but do not meet or hear of the unfortunate man buried in a slum or forced to keep a sixpenny dispensary, of what value is the consultant's opinion? The late Sir James Paget's figures of 276 failures in 1100 medical men kept under observation for a period of 16 years do not sound encouraging. What would the number of failures be at the present time? Has Sir William Mac Cormac any idea of the number of young and middle-aged medical men trying to buy practices or settle down in likely town or country districts? As house surgeon to a provincial hospital for many years I was often consulted by medical men who were thinking of starting practice in the neighbourhood. The cry of many was this: "I have enough money to buy a practice, or a share in a practice, but have wandered about the country during the past two years (often more), and although I can get a few locums and assistantships I have been quite unable to find any suitable opening." The unfortunate medical man with money to buy a practice finds things bad enough, but woe to the man without any.

I am, Sirs, yours faithfully,
Oct. 16th, 1900. G. P.

THE SPAS OF CENTRAL WALES.

To the Editors of THE LANCET.

SIRS,—After spending a very pleasant holiday at Llandrindod Wells I would, with your permission, make a suggestion to the Balneological Society that they should imitate their French *confrères* and organise trips to the various inland watering-places during the month either of August or September. Although I am fairly acquainted with most of the inland watering-places I must honestly confess that for beauty of scenery and for exhilarating air the neighbourhood I have mentioned stands very high in the list. I say nothing about the waters because I am not competent to do so.

I am, Sirs, yours faithfully,
Cardiff, Oct. 13th, 1900. T. GARRETT HORDER.

"A NEW WOOD FOR STREET PAVING."

WITH reference to the note on this subject which appeared in our issue of Oct. 13th Mr. E. M. Allcott, the introducer of the wood in question, writes to us to say that the wood "is treated in its natural state, no acids or chemicals being used whatever." He also sends us a copy of a portion of a report of some experiments made by Mr. Weaver, surveyor to the Kensington Vestry. Mr. Weaver found that the red gum wood placed under pressure in a creasoting tank absorbed "practically none at all," whereas deal absorbed "10lb of creasote to the cubic foot." This non-absorbent quality is certainly valuable from a sanitary point of view.

THE REMOVAL OF SUPERFLUOUS HAIRS.

To the Editors of THE LANCET.

SIRS,—I hope some of your readers who have tried removing superfluous hairs from the face will give me the benefit of their experience. I have a patient, a girl, who besides being very short has a well-marked moustache. These factors, especially the latter, make her very shy and morbid, and I feel that if she could have the hairs removed she would be much improved in health.

I am, Sirs, yours faithfully,
Oct. 10th, 1900. BATH.

*** Our correspondent is referred to THE LANCET, vol. i, 1899, pp. 1202, 1271, 1340, 1408, and 1468.—ED. L.

YORKSHIRE SANITARY INSPECTORS' ASSOCIATION.

THE annual meeting of this association took place at the Council Hall, Rotherham, on Saturday, Oct 1st, 1900, where Mr. T. Pridgin Teale presided. Mr. Teale was re-elected president and Mr. Evington, as chairman of the branch council, gave an address in which he mentioned that the association had over 600 members, 100 of whom belonged to Yorkshire. Dr. Alfred Robinson, medical officer of health for Rotherham, then read a paper on the Gain to the Community through the Adoption of Effective Measures against the Spread of Infection.

◆

Pathology (Wigan) would be glad to have references to a case or cases of ambulatory typhoid fever in which the patient was able to eat, sleep, and do laborious work, in fact, was apparently in good health, up to 60 hours before death. "Pathology" has references to cases of perforation reported in THE LANCET, vol. ii., 1870; vol. i. and vol. ii., 1873; and vol. ii, 1881.

A. J. P.—The work in question was an account of a suggested system for universal language.

ERRATUM.—In our last issue at page 1081, col. i., line 32 and 33, *Nigeria* should be read for "British New Guinea."

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 18th, 1900.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN

(2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (22nd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council Meeting. 8 P.M. The Pre-
[illegible] Communica-
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cussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. T. Colcott Fox: Consultation. (Skin.)

(West London Hospital, Vaginal Discharges.

COLLEGE AND POLYCLINIC . Campbell: Consultation.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. S. Edwards: Stricture of the Urethra.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Pitts: Abdominal Surgery in Children.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. W. Wingrave: Morbid Anatomy and Pathology of the Larynx.

FRIDAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Consultation. (Throat.)

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ABSTRACT OF

The Harveian Oration

ON

THE FORCES OPPOSED TO HARVEY AND HIS RESEARCHES.

Delivered before the Royal College of Physicians of London on Oct. 18th, 1900,

BY T. CLIFFORD ALLBUTT, M.D.,
F.R.C.P. LOND., F.R.S.,
REGIUS PROFESSOR OF PHYSIC IN THE UNIVERSITY OF CAMBRIDGE.

MR. PRESIDENT AND GENTLEMEN,—The discovery of the circulation of the blood by William Harvey is commonly regarded among scientific discoveries as eminent if not unique, and this in the judgment not of Englishmen only. My purpose to-day is to show that at any rate it was made against enormous difficulties.

To put this discovery in right perspective we must have some vision of the history of philosophy, science, and medicine. Medicine, herein in contrast with theology and law, had its sources almost wholly in the Greeks; from them for good or evil it took its first scheme of thought; and in the schools of Hippocrates and of Alexandria it was based, more soundly, on natural history and anatomy. The noble figure of Galen, the first physiologist and the last of the great Greek physicians, portrayed for us by Dr. J. F. Payne in the Harveian Oration of 1896, stood eminent upon the brow of the abyss when, as if by some convulsion of nature, medicine was overwhelmed for 15 centuries. Galen practised the method of verification by experiment, first introduced, perhaps, by Archimedes; but after him it was lost till the time of Gilbert, Galileo, and Harvey.

In the growth of societies small civilisations have been sacrificed to the formation of larger aggregates, whereby stable equilibrium may be attained for the highest ends. Perhaps because of her very freedom of thought Greece never became a nation. Even the Roman peace, bought as it w [illegible] but a mechanic [illegible] the bodies but [illegible] even in Rome [illegible] Under the Fra [illegible] and obedience [illegible] saved by the [illegible] entering as a new element into the ancient fabric of Roman empire, was now to hold men's service in heart and soul as well as in body; but to this end no mere mystic or personal religion could suffice; clothing itself with the political and ritual pride and even with the mythology of the pagan empire it inspired a new adoration, but it imposed upon men also a universal and elaborated creed. In the third century philosophy was born again in neo-platonism, the offspring of the coition of east and west in Alexandria, where all religions and all philosophies met. The world and the flesh were crucified that by the spirit man might enter into God. Pure in its ethical mood, neo-platonism, says Harnack, led surely to intellectual bankruptcy; the irruption of the barbarians was not altogether the cause of the eclipse of natural knowledge. Yet even then, as again and again, the genius of Aristotle came to save the human mind. Proclus, ascetic as he was, was also versed in *Aristotle* and he compelled the Eastern mysteries into peripatetic categories and bequeathed a formal philosophy to the Faith. Thus the first scholastic period was fashioned and the objects and methods of inquiry were determined for 30 generations. Rationalised dogma lived upon dialectic and conflicted with mysticism, but logic, dogma, and mysticism alike disdained experience. The Faith then was the first adversary of Copernicus, Galileo, and Harvey.

[illegible] Faith that of all the treatises of [illegible] fantastic and least scientific, [illegible] ct the mediæval world, while [illegible] knowledge fell out of men's han [illegible] and the "Interpretation" mad [illegible] nominalism and turned men's minds rather to rhetoric and dialectic than to natural science. Thus it was that Plato's chimæra of the human microcosm, a reflection of his theory of the macrocos [illegible] adversary of ph [illegible] by Europe was [illegible] human ideas. [illegible] so was that of I [illegible] Ages of the Arabian versions of Aristotle and Galen. It is not easy for us to realise a time when intellectual progress, which involves the successive abandonment of provisional syntheses, was unconceived, when truths were regarded as absolute, when reasons were not tested but counted, when even Averroists found final answers either in Aristotle or in Galen. Thus in the irony of things was Harvey withstood by the dogma of that Galen who, in his own day, had earnestly appealed from dogma to nature.

In the *Isagoge* of [illegible] problem which during [illegible] asunder, a problem, say [illegible] more of the time and passions of men than for the house of Cæsar to conquer and govern the world; a problem, indeed, which in our own day is not wholly resolved. This was the controversy of the Realists and the Nominalists, first brought to a clear issue by William of Champeaux and Roscellinus. Now Plato held ideas not as mere abstractions but as creative forces, and we shall see how potent was this function in mediæval thought. Every particular, every thing, was regarded by the realist as the product of universal matter and individual form. Now form might be regarded, and variously was regarded, as a shaping, determinative force or principle, pattern or mould, having a real existence apart from stuff; or, on the other hand, as a principle or pattern having no existence but as a conception of the mind of the observer. And for the Realist not individuals only but genera and species also have their forms, either pre-existent (*universalia ante rem*) or continuously evolved in the several acts of creation (*universalia in re*). For instance, the Church exists for the Realist as a thing apart from the wills of successive generations of individual men; man has fallen not only in many or all individual cases but also as a kind—a kind having an independent existence; in the Sacraments, again, there may be a change of hypostasis without change in sensible matter. Now if forms pre-exist (*ante rem*) the Will of God must be pre-determined; or if form be an immanent function acting *in re* we are landed in Pantheism. Thus Erigena, the brilliant prophet and Protestant of the first period of the scholastic philosophy, was virtually a Pantheist, as Spinoza was the last great Realist. Aquinas, who determined the philosophy now ruling in Rome, brought about a compromise which covers up rather than solves the difficulty. The problem, it is evident, was no hair-splitting; it dealt with the very nature and origin of being and it agitated the minds of earnest men at a time of fervid and widespread enthus [illegible]

Now closely allied to the [illegible] was that concerning "mat [illegible] terms used were "form and matter," "force, energy, or pneuma and matter," "soul, archæus, or life and body," "determinative essen [illegible]" "male principle and f [illegible] clay of the potter"; or [illegible] cause," "nature and law," "being and becoming," the riddle lay in the contrast of the static and dynamic aspects of things; in the incessant formation of variable individuals in the eternal ocean of existence. Even Francis Bacon never got out of the tangle of form, cause and law. It has been the temptation of philosophers of all times, and even of Harvey himself, than whom none had put better the conditions of scientific method, to suppose that by means of abstraction kinds may be apprehended; that thus they may get nearer to the inmost core of things; that by purging away the characters of individuals they may detect the essence and the cause of individuation, not perceiving that the content of notions is indeed in inverse proportion to their universality. We see this error continually to-day; for instance, we may discuss the causes of typhoid fever and bewilder ourselves by forgetting that there is no such thing as typhoid fever, and that the only causes of a general notion are the psychological *causes of its generation in the* mind of the thinker at the time; that which is due to objective causes is of course not the general notion but the particular case, a very different matter.

Before motionless stuff—before the problem of the "primum mobile"—even Harvey himself stood helpless when he had come to the end of his admirable experiments and began to indulge in contemplation. In his need for a motor for his machine he was not able to divest himself of the language or even of the philosophy of his day. In his day he could not help regarding rest and motion as different things and motion as a superadded quality. The motion he attributed not to a property of the heart but of the blood—to its "innate heat," which is as far as he could possibly have got. But by way of explanation he adds that the innate heat of the blood is not fire nor derived from fire; nor is the blood occupied by a spirit, but is a spirit; it is also "celestial in nature, the soul, that which answers to the essence of the stars ...... is something analogous to heaven, the instrument of heaven." In denying that a spirit descends and stows itself in the blood or elsewhere, as an "extraneous inmate," he bravely says: "I cannot discover this spirit with my senses, nor any seat of it." And yet in the treatise "De Generatione" he propounds a theory of the impregnation of the female not by any material from the male but by the influence upon her of a "general immaterial idea," which even for his own time was very substantial realism. The riddle which oppressed the great thinkers from the Greeks to Lavoisier was then the nature of the "Bildungstrieb"—of the "*impetum faciens*." What makes the ball to roll? Does heart move blood or blood move heart, and in either case what bestows and perpetuates the motion? Telesius, the first of the brilliant band of natural philosophers in Italy of the sixteenth and seventeenth centuries, still sought this principle of nature in the "form" of the peripatetics. Gilbert regarded his magnetic force as "of the nature of soul, surpassing the soul of man." Galileo, although willing to conceive circular motion as perpetual and even self-existent, was unable thus to conceive rectilineal motion. All these naturalists, including Harvey and even Descartes, followed the mediæval world and Aristotle in deriving the source of motion directly from that of the spheres—from the quintessence.[1] Till Copernicus transfigured the cosmos, and Galileo and Newton carried terrestrial physics into the celestial worlds, the heavenly bodies were regarded as animated beings, themselves active, and by propagation from sphere to sphere animating all "sublunary" matter, wheels within wheels, even to its innermost particles.

Of the origin of energy we have not solved the riddle—we have given it up; but instead of finding its sources without we find them within. Harvey's contemporary Francis Bacon sagaciously guessed that heat is an expansive motion of particles, but he regarded heat and cold as two contrary principles. Almost in the same generation the brilliant John Mayow perceived a substance in the air "allied to saltpetre" which passed in and out of the blood by the way of the lungs or placenta. So innate heat gave way to phlogiston, and soon afterwards oxygen and the conservation of energy turned out to be "form," "spirit," "essence," "primum mobile," "causa efficiens," "potentiality," and the rest of them, and by Lavoisier a vast pile of metaphysics was blown into the air. But to kill a strong theory outright takes many a generation. Realism, shaken by Abelard and scotched by Hales and Ockham, not only survived to mislead Harvey, but it stretches its withered hand over us still, in the nursery, in the schoolroom, in the university, and in the great arguments of life.

As strong as realism was a third adversity—the pride of human mind. The asceticism of the East, disdainful of carnal things, brought the dualism of matter and spirit into monstrous eminence; and in respect of medicine in a few generations it turned the cleanest people in the world into the most filthy.[2] Almost to this day the mechanical arts, presumably concerned with lower categories, have been regarded as base, and the crafts, even of the laboratory, as unworthy of great souls. Anatomy had to labour also against both ecclesiastical and popular antipathy; chemistry and mechanics were gross pursuits unless endowed with the perilous distinction of alchemy and sorcery. Unfortunately, this charge upon the dignity of man was made heavier rather than lighter by Petrarch and the humanists of the Renascence; and in Oxford of the seventeenth century we find that Boyle was bantered by his friends as one "given up to base and mechanical pursuits." In a certain important respect medicine suffered greatly from this prejudice. It is obvious that, speaking generally, medicine would find its most positive and direct control in those diseases and in those therapeutical experiments which take place on the outside of the body. Yet surgery fell under the proscription of a handicraft, and, as such, was eliminated from the College of Physicians both in London and Paris; and thus the genuine work of such men as Paré and Gale was without influence upon medicine. Thus it came about that Francis Bacon says of the physicians of Harvey's day that they saw things from afar off as if from a high tower. From Erasistratus to Celsus physicians practised medicine as one art. Galen taught not the simplicity but the unity of medicine; and Littré points out that this unity is consistent in the Hippocratic writings. Surgery, by virtue of its imperative methods, was kept clear of philosophy on the one hand and of humanism on the other. Fortunately for Harvey his master Fabricius was as great a surgeon as anatomist; and such also was Fallopius. Thus it was that medicine at the end of the Middle Ages had not recovered the standard of Alexandria. And against this adversity also had the founder of physiology to contend.

Happily, Arabian scholastic philosophy took its root in Alexandria when neo-platonism had veered towards Aristotle and was therefore more uniformly peripatetic than the Christian scholasticism. It is one of the signs of the greatness of Aristotle that thus garbled and glossed his power made itself felt in the thirteenth century, chiefly by the great Franciscans Alexander Hales, Roger Bacon, and William Ockham—Roger Bacon whom we may call the first of the natural philosophers of the West. This former renascence determined the second period of the Middle Ages, the period distinguished by the Arabian version of Aristotle, by a check to the chimæras of realism, by some liberty of secular knowledge—for even bishops came out of the school of Toledo—and again by the coming of the friars whose influence upon the thought of the Middle Ages was a curious proof that as all ways are said to lead to Rome, so all systems of thought, in spite of the thinkers, led to natural science. The logic and rhetoric of the Dominicans, by their rationalism, defined, and in defining restricted, the dominion of the Faith. Men got used to reason and made a language for thought. And in the history of the unlearned Friars Minors we find, as elsewhere in history, that mysticism is more favourable to natural knowledge than the passionate dogmatism of Clairvaux or the dogmatic rationalism of St. Thomas. The Victorians, as Gerson after them, despised reason rather than feared it. Mysticism makes for individual religion, as in Glisson and Newton, rather than for the Church. Hence it may have been that independent thinkers, like Hales and Bacon and Ockham, entered the Franciscan order. The former renascence brought also a more tolerant spirit. Albert of Cologne owed as much to Avicenna as St. Thomas to Averroes—sages technically damnable, yet "mighty spirits" worthy of reverence. Dante put in hell, but on green meadows in an open place, lofty and luminous, not only Aristotle, Plato, and Socrates, but also Euclid, Ptolemy, Hippocrates, Avicenna, Galen, and "Averroes, who made the great commentary." Universities were founded in France, England, and Italy. But the natural science which made the second renascence irresistible was absent from the former and at the end of the century a reaction set in. During the two following centuries in Spain freedom of thought was crushed out by the Church; but in the conflagration of books of philosophy medical works, such as the "Colliget" and the Commentary on Galen of Averroes, were largely spared; yet in the fourteenth and fifteenth centuries the very name of Averroes, "the mad dog that barked against the Christ," not only became ecclesiastically accursed, but also began to signify loose life as well as free thought; a resentment of which there was no trace in Albert or Aquinas.

Averroism, however, held its ground at Padua, which had become celebrated for medicine as Bologna for law, and although Averroism, like any other philosophy taught as a separate study, decayed, yet, effete as it was, it kept the ground open at a time when the tide was turning against free thought, when the commercial supremacy of Venice was declining, when the Spanish Inquisition was established in Rome, and when even the influence of the Florentine humanist was rather against natural knowledge than for it. No doubt the coarse and disingenuous scepticism of the physicians of North Italy and their pretentious manners alienated the humanists not only from themselves but also

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[1] Vide Arist., De Coelo; and Met. xii.

[2] Those curious in such things will notice that the mediævalising clergy of our own day have discarded in their persons that fair linen which in their fathers was the emblem and example of cleanliness.

[illegible] such as Telesius and Galileo; and alike stood by at the burning of Padua at a fortunate time; he found Galileo engaged in teaching and also in methodical research, for Galileo was not only a great discoverer, but he was the first to formulate fully and clearly that method which we know under the name of the "inductive method." The discovery of Greek texts had destroyed the conventional Aristotle and the conventional Galen; Gregory by the reform of the calendar had put the axe to the root of astrology; Newton was soon to carry terrestrial physics into celestial spheres; and Boyle was soon to create chemistry; anatomy was fully awake already. In England, moreover, with the accession of Elizabeth more spacious times were assured, and Charles protected Harvey. Clinical teaching also had been established at Padua by Fracastorius and Montanus, to be pursued in Heidelberg, Leyden, and Vienna Physiology, however, was awaiting Harvey. Servetus had buried his conception of the lesser circulation under a pile of theology; Columbo and Fabricius, however, had prepared the way, not so much by the value of their discoveries as by their practice of the experimental method in this science, for the anatomists, Galenists to a man, had done next to nothing for physiology.

The genius and courage required to make discoveries like that of the circulation of the blood, cannot be measured directly; there is no method of determining the specific gravity of such adventures: I have tried, however, to shadow forth the weight of the social systems, opinions, prejudices, and habits against which Harvey's gigantic effort was made. Almost in the year of the publication of the "De Motu Cordis" (A.D. 1628) the Parliament of Paris issued an edict that no teacher shall promulgate anything contrary to the accepted doctrines of the ancients. Under such conventions Harvey's discovery burst like an earthquake—under *corrupt Galenism, venerable sophistries, current abstractions* bequeathed by realism, and long-winded dialectics on critical days, coctions, derivatives, or revulsives, and dogmas based on uncritical subservience to texts His work stood out even more ascendant against a lurid background of folk superstitions—of vampires, witch-burning, magic, cabbalism, astrology, alchemy, chiromancy, and water-casting. In terrestrial and celestial physics Galileo, persecuted as he was, had some strong current with him; Copernicus was before him, Kepler was beside him; but in physiology upon the path of Galen the waters had closed as upon the track of a great ship; and among Harvey's contemporaries and immediate forerunners there was none to claim a share with him in the discovery of the central fact of physiology, or in his application of the method which opened the way to Pecquet, Glisson, Steno, Wharton, Willis, Haller, and Bernard.

An Address
ON
APPENDICITIS.

Delivered before the Mirfield Medico-Chirurgical Society.

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GENTLEMEN,—I very much appreciate the kindness which prompted the members of this society to ask me to be here this evening, and I felt that I had only one course open to me and that was to accept your kind invitation.

The subject which I have selected to bring before you is appendicitis. I am afraid, however, that I can tell you very little which you do not already know or which you cannot find in the numerous monographs on this subject that have been written during the past 10 or 15 years. Still, I have thought that to hear how the subject is viewed by one who, like myself, enjoys the privilege of being attached to the full surgical staff of a great provincial hospital may be of interest, and perhaps of some value, in helping you in the diagnosis and treatment of cases of this nature which may present themselves in your practice. To bring one's thoughts to a focus from time to time as to the pathology of any class of disease, or to review any portion of one's work—the mistakes and failures as well as the successes—is always a useful and wholesome discipline. We see where we stand and [illegible] we have yet to overcome in p[illegible] and treatment. To no class [illegible] to members of our profession and that, I think, is one of the great functions of our medical societies We are so accustomed to give dogmatic opinions to our patients that if we had not the restraining influence of the friendly criticism of our *confrères* we should be in danger of believing our own dogmas and cease to have an open mind, receptive for the new developments of an ever advancing knowledge.

The whole subject of appendicitis is of recent development—15 or at most 20 years—and it is only during this period that the important part played by disease of the vermiform appendix has been appreciated. Here and there a few observers had pointed out the fact that the appendix was diseased and perforated in some fatal cases of peritonitis. In 1812 an English physician, Dr Parkinson, brought before the Royal Medical and Chirurgical Society of London a case of ulcerated and perforated vermiform appendix from a boy, aged five years, who had died from general peritonitis, and it is of interest to us in Yorkshire to recall the fact that in 1861 the late Mr. Nunneley of Leeds described such a case in the Transactions of the Pathological Society of London. Mr. Darwin has not overlooked the condition and refers to it in his "Descent of Man," which was published in 1874. Up to the last few years isolated cases may be found by the careful and patient student scattered throughout medical [illegible] played by the [illegible] its neighbour[illegible] *cæcum, and we* [illegible] is," and "paratyphlitis" to describe the condition. These expressions have now been practically superseded by the term "appendicitis," a word which most of us object to, but which is now so universally in use as to have become a permanent fixture in our nomenclature A recent writer has suggested the term "epi-typhlitis," but I very much doubt if he will succeed in popularising it. Pathologists, making post-mortem examinations with the fixed idea that the disease was in the cæcum, did not upset the views of the orthodox by examining and inquiring into the condition of the appendix. To many observers—workers in America, on the continent, and in this country—we owe our present knowledge. [The anatomy, the variations of position, and the histology of the appendix were described and illustrated by drawings and specimens. One interesting specimen was shown in which the appendix was found in the sac of a right inguinal hernia attached to an [illegible] malignant. The herni[illegible] tion of castration, and [illegible] the testis it was removed.]

Having briefly reviewed the anatomy and histology of the appendix let us inquire into the common causes producing the inflammatory changes. It is more than probable that the presence of scybalous masses or concretions in the appendix is the starting point of a very large proportion of inflammatory processes. By some it has been assumed that these masses are formed in the appendix—and this may be so in a few cases, especially in a long appendix—but it is more than probable that in the majority of cases they are formed in the cæcum The inflammatory changes are probably produced in this way. The concretion enters the appendix and, being large for the lumen, dilates its walls, and by preventing the return of blood produces a venous stasis, or it may simply produce a certain amount of local irritation and perhaps an abrasion of the mucous membrane, and thus a lowering of the vitality of the parts. Micro-organisms, the second factor, now come into play. These are always present in the gut and they attack its walls the moment its vitality is lowered or its walls are injured. A great variety of micro-organisms are present in the gut. The bacillus coli communis and various forms of streptococci [illegible] emoved and the [illegible] acute and acute [illegible] onged, so that in [illegible] ends beyond the [illegible] may form or the whole appendix may become gangrenous. There is some analogy between this condition and the condition produced in a knuckle of gut in a strangulated hernia, but in this instance the constriction is outside the gut, producing the venous stasis and so lowering the vitality of the walls of the bowel. The micro-organisms at once seize their opportunity and may either produce gangrene or some milder form of inflammatory change, for in the fluids found in the sacs of strangulated herniæ micro organisms are invariably present and have in all probability come from the bowel. About a year ago I operated on a case of strangulated femoral hernia in which this condition was beautifully demonstrated. On opening the hernial sac about half an ounce of stinking pus escaped, and after wiping this away a knuckle of gut with a portion of infiltrated omentum was found, these structures forming one wall of the abscess and preventing infection from spreading to the peritoneal cavity. The gut was covered by a white purulent membrane. After thoroughly wiping out the sac I was able to detach the membrane from the bowel; this left a deeply, congested surface which was roughened and bled from two or three points. After having rendered the parts antiseptic I ventured to relieve the strangulation and to return the parts into the abdomen. The patient made a good recovery. Here, I take it, is a demonstration of almost an exact counterpart of what takes place in cases of inflammation of the appendix. In the case of the hernia, had the strangulation been a little more complete or had the operation been delayed a little longer gangrene would have been produced. There can be no doubt that the pyogenic organisms came from the intestine. If you damage any portion of the intestinal wall the micro-organisms are soon at work and may produce any gradation of inflammatory change, ulceration, and even gangrene of the bowel. Two years ago I had a child under my care who had been run over, the wheel of a cart passing over the abdomen. On opening the abdomen about 60 hours after the accident we found a gangrenous patch of the small intestine opposite the mesenteric attachment about two inches long and two-thirds of an inch wide. Round about this was a certain amount of peritonitis, which had been obviously produced by the organisms having gained access by the damaged bowel to the peritoneum. The bowel was stitched to the surface around the gangrenous patch, which separated and left a fistula. The child died after a second attempt to close the intestinal fistula.

Other causes producing appendicitis are foreign bodies in the appendix—e.g., pins, needles, fish-bones, fruit-stones, shot, &c. I removed a specimen some time during last year from a man aged 20 years. The exciting cause was a large needle. The patient made a good recovery. Other causes are kinking and twisting of the appendix; I have removed several which illustrate this point. Amongst the general diseases tubercle may be mentioned. It is sometimes found in the cæcum, but it is rare to find tuberculous disease of the appendix. Typhoid ulceration, malignant disease, and actinomycosis are amongst the rare causes. Gout, rheumatism, and cold are said sometimes to be causes, and the disease may be simulated by hysterical patients The ascaris lumbricoides is said to have been an exciting cause. In two cases of suppurative appendicitis associated with large abscesses which I have operated on some days after the operation ascarides were passed through the opening. The disease is said to be more common in males than in females in the proportion of 78 to 22, and more common in the summer months.

I.—SIMPLE APPENDICITIS (NON-SUPPURATIVE).

The first class, simple appendicitis—the catarrhal appendicitis of the Americans—may be (1) acute or (2) chronic (recurrent or relapsing appendicitis) Here probably the inflammation is confined to the appendix. The inflammatory processes, starting in the mucous or sub mucous tissues, rapidly spread so that in about 48 hours there would be some roughening of its peritoneal covering. The appendix becomes increased in size and it appears turgid and distended. Operations have been performed within two or three days of the onset and this condition has been observed. If the attack subsides the inflammatory materials become absorbed and if the parts are examined a short time after the attack it is quite possible that no evidence of such an attack could be found. In the same way, if the tonsils are examined after an attack of acute tonsillitis nothing may be seen to suggest that the tonsils have been inflamed. If these attacks are often repeated or the disease assumes a chronic form, then definite permanent changes will be found—thickening of the appendicular walls, adhesions to surrounding parts, and partial or complete obliteration of the appendix. It is this condition which is responsible for some of the attacks of relapsing appendicitis. In this class the patients suffer from acute and sub-acute attacks, at intervals varying from a few weeks or months, and in the meantime rarely feel quite well. There is always a little tenderness or something to remind them that they must be careful, a consciousness of something in the right iliac fossa. Some of these patients become chronic invalids. It is important to operate on these patients between the attacks if possible. This condition is often associated with twisting and adhesion of the appendix, the results of several attacks of either acute or chronic simple appendicitis; in some of these cases there has been suppurative appendicitis, the abscess probably becoming encysted and the contents dried up. A fresh irritation arises, to be again lighted up into an acute inflammatory attack.

In some of the cases very little may be found at the operation. I removed a specimen about a year ago from a young lady, aged 23 years, who was under the care of Dr. O. E. Salter of Scarborough, who helped me at the operation, Dr. Geoffrey Thompson kindly giving the anæsthetic. There were no adhesions. The appendix was full of a softish concretion and the walls appeared turgid and inflamed so that it looked very like the erect penis of a child. This patient had had two definite attacks of appendicitis, one in May, 1897, and another in May, 1898. During both attacks she was in bed for about six weeks. Since the last attack she had never been quite well, always having some pain and tenderness in the appendicular region. The patient made a good recovery and since the operation she has been quite well. I have other specimens of relapsing appendicitis all successfully removed, and it is a successful, although at times a difficult, operation. According to Ewald at least 90 per cent. of these cases clear up and the question of surgical interference need never be entertained. My own impression is that the percentage is a great deal lower, and I do feel that there is scarcely ever a case of appendicitis in which those in charge may not have to consider the advisability of operative interference.

There are other simple varieties in which a coagulable exudation (yellowish translucent lymph) may be found extending for a considerable distance around the appendix and cæcum and forming a very definite tumour.

II.—SUPPURATIVE APPENDICITIS.

I will now consider the suppurative cases. In this condition the contents of the appendicular canal are either purulent or muco purulent, the walls are infiltrated with a purulent exudation, and at one or more places the appendix may have perforated. In most of these cases the pus is shut off from the general peritoneal cavity by adhesions and the quantity of pus may vary from a few drops to several ounces. If the inflamed appendix is lying on the external iliac vein or artery in rare cases these have become perforated. If it is in contact with the anterior abdominal wall an abscess may form here, and if it is not operated upon it may burst and discharge itself. In some cases the inflamed appendix may become adherent to the peritoneum; covering the iliac fascia, it may ulcerate through the fascia and an abscess may form beneath it, the inflammation extending into the cellular planes and producing a large tumour by the widespread cellulitis, reminding one of large inflammatory swellings about the lower jaw secondary to a decayed tooth. The whole of this condition may subside, leaving a small encysted abscess. About a year ago (on March 6th, 1899) I operated on such a case.

A woman aged 35 years, whom I saw with Dr. W. H. Holliday of Gildersome, had an attack of appendicitis in October, 1898. She kept her bed for three or four weeks and was away from work for another fortnight. At the time of the attack there was a large swelling in the right iliac fossa extending up into the lumbar region. I think it was one of the largest swellings I have ever seen. The swelling subsided and she felt comparatively well, getting up and performing her household duties. A second attack commenced on Jan. 7th, 1899. There was a good deal of pain, but this time there was practically no swelling. During this attack she had a relapse and after that made a good recovery. At the time of the operation no swelling could be felt, there was just one tender place in the iliac fossa. At the operation I found the appendix acutely bent on itself, and the apex of the bend attached to the peritoneum covering the iliac fascia. In separating the adhesions the free end of the appendix was torn off and it was found that there was a perforation the edges of which were adherent to an opening in the peritoneum and the iliac fascia. This opening led to an abscess extending upwards beneath the fascia and containing about a drachm of inspissated non-offensive pus. This was carefully scraped out and cleansed and some iodoform was put in the cavity, the appendix was removed, and the abdomen was closed. The patient made a good recovery.

When the appendix is situated behind the cæcum an abscess may form and discharge itself into the cæcum. By some this is supposed to be a very common method of spontaneous cure. I have had an opportunity of seeing this condition in a case which I operated on and which terminated fatally. A large stinking abscess had formed behind the cæcum and ascending colon, probably secondary to a suppurating appendicitis. A large opening was found in the cæcum communicating with the abscess. The man was suffering from marked septic absorption before the operation and he died 48 hours after it In other rare cases the pus has been discharged by ulceration into the bladder or rectum, but instances of this condition I have never seen. A certain proportion burst into the peritoneal cavity and produce a general suppurative peritonitis. It is now generally agreed that when the presence of pus is ascertained the case is one in which a better and more rapid result will be obtained by surgical interference than by natural means. The great difficulty is to be certain of the presence of pus. Perhaps, on the whole, the safest line of practice will be: When in doubt, operate. It is astonishing how rapidly pus may form. On Oct 13th, 1898, I operated on a girl, aged 12 years, about 60 hours after the appearance of the first symptoms, and I found a sloughing appendix, which had perforated, lying in an abscess cavity. There was also some purulent inflammation about the coils of intestine, in the cæcum, and in the omentum in the right iliac fossa—the case was one of localised suppurative peritonitis. The abscess cavity was cleaned, the appendix was removed, and the patient made a good recovery.

In connexion with the subject an interesting problem here presents itself. Is it possible for pus, when it has once formed, to remain inert, to become encapsuled, and ultimately to become absorbed? I think that it is possible, and I have seen cases which I venture to think will not bear any other interpretation. I have operated on three or four cases of relapsing appendicitis in which I have not at all expected to find any pus and have found small quantities encapsuled. I feel that these patients have been subjected to great risks by the delay, although all of them made good recoveries In the foregoing classes general peritonitis very rarely takes place during the first attack.

III.—GANGRENOUS APPENDICITIS.

The greater part of the appendix may become gangrenous or a localised patch may form in its walls. It is in these cases that one, as a rule, finds a hard concretion near the cæcal orifice of the appendix. Here venous stasis is produced with a rapid œdema, and very quickly the micro-organisms finish the work of destruction so commenced. In some cases a rapid line of demarcation is formed and the gangrenous portion of the appendix may be found free—necrotic amputation. It is these cases which are so rapidly and tragically fatal, the patient dying in a short time from general peritonitis In other cases the purulent collection is limited by adhesions, so that the whole peritoneum is not [illegible] y be [illegible] per- [illegible] ion, [illegible] on- [illegible] ave been fortunate enough to have two successful cases of this kind in both of which there was very extensive peritonitis—I will not say general—associated with a gangrenous appendix.

CASE 1.—A woman, aged 29 years, was operated upon on April 11th, 1897. There was very extensive peritonitis with gangrenous appendix The appendix was removed and the peritoneum was drained. I do not think that I ever saw a patient who was so ill recover. Her hands and face were cold and blue after the operation and the pulse was very rapid, small, and feeble.

CASE 2.—A man, aged 22 years, was seen by me with Dr. O. T. Empey of Cross Hills He was suffering from complete gangrene of the appendix, and he was operated upon seven days after the onset. The abdomen was opened in the middle line There was extensive peritonitis. The appendix was removed and the peritoneum was drained. The patient made a good recovery.

The following three cases were fatal:—

CASE 3—A man, aged 21 years, was operated upon on June 29th, 1898. Five days after the onset gangrenous appendix was found with extensive peritonitis. The appendix was removed and the abdomen was drained.

CASE 4—The patient was a man, aged 25 years. The symptoms commenced on March 1st, 1896, and the patient was medically attended on the 7th. The operation was delayed till the 9th. The abdomen was opened in the right iliac region and a large abscess with extensive peritonitis was found. The appendix was not sought for, as the patient's condition would not permit of a prolonged operation. He died on March 14th. The appendix was removed at the post-mortem examination

CASE 5.—The patient was an adult, aged 29 years. The operation was performed in August, 1896, five days from the time of the attack. The operation was delayed for 48 hours. There was extensive peritonitis. The gangrenous appendix was removed and the peritoneum was drained. The patient died three days later. The appendix was completely gangrenous.

The diagnosis of appendicitis is often a very easy matter, but it is sometimes very difficult. Sometimes it comes with a sudden onset and sometimes with vomiting. The symptoms are acute pain in the region of the cæcum, generally radiating to the umbilicus, a quick pulse with a rise of temperature, a flushed face, and in some cases obstinate constipation and no passage of flatus. On examining the abdomen the movements of the abdominal wall over the cæcal region are seen to be limited. There are some fulness and tenderness in this region. It may be interesting here to discuss how this fulness is produced. Fæcal accumulation in some cases and in others adhesions to, and inflammatory changes in, surrounding parts, the anterior abdominal wall, intestines, and omentum may account for it. The latter is a very common cause I here show you some specimens in which the appendix was embedded in a mass of omentum which was removed with the appendix. In two or three instances I have found abscesses in the omentum. Other causes of the swelling are collections of pus and masses of coagulated lymph. The tender spot, McBurney's point, is often present. This can only be taken in association with other signs and symptoms in helping to make a diagnosis. It may be absent in cases of appendicitis and present in diseases not connected with the appendix.

In all cases a rectal examination should be made Frequently a distinct fulness can be felt on the right side of the pelvic brim, and the rectal mucous membrane is sometimes hot and œdematous, making the examination difficult. In the simple cases, after 48 hours, the symptoms may begin to subside and the signs may clear up in about 10 or 14 days. In the suppurative cases the symptoms will increase in severity and the signs will become more marked during the extension of the inflammatory process. The pulse will become more rapid, the abdomen more distended, and intestinal movements may be visible. When these conditions are present surgical interference must be discussed. The disease may advance a stage further, fluctuation may be obtained, and the abscess may either burst into the general peritoneal cavity or become evacuated by other routes. In the acute perforating cases the course of the disease is more rapid. Often there is an attack of pain in the right iliac region which comes on 24 or 48 hours before the greater pain and collapse associated with perforation The patients are often strong, active people and they will fight against the disease, going to business or doing their work until the onset of the perforation On seeing the patient soon after this has happened the pain will be found to be great The hands are cold and generally moist and the face has an anxious expression; it is flushed and it soon becomes dusky. The duskiness is not easily to be seen by artificial light, and if the pain should have been relieved by morphia the flushed face may quite mislead the medical attendant, so that the gravity of the condition may be under estimated and it is sometimes difficult to convince the friends that the patient is really seriously ill. The pulse will be small and very rapid and the temperature may be sub-normal. On examination of the abdomen it may either be greatly distended or there may be retraction, with the abdominal muscles as hard as a board, and the limbs drawn up. There may be no tumour felt in the cæcal region and no one spot may be more tender than another. The urine is scanty and sometimes suppressed and it contains albumin and indican.

This is a picture of a commencing acute general peritonitis due to some peritoneal catastrophe, and it is sometimes very difficult to make a diagnosis as to its exact cause. The making of a correct diagnosis may be nothing more than a shrewd guess. Appendicitis which has gone on to perforation, however, is by far the most common cause. Other causes are perforated gastric ulcers or duodenal ulcers, one of the many causes producing acute intestinal obstruction, and some cases of ruptured tubal pregnancy; in the latter condition the dominant symptoms are, as a rule, those of internal hæmorrhage. Still, in some cases it may be quite impossible to decide. For these conditions only one form of treatment is of any avail—that is, operation; and lately for these extreme conditions recent results have been decidedly encouraging. If no operation is done death takes place in a few days. There is great and frequent sickness, the tongue is kept moist, and there is pain in the abdomen The face and extremities become cold and livid, the pulse becomes rapidly quicker and is pegging out. The patient often remains quite conscious to the last moment, so that the friends cannot believe that the end is so near. In a few cases acute delirium may set in and some patients die comatose.

Many mistakes may be made in the diagnosis of appendicitis—renal and biliary colic, psoas or iliac abscess, hip-joint disease, and, in women, diseases of the uterine appendages. I have twice opened the abdomen in the region of the appendix expecting to find the organ embedded in a mass of adhesions, and I have found instead tuberculous disease of the cæcum. In one case the appendix was found and removed; in the other it was embedded in a tuberculous mass and was not seen. Both cases developed troublesome fæcal fistulæ and subsequently died from general tuberculosis. In the relapsing cases a careful search must always be made to exclude tubercle before recommending an operation. I have twice operated expecting to find malignant disease and have been greatly surprised to find that I had a simple appendicitis with very firm adhesions to deal with. In the first case the end of the appendix was firmly embedded in the omentum and around the end of the organ was a small abscess in the omentum connected with a small perforation. It was a very hard mass and was moveable. The patient had noticed it for some months and had lost considerably in weight. In another case a hard growth infiltrated the abdominal wall in the region of the appendix, forming a prominence which could be easily seen and felt, and from this a good deal of induration extended into the false pelvis. On cutting down I found the mass to be composed of hard fibrous tissue, evidently due to the organisation of inflammatory products resulting from a relapsing appendicitis. The appendix was successfully dug out. I have a case to record which is the converse of the last two cases. The patient was a man, aged 34 years, who was diagnosed by the medical man in charge and by one of my medical colleagues to be suffering from relapsing appendicitis—a diagnosis in which I quite concurred. I opened the abdomen and found malignant disease of the cæcum and a peritoneum studded with secondary growths. The last mistake I have to record is one which I venture to think few will have a chance of repeating. It was an encapsuled decomposing ectopic gestation situated in the cæcal region. As it is so unusual I will read brief notes of the case.

CASE 6.—The patient was a woman, aged 26 years, who was admitted into the Leeds General Infirmary on Nov 13th, 1897. The history of the case was as follows. On May 6th, 1897, the patient complained of an attack of pain in the right iliac region which was accompanied with vomiting and complete constipation lasting for two or three days. The attack kept her in bed for a week. Her medical man told her that she was suffering from a "stoppage of the bowels and inflammation." Though she had some pain every day she got up until June 18th. On this date a similar attack commenced but of greater severity; the bowels were confined for a week and they were then opened by enemata. At this time a swelling appeared in the cæcal region. During July, August, and September she had two more attacks, in the intervals of which she was not free from pain and was quite unable to attend to her household duties Three weeks before admission into the infirmary she had another attack of pain in the body which was accompanied with vomiting and constipation. At the end of three days the bowels were opened and although she was in pain she again got up. I saw her on Oct. 28th, when she was suffering from acute intestinal obstruction, with vomiting, constipation, and abdominal distension, and there was well-marked visible peristalsis. On rectal examination there was found a swelling of about the size of a closed fist in the cæcal region and there was some fulness in the right side of the pelvis. I made the diagnosis of recurrent appendicitis and advised her to come into the infirmary. This she refused to do. Soon afterwards the bowels were opened, the vomiting ceased, and the pain disappeared. The swelling diminished in size. She had another similar attack and she was admitted to the infirmary on Nov. 13th, 1897, and was operated upon on Nov. 21st. Ether was administered. An incision about four inches long was made obliquely in the right iliac region, commencing one and a half inches internal to, and a little above, the anterior superior spine. At a later stage of the operation another incision was made from the middle of this downwards and at right angles. The structures were divided down to the peritoneum, all bleeding points were stopped, and the peritoneum was opened. In the iliac fossa an oval swelling presented. Its lower limits were close to Poupart's ligament. It extended inwards to the pelvic brim and was covered with firm fibrous tissue. There were many adhesions to the surrounding viscera. The parts around were carefully packed and an opening was made with the finger about the middle of it, near Poupart's ligament. The swelling was found to contain some foul and stinking pus and a mass of decomposing fœtal bones of about the fourth month. These were removed and the cavity was cleansed and packed with gauze for drainage. The edges of the opening were then stitched to the peritoneum and the peritoneum was closed. The muscles and skin were sutured separately. The patient made a good recovery and left the infirmary on Feb. 5th, 1898, the wound having quite healed.

TREATMENT.

I shall not discuss the general treatment of this condition, but I would urge, if there is no improvement in the patient's condition after 48 hours from the onset of the attack, that those who will be responsible for the operation should have a chance of seeing the case and of deciding at this stage whether or not an operation should be performed. I have never yet regretted operating, but I have often regretted that operation has not been decided upon earlier. There are no golden rules as to when to operate or when not to operate. Each case must be carefully studied. It is an advantage to operate when there is no pus, for then the appendix can be removed by a muscle splitting operation which is much less likely to produce a hernia. When pus is present and is localised one must work very carefully so as not to infect the peritoneum. This can be done by carefully using strips of gauze and wiping out as one goes along; in the majority of these cases it is necessary to drain. The pus is generally found about the appendix extending to the pelvic brim and perhaps into the pelvis, behind and to the outer side of the cæcum, and the parts in front of the cæcum. Here it is shut off from the general peritoneal cavity often by recent adhesions to the omentum which may be infiltrated with pus. I think that the more experience one has the more one is inclined to search for and remove the appendix; but there are certain cases in which the condition of the patient will not admit of this, where we must simply be content to open the abscess and drain, leaving the appendix Fortunately a fair percentage of these cases may recover and some of them may never have a relapse.

The abdominal wall in the region of an inflamed appendix is generally very vascular. Often the muscles and intermuscular planes are œdematous and sometimes purulent. In the gangrenous cases with extensive peritonitis something heroic must be done for so desperate a condition: more extensive exposure of the peritoneum for cleansing and drainage getting the bowel to act by saline purgatives, &c.

Formerly all cases of appendicitis were considered to belong to the province of the physician, but now surgery has put forward such strong claims that in a certain number of cases an operation must be performed, and in others the advisability of an operation must be discussed. I have endeavoured to illustrate this paper with as many personal observations and experiences as possible. I hope it may not

[Mr. Littlewood illustrated his address with about 30 specimens which he had recently removed. The specimens [illegible] so that they could be easily [illegible] and the different patho-

ON THE RÔLE PLAYED BY THE SPLEEN IN THE PANCREATIC DIGESTION OF PROTEIDS.

BY HENRY F. BELLAMY.

It is probable that no organ of the body has furnished such abundant food for physiological reflection and research as the spleen. In all ages speculation has been rife as to the rôle played by it in the animal economy, and observers in all countries have not been wanting who have ascribed more or less hypothetical functions to an organ which, as they justly argued, possessing such overwhelming importance as regards position and blood supply, should in the natural order of things be possessed of functions equally weighty. Attempts, however, at the solution of the problem have enjoyed only a limited measure of success, chiefly in face of the almost insurmountable difficulty that in all animals, from man downwards, possessing a spleen the organ can be surgically extirpated without *apparent* disadvantage to the organism as a whole. It is the purpose of the present article, without any reference to the possible and perhaps equally important manner in which the spleen acts in other departments of the animal economy, to consider it in the light of a powerful, and indeed essential, factor in the pancreatic digestion of proteids and to bring forward, as briefly as possible, such evidence as may be forthcoming in support of such a view.

While pursuing my own work here in Lausanne it has been my privilege and pleasure to have had many conversations on this subject with Professor A. Herzen, the distinguished occupant for many years past of the chair of Physiology at the Lausanne University, a physiologist who, formerly in conjunction with Professor Schiff (the original proclaimer of the doctrine of the functional co relation of spleen and pancreas) has devoted practically his whole lifetime to this and kindred questions, and it is in deference to his wish to invite the attention and criticism of English physiologists to what appears to him and his supporters an important contribution to our present meagre knowledge of the spleen, that the present article is penned

Before proceeding to a detailed discussion of the evidence appertaining more nearly to the question, it would be as well to recall as briefly as possible several fundamental facts in connexion with the peptonisation of proteids by the pancreatic juice, for the discovery of which physiology is largely indebted to the researches of Corvisart, Schiff, and Meissner. The experiments of these observers were performed both with the natural juice and with infusions of the gland For the study of the natural juice experiments on living animals (principally on dogs and cats) were conducted [illegible] ways 1 By establishing *pancreatic* [illegible] secretion of the gland was drawn [illegible] cannula fixed in the duct; this method, although possessing the disadvantage that the fluid flowing through the cannula soon ceased to be normal, gave in successful cases results identical with the two following 2 By causing *duodenal fistulæ* analogous to gastric fistulæ and observing the progress of digestion in the living and normal duodenum of small cubes of coagulated albumin enclosed in coverings of fibrous membrane, the latter having the property of resisting the action of the pancreatic juice without preventing its penetration; by this means it could always be rendered certain that the albumin was digested by the pancreatic and not by the gastric juice, since the latter would first destroy the envelope. The presence of the cannula interfered in no way with the health of the animal 3 By isolating the whole duodenum after introducing into it a measured quantity of boiled albumin between two ligatures placed respectively at the pyloric and jejunal ends, the pancreatic the experiment, the bile could be excluded. In order, however, to observe the progress of peptonisation by this method, it was necessary, after some hours, to sacrifice the animal.

The results claimed from these experiments in so far as they concern the present question were briefly these. Corvisart found that in dogs in full digestion there was for a certain time a constant rise to maximum in the digestive power of the pancreatic juice, succeeded by an equally constant fall to minimum. The maximum was attained during the eighth hour after the ingestion of a meal, the minimum from the thirteenth to the eighteenth hours. Meissner announced that in fasting animals the pancreatic juice possessed little or no peptonising power. Schiff,[1] after a number of experiments on such animals as rats, guinea-pigs, rabbits, and young dogs or dogs of small breed, found that during fast the pancreas really possessed almost no peptonising power; the albumin imprisoned in the duodenum remained there for whole hours without dissolving, the infusion of the gland giving results equally negative. On the other hand, in the case of ravens and adult dogs of large breed the pancreas preserved during fast a certain digestive power, even in animals in a condition of complete fast which had digested a copious meal the day before; under these circumstances, indeed, the infusion of the whole pancreas of a large dog was capable of digesting from 50 to 60 grammes of albumin. In such dogs this condition of weak digestion was maintained until towards the fourth hour after the meal, after which time digestion proceeded very much more rapidly, so that at the time of maximum the pancreatic infusion was capable of digesting from 50 to 60 grammes of albumin. As regard cats and small dogs, he was able to confirm the results of Corvisart. By these experiments, then, the above-mentioned observers succeeded in establishing the following two facts: (1) that the activity of the pancreatic juice or of an infusion of the gland is not continuous but intermittent, and (2) that maximal activity appears regularly during the culmen of gastric digestion (from six to eight hours after a meal) at which time it is very considerable

Passing now for the moment from the pancreas to the spleen we will proceed briefly to examine the behaviour of this organ in relation to digestive phases. Lauret and Lassaigne in 1825 discovered that the spleen began to become congested at the moment when the stomach discharged chyle abundantly into the duodenum; that this is, however, merely a coincidence is shown by the fact that the congestion also occurs after ligature of the pylorus Dobson in 1847 discovered that in a dog three hours after a meal the spleen is still as small and as anæmic as during fast; that it commences to dilate in the fourth hour after a meal; at five hours after it has attained its maximal turgescence, decreasing afterwards from the seventh hour to attain towards the twelfth its minimal volume Landois in the same year found that in the rabbit the relative weight of the spleen to the body-weight of the animal was the same two hours after a meal as after 48 hours of fast; that it increased considerably from the fifth hour, remaining high until the twelfth hour In 1835 Schönfeld, under the direction of Van Deen, compared the weight of the spleen with that of the body of six rabbits of the same age fasting and digesting His results are given in the following table:—

Relation between Weights of Spleen and Body during Fasting and Digestion.

Hours after meal	Weight of spleen	Proportion to body-weight
0	3	1 : 2180
2	4	1 : 1137
5	6½	1 0738
8	5	1 : 0996
12	5	1 : 1062
24	2½	1 2140

Observations on the human body have confirmed these facts Dittmar and Vogel in 1850, studying from this point of view the changes in volume of the spleen of man by means of percussion, found that it began to swell four hours after a meal, reached two hours later its maximal volume, and gradually diminished afterwards to its minimum.

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[1] Recueil des Memoires Physiologiques, vol. iv., cap Pancreas et Rats. Lausanne, 1898

The striking synchronism in the splenic congestion and the presence of trypsin in large quantity in the pancreatic juice or in an infusion of the gland was observed by Schiff and caused him to repeat all his former experiments on the tryptic digestion of albumins, this time on animals in which the spleen had been for some time removed and on others in which it was prevented from dilating by ligature of its hilum at the time of the experiment. He experimented in this way upon a very large number of dogs and cats; nearly all his experiments were double—i.e., performed at the same time and in the same manner on two animals selected so as to resemble one another as much as possible, and in only one of which had the spleen been extirpated or ligatured. These experiments were of two kinds: (1) those conducted with pancreatic infusions, and (2) those carried out in the living duodenum, the following being typical examples.

I. *Infusions.—Ligature of the hilum of the spleen.*—Two cats, after fasting for 19 hours, received as much meat as they would eat; one hour afterwards they were etherised and the spleens, which were found to be in a state of contraction, were brought out through a wound in the abdomen and their hila were encircled by strong thread; in one of the animals the hilum was firmly tied, but in the other it was simply encircled and a knot was tied, leaving the splenic circulation perfectly free (this was done in the endeavour to equalise traumatic conditions as much as possible). The spleens were then replaced in the abdominal cavity and the wound was sutured. On recovering from the anæsthesia the animals did not appear to suffer. They were killed six hours later. Gastric digestion was found to be more advanced in the animal in which the splenic vessels were tied; the pancreas of both was cut up into small fragments and infused with 100 cubic centimetres of water for an hour at 35° C; the liquid was afterwards decanted and returned to the warm chamber together with cubes of albumin. Result.—In seven hours the pancreatic infusion of the cat in which the hilum was not ligatured digested 17 grammes of albumin; that of the other did not digest at all even at the end of 12 hours.

This experiment was performed on a large number of cats and dogs and always gave the same result. In spite, however, of the perfection of gastric digestion in the operated animals, it was possible to lay at the door of traumatism the absence of duodenal digestion; to correct this the experiment was repeated as follows.

Extirpation of the spleen.—Two dogs, one normal, the other having undergone splenectomy a month previously but at the time of the experiment in perfect health, were operated upon, while fasting, as follows: etherisation, ligature of the pylorus, injection into the stomach per œsophagus laid bare and opened of 50 grammes of peptone and two grammes of dextrin; to allow drainage of swallowed saliva the œsophagus was ligatured below the opening. Both animals were killed five hours later and each pancreas was infused for three-quarters of an hour in 100 cubic centimetres of water at 35°C. Although death had occurred before the most favourable moment for the experiment—i.e., in advance of the summit of the splenic curve—the infusion coming from the dog with the spleen intact digested 17 grammes of albumin in 17 hours, while the other digested nothing even in 18 hours. Numerous experiments made in this manner always gave the same result. The spleenless dogs had in many cases undergone splenectomy several months before the experiment, and the determination in them of perfect conditions of health was always a matter of great care.

II. *Experiments in the living duodenum.—Ligature of the duodenum at both ends.*—Two dogs after fasting for 17 hours received as much meat as they would eat and immediately afterwards were operated upon as follows: etherisation, laparotomy, ligature of the pylorus and of the bile duct, introduction into the duodenum of from 30 to 40 grammes of albumin, and ligature of the jejunal end. In one of the animals the splenic hilum was also ligatured. Both were killed seven hours later. Result.—In the dog with the splenic hilum tied the albumin was found to be intact; it had, however, disappeared in the other.

This experiment was also several times repeated on animals which had undergone splenectomy a long time previously and always yielded the same result; it is, of course, capable of being combined with the preceding by making an infusion of the pancreas after the death of the animals. Such infusions give results in harmony with those furnished by the duodenum itself. Further, it will be remembered that in the pancreatic juice of dogs of large breed Schiff generally found, even while fasting, a certain quantity of trypsin; when the same were spleenless, however, he was unable to find any.

Digestion in the normal duodenum provided with a fistula.—A duodenal fistula was established in a dog. After complete recovery a measured and constant quantity of albumin was introduced every day into the duodenum enclosed in a small envelope of fibrous membrane fixed to the cannula by a thread some centimetres long. The progress of digestion was then observed, the following results being obtained. 1. When the animal was fasting the albumin took from five to six hours to become dissolved. 2. When the albumin was introduced into the duodenum during the two to three hours immediately following the ingestion of a meal by the animal it remained unchanged. 3. When introduced four hours after a meal it disappeared very quickly, in about half the time, in fact, occupied during fast. These facts having been duly noted the spleen was then extirpated and after complete recovery the same experiment was repeated; very different results were now obtained. Whether fasting or in full digestion the time taken for the digestion of the albumin was exactly the same —viz., from five to six hours. The acceleration in the peptonisation which had formerly appeared after the fourth hour of digestion and which coincided both with the appearance of trypsin in the pancreatic juice and with the dilatation of the spleen, was now absent. The slow digestion (from five to six hours) in this experiment was probably entirely due to the secretion of the duodenal glands which possess only a very feeble digestive power; the active, rapid digestion was due to the appearance in large quantity of trypsin in the pancreatic juice, a phenomenon wanting in the spleenless animal.

The researches of Schiff, of which the above are only a few typical examples, thus lead him forcibly to the belief that after extirpation of the spleen, or when the organ is prevented from dilating by ligature of its hilum, trypsin fails to appear in any considerable quantity in the pancreatic juice or in an infusion of the gland during that stage of digestion in which in the intact animal it is normally present. In other words, he was warranted in concluding that not only the presence of the spleen but also its congestion is necessary to the abundant formation of trypsin. The pancreas of an animal deprived of its spleen behaves always (even in full digestion) in the same manner as that of a normal animal in a state of fast. Several years later M. Herzen being then Schiff's assistant in his laboratory at Florence, the latter resolved again to repeat all his experiments on the influence of the spleen upon the production of trypsin. M. Herzen thus assisted in this repetition, glycerine (after the proposal of von Wittisch) being this time employed as the vehicle of the digestive infusions. In the years which followed M. Herzen himself many times repeated the experiments, sometimes making use of glycerine, sometimes of boric acid, his own vehicle. With certain rare exceptions, easily capable of explanation, they always yielded the same result.

Such were the facts and they formed evidence striking enough. The differences observed were so enormous as to exclude all possibility of doubt. Schiff endeavoured to interpret the facts by the following theory. During the congestion of the spleen a substance is produced within it which, carried away by the blood, gives to the pancreas the wherewithal to form its peptonising ferment.

The whole question was received by physiologists with complete scepticism. The experiments of Schiff, instead of being repeated, were opposed by arguments and objections purely theoretical, and finally, not only was his theory rejected, but also the facts which he had observed. Some attempts were indeed made to reproduce the fundamental fact, but they were carried out with a superficiality and ignorance of the necessary experimental conditions which reduced the value of their results to practically nothing.

In 1872, however, the theory of Schiff received a rude shock through the great discovery of the zymogens by Heidenhain and his pupils. From the researches of this observer it appeared that as the gastric mucous membrane forms at the outset hardly any active pepsin, but a zymogen accumulating in its glands in the intervals of digestion, so the pancreas does not at once elaborate active trypsin but a

ditions and in a certain phas
substance being, of course,
trypsinogen or protrypsin. The researches of Heidenhain are well known and it suffices to recall here only one or more essential points; thus from them we know that the pancreas of a fasting dog contains little or no trypsin, but merely trypsinogen, consequently its glycerine infusion possesses little or no digestive power; the infusion, however, of a dog in full digestion digests rapidly and copiously because it contains trypsin. If the pancreas of a fasting dog be divided into two equal portions, one of which is infused at once and the other only after an exposure of 24 hours to the air, the first is found to be inactive while the other is immediately and energetically active, from which it is clear that the inert pepsinogen which it contains becomes spontaneously transformed into active trypsin; indeed, it suffices to pass a current of oxygen through a pancreatic infusion, rich in pepsinogen and poor in trypsin (an inactive infusion) to transform it into an infusic
proportional to the amount of
This transformation, then,
oxidised trypsinogen.

The fact observed by Heidenhain of the continuous formation and storing up of trypsinogen in the pancreas and its subsequent transformation into trypsin during the culmen of gastric digestion proved that the former substance at any rate enjoyed an origin quite independent of all influence outside the pancreas itself, and the hypothesis of Schiff as to the intervention of the spleen seemed in consequence to be at fault. But it was only the theory of Schiff which suffered by these new revelations; as far as the experimental results of the two observers were concerned physiologists were face to face with two series of apparently contradictory acts—apparently because facts properly observed can never stand in contradiction with one another and when they appear to do so it is merely because the interpretation of them is either false or incomplete. It fell to the lot of M Herzen to unravel the tangled hypotheses It appeared to him that by modifying the hypothesis of Schiff as to the manner in which the spleen acts as a tryptogene, a fusion of the respective facts of Schiff and Heidenhain could be brought about, and that far from being antagonistic they could be shown to be reciprocally corroborative. He argued thus: since the zymogen, even in splenectomised animals, is being continuously elaborated, and therefore independently of the spleen and its periodical congestion, and that it accumulates in the gland cells during fast, but that it becomes rapidly and copiously transformed into trypsin only in the presence of the spleen and in direct proportion to its dilatation, it would seem feasible that the spleen produces by "internal secretion"
own substance, which, carried
transforms the inert zymogen
creas, into active trypsin destined to pass into the secretion of the gland, and that the influence exercised upon the zymogen by this product of the spleen seemed to be a condition *sine quâ non* for the transformation of the former into trypsin, at least in the living pancreas, since in the dead organ or its infusion it is so transformed by direct oxidation This hypothesis of Herzen would seem to be further confirmed by the fact gleaned from the researches of both Schiff and Heidenhain—to wit, that the holding in zymogen of the pancreas at a given moment either of fast or digestion is always in inverse ratio to its holding in trypsin and *vice versâ*, while the latter is always in direct proportion to the spleen dilatation

So far so good. But Herzen reasoned further. If the spleen really produces during its congestion a substance which brings about the transformation of the pancreatic zymogen into trypsin it would then be possible to seize upon this substance in the spleen itself while in its turgescent condition (from six to seven hours after a meal) and by at once making an infusion of it and mixing a certain quantity of this splenic infusion with pancreatic infusion made from the pancreas of a fasting animal (very rich in zymogen and very poor in trypsin and consequently nearly inactive) there could be obtained *in vitro*
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easily recognisable
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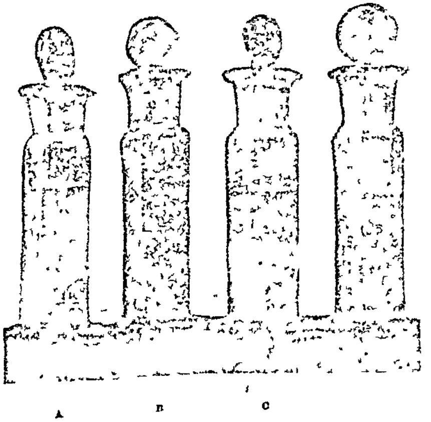
given time. The c
very
simple, consisting merely in mixing with the same pancreatic infusion that of a contracted and anæmic spleen; in order to observe whether it would have the same effect as that of the spleen dilated and engorged with blood. Artificial digestions actually carried out with these infusions gave which had been added infusion of engorged spleen digested rapidly and copiously, indeed it had often completely digested its dose of proteid by the time that the other two, if digesting at all, had barely commenced. The mixed infusions thus behaved in the same way as a pancreatic infusion taken at the culmen of digestion.

A large number of similar experiments were made with aqueous, boric, and glycerine infusions, each being double—i.e., performed in two separate series of vessels, the one containing finely divided fibrin and the other equal-sized cubes of coagulated albumin. The results were always the same Technical points gleaned from these experiments appear to have been that the watery splenic infusions work more energetically than others but have the disadvantage of not being able to be preserved for more than one or two days. Glycerine infusions can be preserved indefinitely, but even when diluted with water they retard the digestion to such an extent as to allow the spontaneous transformation of the zymogen into trypsin; boric infusions keep well and do not retard digestion, but even they also permit the slow spontaneous oxidation of the trypsinogen; this disadvantage is, however, compensated for by the rapidity with which they digest. Fibrin digests very much quicker than albumin and consequently its use better demonstrates the difference in the activity of liquids poor and rich in trypsin. In order to obtain very considerable differences rapidly—in from two to three hours—it is preferable to make use of fibrin, the boric infusion of pancreas, and the aqueous infusion of spleen Further, in order that the various liquids for comparison shall contain the same amount of zymogen, Herzen adds to the pancreatic infusions which are to digest alone—i.e, without admixture of splenic infusion—the same volume of the vehicle with which was prepared the splenic infusions, added to the other portions. Finally to render all his experiments uniform and directly comparable Herzen always works with constant quantities of infusion and of albumin or fibrin (usually 10 cubic centimetres of infusion and 10 cubic centimetres of proteid) Below is given a typical example of such an experiment with results obtained in three instances.

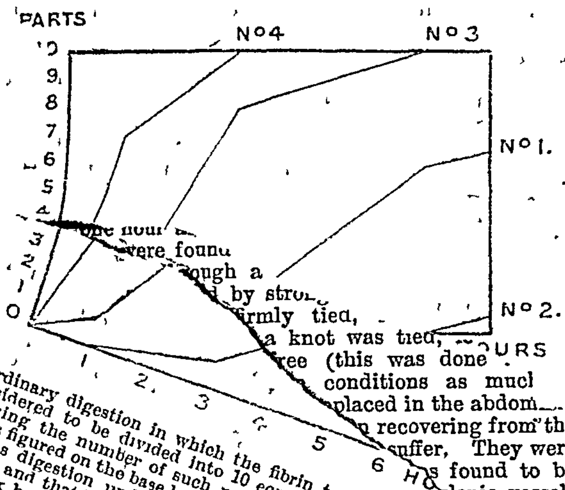
In a temperature of 40° C. are placed two sets of four vessels, a set for fibrin and albumin respectively; in them are placed the following liquids:—No. 1 Pancreatic infusion of a fasting animal diluted with twice its volume of sterilised distilled water. No. 2 The same diluted by the same volume of saturated solution of boric acid No. 3. The same diluted by the same volume of boric infusion of spleen No. 4 The same diluted by the same volume of aqueous infusion of spleen.



Photograph of specimens, now six years old, exhibited by
C ngress at Berne. The liquid is in each
Bottles A and C,
ntaining the pan-
a mixture of both
lifference in diges-

The following charts graphically illustrate the quality of the results obtained in the case of fibrin. The albumin digestions are omitted, since, being necessarily so slow, they show but imperfectly the influence of the splenic infusions in bringing about rapid and copious digestion quite independently of spontaneous transformation of the zymogen. For the same reason the time of observation is restricted to six hours. The numbering of the curves in these charts corresponds to that of the liquids in the account of the experiment.

CHART 1.



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ordinary digestion in which the fibrin to be digested is
onsidered to be divided into 10 equal parts, the curves
owing the number of such parts digested in the time-
ılts figured on the base line. Notice the immediate and
ous digestion under the influence of the splenic in-
ns and that No. 2 is barely commencing to digest even
six hours.

experiments the enormous acceleration in the
f the fibrin under the influence of the two
ions is very evident. As for the albumin it only
appreciable manner when under this influence;
No. 4 may give rise to the suspicion that it
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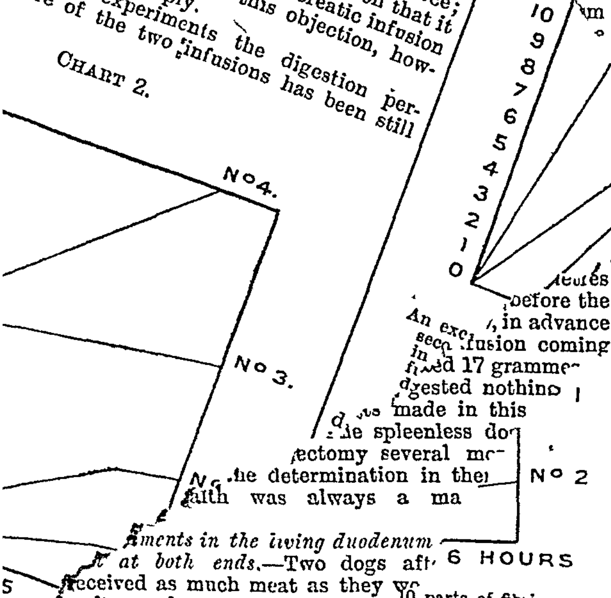

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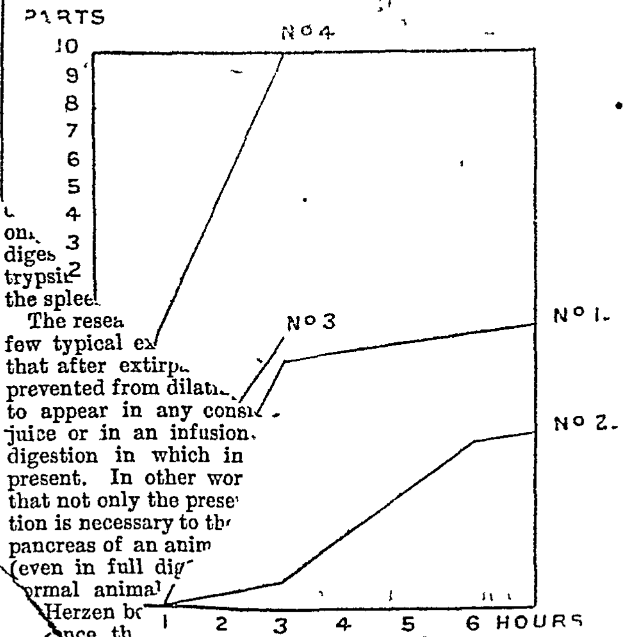

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The answer could not be *clearer: the product of the* internal secretion of the spleen, borne therefrom by the circulating blood, is present during the period of the dilatation of the spleen in feeble but appreciable quantity in the blood of the general circulation and abundantly in the splenic venous blood. The venous blood returning from the contracted spleen only contains it in very small quantities. This experiment, several times repeated, always gave the same result, showing that it is not the blood as such which favours the transformation of pancreatic zymogen into trypsin, but that, by picking up from the spleen the unknown substance possessing this property, the blood becomes its vehicle and means of communication with the pancreas.

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From the bulk of evidence collected by Herzen there thus seems to be very little room for doubt that apart from hæmatopoietic, and possibly allied, functions possessed by the spleen, the organ furnished a product, of "internal secretion" which causes in the pancreas the transformation of its inert zymogen into active trypsin.

I shall, in conclusion, briefly examine the criticisms to which the researches of Schiff and Herzen have been exposed. It is not proposed to consider *objections* purely speculative and theoretical, since, however plausible the arguments of such may appear, they cannot be brought into the same category with established facts; I shall therefore concern myself only with those having at least the semblance of being supported upon an experimental basis; and even in these cases it will be apparent with what lightness of heart the critics of Schiff and Herzen have undertaken their task—a lightness of heart only equalled by that of a large number of physiologists who have given these criticisms their support. Now the first rule required to be observed in endeavouring to test the results of a particular line of research consists in the exact reproduction of the original fact which it is sought to establish, a proceeding only rendered *possible by the second observer* reproducing accurately the experimental conditions under which the first laboured. Having done this the way is then open for him to repeat the several experiments, modifying them in what way he will in order to detect in them possible sources of error. This elementary rule appears to have been entirely overlooked by the opponents of Schiff and Herzen, as will readily be gathered from the following examples of their *modus operandi*.

In 1868 the Italian physiologist Lussana extirpated the spleen in three dogs and killed them later in order to ascertain whether the extract of their pancreas would digest coagulated albumin. One of his dogs suffered from a chronic peritonitis, another from an inflammatory condition of the pancreas. The pancreatic infusion from these two animals digested minimal quantities of albumin (maximum 0·25 gramme) in 24 hours. The third dog appears to have been healthy and its pancreas digested 1·10 grammes. The animal had, however, been killed three hours after a meal—i.e., at a moment when, even had it been in possession of its spleen, that organ would not yet have commenced to become congested. The experiment, therefore, gave the result which might be expected—viz., no digestion, for nobody would accept seriously the digestion of 1·10 grammes, knowing that the pancreas of a dog when digesting can dissolve from 50 to 60 grammes of albumin, for which, however, it is not only necessary that the spleen should be intact but also that it should be maximally congested, a phenomenon only commencing from *six to seven hours after a meal. Nevertheless*, Lussana concluded that in the absence of the spleen the pancreas digests just as well as when it is present, and that the diseased pancreas losing its peptonising property it was natural that Schiff had not found this property "*chez ses lapins dératés.*" It would seem evident that not only had Lussana never seen a true digestion by an active pancreas, but also that he had never read the work which he professed to criticise. This, however, did not prevent *the majority of physiologists from blindly accepting* his conclusions and declaring that the hypothesis of Schiff had been unable to withstand experimental proof, and in spite of the fact that Herzen, then Schiff's assistant, had immediately issued a severe analysis of Lussana's publication, to which, however, the latter never replied. For 10 years after Lussana's statement continued to be made, the name of Herzen being now coupled with that of Schiff, without the least attempt at experimental inquiry, Herzen published later an account of his own researches, the equally surprising results of which, obtained by an altogether new method, entirely confirmed those of Schiff.

In 1893 two French observers, Carvallo and Pachon, communicated to the *Société de Biologie*, and also published in the *Archives de Physiologie*, an account of some experiments said to be performed according to Herzen's method and of which the results were entirely negative. One would again be inclined to ask whether the authors had read the work which they undertook to criticise, for they, like Lussana, altogether neglected the conditions most essential to the experiment. Owing to too prolonged extraction they allowed a large part of the zymogen to become transformed into trypsin *before even commencing their digestive experiments*, and in the course of digestions equally prolonged the transformation of the remaining zymogen was also allowed to take place, so that in summing up their results they were unable to perceive any difference in the activity of their infusions. Herzen replied by drawing the attention of the authors to this double source of error which deprived their experiments of all value. Pachon, now professor of physiology at Bordeaux, fully comprehended the gravity of these errors and resolved to do now what might reasonably have been expected of him and his colleague in the first instance—conscientiously to repeat the experiments of Schiff and Herzen by conforming to their directions; the result was that Pachon confirmed all their results and, together with his *new collaborator Gachet, was entirely* won over to their point of view. Nay, they did more, they invented an entirely new experiment, at once original and ingenious, which consisted in realising *in vivo* what Herzen had hitherto only done *in vitro*. This experiment was as follows.

A dog, which a long time previously had undergone splenectomy, was anæsthetised and half its pancreas was removed and immediately infused; at the same time a normal dog, in the height of digestion, was killed and its congested spleen was infused in water and this infusion was injected into the venous system of the spleenless dog; from 15 to 20 minutes afterwards the remaining half of the pancreas of the latter dog was infused exactly like the first; of the two *infusions when* given fibrin or albumin, the second only digested rapidly and copiously.

It would be thought that after proof so absolute the doctrine thus established by six different methods, first by Schiff and Herzen and afterwards by Pachon and Gachet, would enjoy immunity from *attacks so reckless as the* preceding. Such, however, was not to be the case, for last year a Russian observer, Popelski, conducted a series of experiments in which he succeeded in combining the error of Lussana with those initially made by Pachon in conjunction with Carvallo. In both normal and splenectomised cats he collected the pancreatic juice by means of a cannula introduced into the duct of the gland, and was

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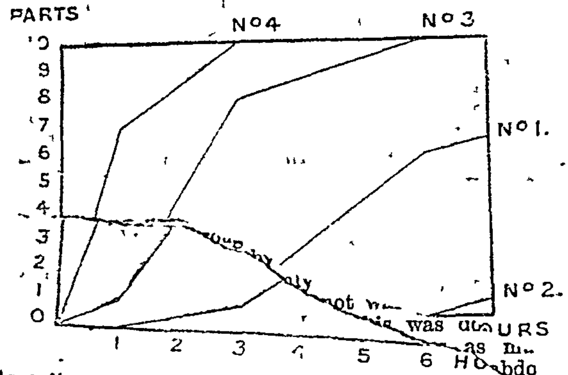

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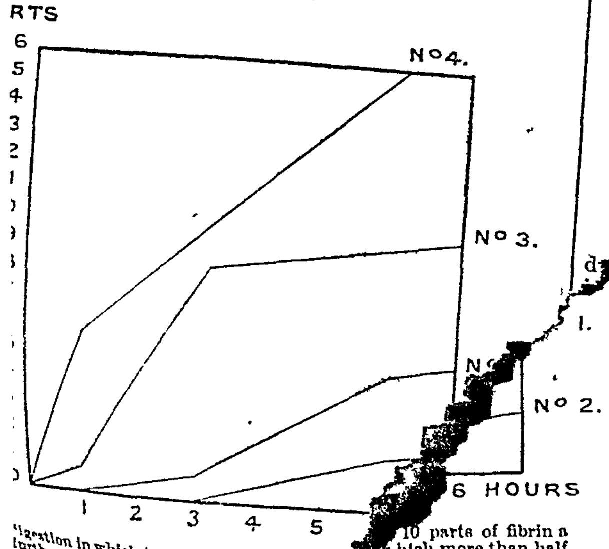

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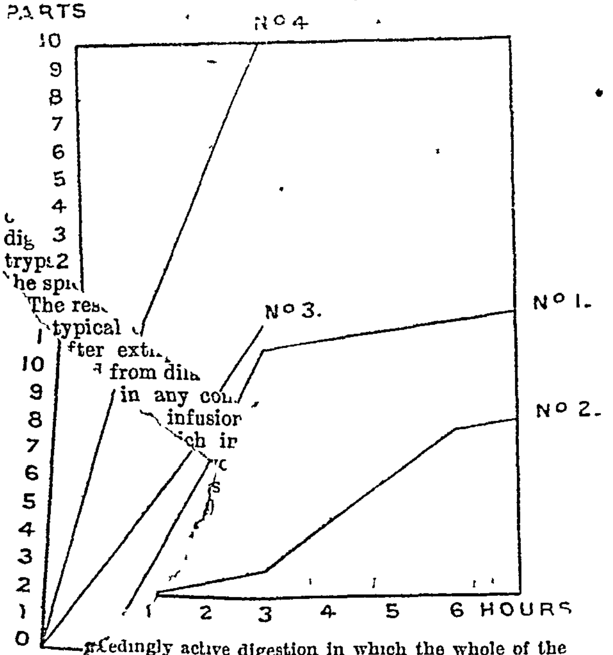

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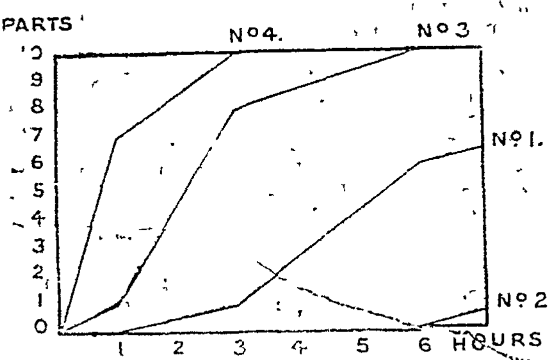

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In these experiments the enormous acceleration in the digestion of the fibrin under the influence of the two splenic infusions is very evident. As for the albumin it only digests in an appreciable manner when under this influence; the activity of No. 4 may give rise to the suspicion that it was due to the neutralisation of the boric pancreatic infusion by the aqueous splenic infusion. To this objection, however, No. 3 conveys a sufficient reply.

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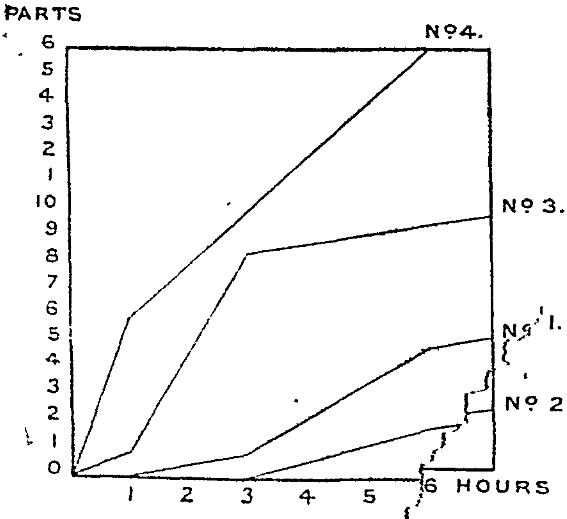

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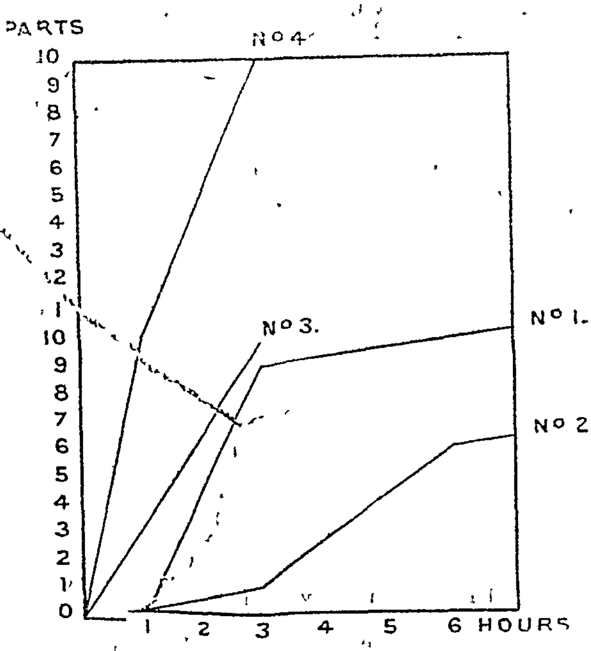

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The answer could not be clearer: the product of the internal secretion of the spleen, borne therefrom by the [illegible] blood. The venous blood returning from the contracted spleen only contains it in very small quantities. This experiment, several times repeated, always gave the same result, showing that it is not the blood as such which favours the transformation of pancreatic zymogen into trypsin, but that, by picking up from the spleen the unknown substance possessing this property, the blood becomes its vehicle and means of communication with the pancreas.

At the International Congress of Physiologists, held at Berne in 1895, Herzen exhibited a second series of specimens preserved as an objective document of results arrived at by another method in which use was made of [illegible] usions Under these conditions [illegible] even in the case of fibrin; even [illegible] contain trypsin but little diminution of the fibrin can be observed after the lapse of several days, and at the same time an effective check is put upon the spontaneous transformation of the zymogen into trypsin. In the infusion of the pancreas alone the fibrin maintains indefinitely its original bulk; in the mixture of the two infusions it gradually dissolves and finishes at the end of three or four weeks by disappearing altogether. The specimens shown by Herzen at this Congress were already one year old. I have seen others in his laboratory at Lausanne which have been preserved for six years, forming, together with those originally exhibited at Strasburg, a striking object-lesson for those following his teaching.

From the bulk of evidence collected by Herzen there thus seems to be very little room for doubt that apart from *hæmatopoietic, and possibly allied, functions possessed* by the spleen, the organ furnished a product of "internal secretion" which causes in the pancreas the transformation of its inert zymogen into active trypsin.

I shall, in conclusion, briefly examine the criticisms to which the researches of Schiff and Herzen have been exposed. It is not proposed to consider objections purely speculative and theoretical, since, however plausible the arguments of such may appear, they cannot be brought into the same *category* with established facts; I shall therefore concern myself only with those having at least the semblance of being supported upon an experimental basis; and even in these cases it will be apparent with what lightness of heart the critics of Schiff and Herzen have undertaken their task—a lightness of *heart* only *equalled* by that of a large number of physiologists who have given these criticisms their support. Now the first rule required to be observed in endeavouring to test the results of a particular line of research consists in the exact reproduction of the original fact which it is sought to establish, a proceeding only rendered possible by the second observer reproducing accurately the experimental conditions under which the first laboured. Having done this the way is then open *for him to repeat* the several experiments, modifying them in what way he will in order to detect in them possible sources of error. This elementary rule appears to have been entirely overlooked by the opponents of Schiff and Herzen, as will readily be gathered from the following examples of their *modus operandi*.

In 1868 the Italian physiologist Lussana extirpated the spleen in three dogs and killed them later in order to ascertain whether the extract of their pancreas would digest coagulated albumin. One of his dogs suffered from a chronic peritonitis, another from an inflammatory condition of the pancreas. The pancreatic infusion from these two animals digested minimal quantities of albumin (maximum 0 25 gramme) in 24 hours. The third dog appears to have been healthy and its *pancreas* digested 1·10 grammes. The animal had, however, been killed three hours after a meal—i.e., at a moment when, even had it been in possession of its spleen, that organ would not yet have commenced to become congested. The experiment, therefore, gave the result which might be expected—viz., no digestion, *for nobody would accept seriously the digestion* of 1·10 grammes, knowing that the pancreas of a dog when digesting can dissolve from 50 to 60 grammes of albumin, for which, however, it is not only necessary that the spleen should be intact but also that it should be maximally congested, a phenomenon only commencing from six to seven hours after a meal. Nevertheless, Lussana concluded that in the absence of the spleen the pancreas digests just as well as when it is present, and that the diseased pancreas losing its *peptonising property* it *was* natural that Schiff had not found this property "*chez ses lapins dératés.*" It would seem evident that not only had Lussana never seen a true digestion by an active pancreas, but also that he had never read the work which he professed to criticise. This, however, did not prevent the majority of physiologists from blindly accepting his conclusions and declaring that the hypothesis of Schiff had been unable to withstand experimental proof, and in spite of the fact that Herzen, then Schiff's assistant, had immediately issued a severe analysis of Lussana's publication, to which, however, the latter never replied. For 10 years after Lussana's statement continued to be made, the name of Herzen being now coupled with that of Schiff, without the least attempt at experimental inquiry, Herzen published later an account of his own researches, the equally surprising results of which, obtained by an altogether new method, entirely confirmed those of Schiff.

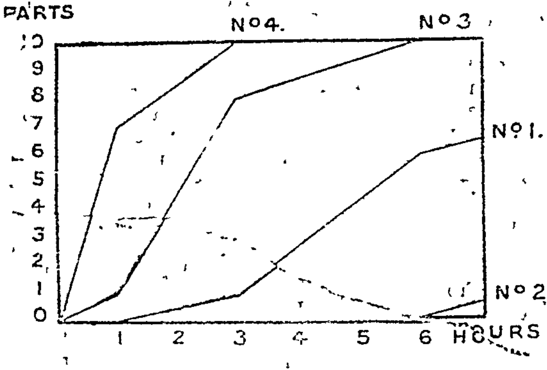
In 1893 two French observers, Carvallo and Pachon, communicated to the Société de Biologie, and also published in the *Archives de Physiologie*, an account of some experiments said to be performed according to Herzen's method *and of which the results were entirely negative.* One would again be inclined to ask whether the authors had read the work which they undertook to criticise, for they, like Lussana, altogether neglected the conditions most essential to the experiment. Owing to too prolonged extraction they allowed a large part of the zymogen to become transformed into trypsin before even comm [illegible] ments, and in the course of [illegible] the transformation of the [illegible] allowed to take place, so that in summing up their results they were unable to perceive any difference in the activity of their infusions. Herzen replied by drawing the attention of the authors to this double source of error which deprived their experiments of all value. Pachon, now professor of physiology at *Bordeaux, fully comprehended* the gravity of these errors and resolved to do now what might reasonably have been expected of him and his colleague in the first instance—conscientiously to repeat the experiments of Schiff and Herzen by conforming to their directions; the result was that Pachon confirmed all their results and, together with his new collaborator Gachet, was entirely won over to their point of view. Nay, they did more, they invented an entirely new experiment, at once original and *ingenious*, which consisted in realising *in vivo* what Herzen had hitherto only done *in vitro.* This experiment was as follows.

A dog, which a long time previously had undergone splenectomy, was anæsthetised and half its pancreas was removed and immediately *infused; at the same time* a normal dog, in the height of digestion, was killed and its congested spleen was infused in water and this infusion was injected *into* the venous system of the spleenless dog; *from* 15 to 20 minutes afterwards the remaining half of the pancreas of the latter dog was infused *exactly* like the first; of the two infusions when given fibrin or albumin, the second only digested rapidly and copiously.

It would be thought that after proof so absolute the *doctrine* thus established by six different methods, first by Schiff and Herzen and afterwards by Pachon and Gachet, would enjoy immunity *from* attacks so reckless as the preceding. Such, however, was not to be the case, for last year a Russian observer, Popelski, conducted a series of experiments in which *he succeeded* in combining the *error* of Lussana with those initially made by Pachon in conjunction with Carvallo. In both normal and splenectomised cats he collected the pancreatic juice by means of a cannula introduced into the duct of the gland, and was

The following charts graphically illustrate the quality of the results obtained in the case of fibrin. The albumin digestions are omitted, since, being necessarily so slow, they show but imperfectly the influence of the splenic infusions in bringing about rapid and copious digestion quite independently of spontaneous transformation of the zymogen. For the same reason the time of observation is restricted to six hours. The numbering of the curves in these charts corresponds to that of the liquids in the account of the experiment.

Chart 1.

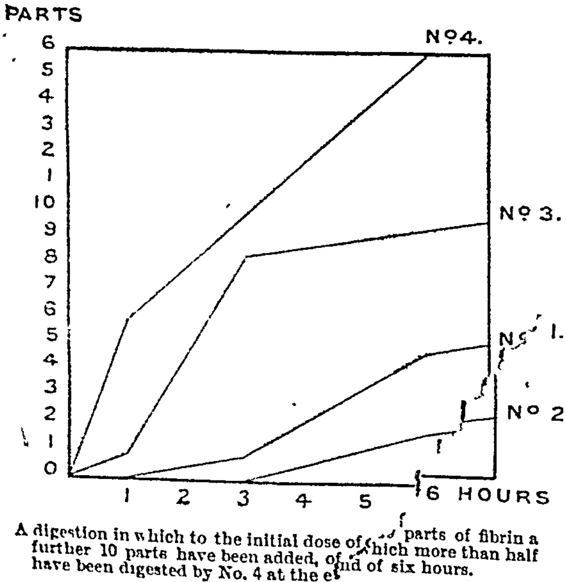


An ordinary digestion in which the fibrin to be digested is considered to be divided into 10 equal parts, the curves showing the number of such parts digested in the time-limits figured on the base line. Notice the immediate and copious digestion under the influence of the splenic infusions and that No 2 is barely commencing to digest even after six hours.

In these experiments the enormous acceleration in the digestion of the fibrin under the influence of the two splenic infusions is very evident. As for the albumin it only digests in an appreciable manner when under this influence; the activity of No. 4 may give rise to the suspicion that it was due to the neutralisation of the boric pancreatic infusion by the aqueous splenic infusion. To this objection, however, No. 3 conveys a sufficient reply.

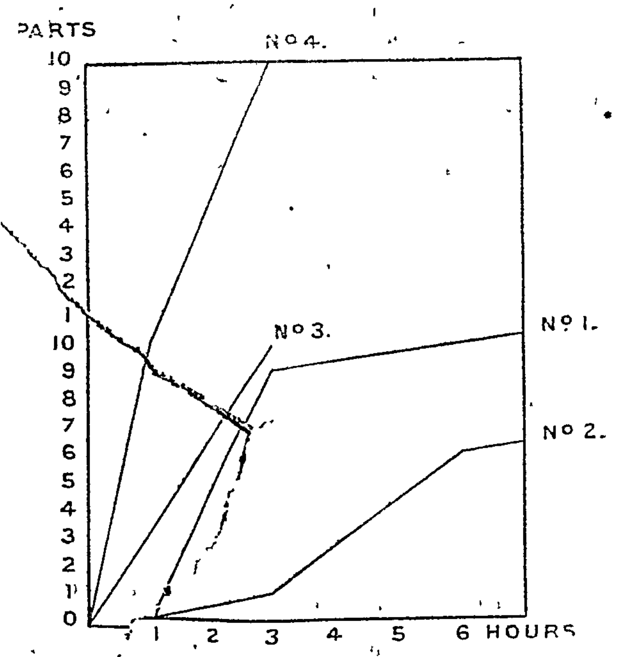
In many of Herzen's experiments the digestion performed by the mixture of the two infusions has been still very much more rapid. He has, in fact, sometimes seen the initial dose of fibrin totally disappear at the end of the first hour. In these cases a second dose of fibrin added by him disappeared in its turn before the third hour. This activity in the digestion of the fibrin was also accompanied by a corresponding acceleration in that of the albumin. The latter, however, was rarely entirely dissolved even after 24 hours. This substance has therefore never given the enormous differences yielded by the fibrin which liquefies extremely rapidly in contact with trypsin. It would be difficult to obtain in a series of experiments a harmony more complete or a sequence more natural upon the researches of Schiff [illegible] Herzen therefore believes himself justified [illegible] he living pancreas the trypsinogen [illegible] o active trypsin under the influence [illegible] in the spleen, in a quantity propo[illegible] Strasburg in [illegible] contain-ing [illegible] er of his digestions, the digesting liquid having been decanted and replaced by alcohol. [illegible] examined them all recognised that th[illegible] the residua left by the pancreatic [illegible] those of the mixtures of the pancreatic and splenic infusions were very [illegible] conversation with Herzen, how[illegible] following criticism. It is well [illegible] reatic zymogen is very greedy of oxygen; on the other hand, the spleen during its dilatation is engorged with blood. The splenic infusions exhibited were intensely coloured by dissolved hæmoglobin—*ergo*, the undoubted and considerable acceleration in digestion obtained by adding such a liquid to another containing trypsinogen could be quite simply explained by the rapid oxidation of the zymogen at the expense of the hæmoglobin. This objection disconcerted Herzen in no inconsiderable degree and he lost no time in making it the subject of experimental inquiry. He at length succeeded in disproving it by the following excellent experiment. The pancreas of a normal fasting dog was infused in pure glycerine and the infusion was divided into eight equal portions. These eight portions were mixed with eight samples of blood received directly into a double volume of glycerine, of which four came from a fasting dog and four from a dog in full digestion with the spleen greatly dilated. The four samples were taken in both animals from (1) the femoral artery, (2) the femoral vein, (3) the splenic artery, and (4) a large splenic vein. The eight portions were then given the usual dose of fibrin and placed at a temperature of 40° C. Now, it is evident that the femoral and splenic arterial blood of the two animals contained more oxygen than their venous blood; the former, then, according to Heidenhain, should exercise a powerful influence on the digestion, equal in the two dogs. On the other hand, according to Herzen, the splenic venous blood alone should exercise this influence and especially that of

Chart 2.



A digestion in which to the initial dose of [illegible] parts of fibrin a further 10 parts have been added, of which more than half have been digested by No. 4 at the end of six hours.

Chart 3.



An exceedingly active digestion in which the whole of the second dose of 10 parts of fibrin has been digested by No. 4 in three hours. Corresponding activity in unmixed infusions. No second dose was added to No. 3, the initial dose of which had been entirely dissolved at the end of three hours.

the digesting animal. The result of the experiment was as follows. After one hour there was still no trace of digestion under [illegible] blood, arterial or venous, nor of [illegible] of the fasting dog; first traces [illegible]ing to manifest themselves under [illegible]enic venous blood of this animal. Digestion was rather advanced in the case of the femoral arterial and venous blood and splenic arterial blood of the digesting dog; the fibrin had almost entirely disappeared under the influence of the splenic venous blood of the same animal.

The answer could not be clearer: the product of the internal secretion of the spleen, borne therefrom by the circulating blood, is present during the period of the dilatation of the spleen in feeble but appreciable quantity in the blood of the general circulation and abundantly in the splenic venous blood. The venous blood returning from the contracted spleen only contains it in very small quantities. This experiment, several times repeated, always gave the same result, showing that it is not the blood as such which favours the transformation of pancreatic zymogen into trypsin, but that, by picking up from the spleen the unknown substance possessing this property, the blood becomes its vehicle and means of communication with the pancreas.

At the International Congress of Physiologists, held at Berne in 1895, Herzen exhibited a second series of specimens preserved as an objective document of results arrived at by another method in which use was made of concentrated glycerine infusions. Under these conditions digestion is extremely slow even in the case of fibrin; even should the liquid already contain trypsin but little diminution of the fibrin can be observed after the lapse of several days, and at the same time an effective check is put upon the spontaneous transformation of the zymogen into trypsin. In the infusion of the pancreas alone the fibrin maintains indefinitely its original bulk; in the mixture of the two infusions it gradually dissolves and finishes at the end of three or four weeks by disappearing altogether. The specimens shown by Herzen at this Congress were already one year old. I have seen others in his laboratory at Lausanne which have been preserved for six years, forming, together with those originally exhibited at Strasburg, a striking object-lesson for those following his teaching.

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It would be thought that after proof so absolute the doctrine thus established by six different methods, first by Schiff and Herzen and afterwards by Pachon and Gachet, would enjoy *immunity from* attacks so reckless as the preceding. Such, however, was not to be the case, for last year a Russian observer, Popelski, conducted a series of experiments in which he succeeded in combining the error of Lussana with those initially made by Pachon in conjunction with Carvallo. In both normal and splenectomised cats he collected the pancreatic juice by means of a cannula introduced into the duct of the gland, and was unable to find any difference in digestive activity. As, however, his cats had been fasting since the day before, his experiments were made outside the digestive period during which the spleen, becoming congested, furnishes abundantly its product of internal secretion which transforms rapidly and copiously the zymogen into trypsin. The experiments, therefore, of this observer are totally devoid of all value and it is useless to enter into further details concerning them, only observing that even had their author taken careful note of the conditions under which occurred the fact he purposed to check, his experiments would still have been incapable of demonstrating the differential digestion, seeing that being conducted with albumin only they were necessarily very much too prolonged; the whole affair, in short, was carried out in such a manner that not only was the fundamental fact wanting but even had it been present its recognition would have been impossible. But Popelski also performed some analogous experiments on a dog with a permanent pancreatic fistula made according to the method of Pavloff. The pancreatic juice of this animal was several times collected and examined before and after splenectomy without any difference in activity being demonstrable; this result, however, elicits no surprise in view of the fact that in both instances the juice was always collected immediately after a meal—i e., again to repeat it, in advance of that digestive period during which the spleen enters into function and the pancreas abounds in trypsin, so that, as well in this experiment as in that with his cats, Popelski was placed in that position in which the presence or absence of the spleen was a matter of perfect indifference—a fact, however, which does not deter him from declaring with perfect assurance and manifest self-satisfaction that the theory of Schiff, Herzen, Pachon, and Gachet is based upon defective methods and should be rejected. Popelski does not thus even seem to have perceived that it is no longer a question of theory but of facts—facts which if he wishes to control he must observe in those conditions under which they occur, and of which it is absurd to deny the existence because they do not occur outside these conditions; in fact, Popelski, to quote Herzen's own words, is in the position of the astronomer who, knowing that a solar eclipse will occur on a certain date, deliberately looks for its appearance on the day previously to that date.

Such is the blind and thoughtless nature, truly extraordinary, of the criticisms passed upon the work of those who by the patient and persevering work of long years have discovered, tested, confirmed, and definitely established the importance of the rôle played by the spleen in the production of trypsin. Those who have intimately studied their works remain firmly convinced of the validity of their results and believe that but few physiological facts are more irrefutably established.

It has been stated earlier in this article that the organism as a whole apparently suffers no disadvantage from removal of the spleen. What, however, in the light of Herzen's results is the actual loss suffered by such an organism? The answer is clear—almost complete cessation of proteid digestion by the pancreas, this function being in such cases almost entirely performed by the stomach. But the zymogen which the pancreas continues to elaborate, does it become entirely lost, or does it continue to serve some useful purpose in the organism? A possible reply to this question might be that the zymogen being excreted as such becomes gradually transformed into trypsin by oxidation or other agency along the intestinal tract. The possibility of this explanation seems to have been suggested to Schiff and Herzen by an observation accidentally made in cases of duodenal fistula, according to which it appeared that pieces of albumin enclosed in fibrous membrane introduced into the living duodenum of splenectomised animals would become more or less digested if the thread fixing the arrangement to the cannula happened to be made too long, thus allowing the bag and its contents to wander further along towards the jejunum. The experiments of Popelski seem also to be a strong hint in the same direction by showing that the pancreas even of fasting animals will very slowly digest more or less proteid. Why, however, in these cases does the general nutrition of the animal not appreciably suffer? Is the peptonising power of the stomach, coupled with such slight assistance as may be derived from the pancreas in the manner just mentioned, sufficient for the ordinary needs of the body? It is a well-known fact that most animals eat too much, thus involving a certain superfluity not only of material consumed but also of digestive activity in both the stomach and the pancreas. On the other hand, it has been noticed and even confirmed by Schiff that spleenless animals require more food than intact animals, a fact which could find its explanation not only in the loss of direct peptonising surface in the alimentary tract, but also in that the parapeptones normally going on to the duodenum to be converted into true peptone by the pancreatic juice, are, owing to the breakdown of the pancreas, no longer capable of being absorbed and assimilated by the organism. The stomach and pancreas, in as far as the digestion of proteids is concerned, would then appear not only to work in perfect unison with one another in the intact organism, but when through any cause whatever the one or the other is thrown out of action, its work is assumed and efficiently carried on by the survivor.

Lausanne.

SOME REMARKABLE CASES OF SARCOMA.[1]

BY A. MARMADUKE SHEILD, M.B. CANTAB.,
F.R.C.S. ENG.,
SURGEON TO ST. GEORGE'S HOSPITAL.

FOR many years surgeons have dwelt upon the sources of error and doubt which attend the diagnosis of sarcoma. The following case, one of suppuration in connexion with sarcoma, illustrates very forcibly the almost insuperable difficulties that may occur even when elaborate pains and care are taken and all modern methods of investigation are employed.

CASE 1.—In March, 1899, I saw, at a distance from London, with Dr. James Andrews of Hampstead, a man, aged about 40 years, who had lived hard but had never suffered from syphilis. A dubious tumour of large size had gradually developed towards the lower third of the left thigh. This formation had been noticed for about six months as beginning as a "thickening" about the lower third of the shaft of the femur. No cause was assigned for it. There was an obscure history of a blow on the part four years before. Iodides were given in full doses and strapping and mercurial ointment were employed without avail. Shortly before I was called in an exploratory incision had been made by a surgeon into the outer side of the swelling; nothing but blood escaped, and the diagnosis of sarcoma was arrived at. When I saw the patient late at night in company with several other medical men, he was somewhat relieved from the very significant circumstance that pus had escaped from the wound. Previously for several days he had been ill and delirious, with considerable fever. I found him to be a well-developed man, ill and feverish, with a dry tongue and all the signs of septic infection. The lower third of the left thigh was occupied by a large, somewhat fusiform, tumour of the size of a big pumpkin which had all the aspect of a soft sarcoma. But the skin over it was red, it was hot to the touch, and, moreover, it felt elastic and fluctuated in all directions with great distinctness. I at once mentioned my doubts as to whether the case was one of inflamed sarcoma or abscess and advised that another exploratory incision should be made, and that if the case turned out to be sarcoma amputation should not be performed in the present inflamed and septic state of the thigh. This was agreed upon and was carried out on the following morning. Dr. M. Parry-Jones of Alfreton gave an anæsthetic and Mr. H. G. P. Le Fanu of Derby and Dr. James Andrews were present and assisted. The previous incision was enlarged and my finger at once entered a large cavity. On withdrawing the finger a gush of pus took place, the amount of which was not measured, but it filled a bowl of considerable size. I made a counter opening on the inner side just above the knee and evacuated more pus. The shaft of the femur was bare of muscles for some four or five inches, but not denuded of periosteum. The patella and the capsule of the knee could be felt, the great abscess being evidently quite extra articular but beneath the quadriceps tendon. The movements of the knee were free. The walls of the large cavity were thick and definite, but no trace of growth could be felt. Full-size tubes were inserted, and the cavity was well flushed out. I expected that this abscess must have depended upon necrosis of the femur, and the obscure history of an injury some four years before lent some colour [illegible] ever, [illegible] ower [illegible]. I, however, dismissed the diagnosis of sarcoma, and expressed the opinion that the case was one of deeply-seated abscess round the femur and that the cause was obscure. I believed the case would do well. How erroneous this opinion proved subsequent events will show. A few days after the operation there was a return of fever and pain This was due to some slight retention of discharge and it soon passed away. The tubes were [illegible] shortened by Dr. Parry-Jone [illegible] to the case and gave me m [illegible] discharge always remained scanty and the wounds were nearly closed about the middle of April. The patient all this time had lost his fever and had put on some flesh and he looked better than when I had opened his abscess Indeed, the case had behaved quite consistently with the progress of a suppurative affection. About the middle of April Dr. Parry-Jones suspected that the case was not so simple, as a distinct mass had again begun to form, the swelling assuming much of its old aspect and the discharge being very scanty. A portion of tissue from one of the sinuses was examined and the microscopical report, as is occasionally the case, was favourable but sadly misleading. It stated definitely that there was vascular granulation tissue but no evidence of malignant disease About this time I wrote and suggested that the discharge should be examined for actinomyces, but this had already been done. The patient came to town early in May when I examined him. The swelling was as large as ever. The wounds had practically healed Very distinct fluctuation could be obtained on either side and the temperature was raised at nights. I expressed the opinion that the previous drainage had been insufficient and I thought the whole cavity should be laid open along the outer side, cutting through the vastus externus muscle. I expected to find much inflammatory material and a sequestrum. Before undertaking so extensive an operation I desired another opinion, and Mr. Frederick Treves saw the patient with Dr. James Andrews and myself early in May. He was at once struck with the resemblance of the case to one of actinomycosis, and suggested that the discharge should be carefully examined for the ray fungus. He suggested free opening and curetting with patient and prolonged flushing and subsequent gauze tamponade. I operated two days after, Dr. James Andrews and Dr. E Collingwood Andrews kindly [illegible]

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[1] A paper read before the Medical Society of London on Oct. 22nd, 1900.

[illegible] as felt but curious masses of growth [illegible] in contour, evidently pedunculated, [illegible] of the cavity. Some of these were quite polypoid, and without much trouble I enucleated one
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tion had occurred
huge cavity had practically been converted into an abscess. The evacuation of so large a quantity of pus was exceedingly misleading, and explained a diagnostic error which, under the circumstances, was perhaps almost unavoidable and I believe would have been made by any surgeon. Amputation at or near the hip was now the sole resource I did not urge it as the case in all respects was very unfavourable, and the fear of leaving infected flaps could not be laid aside All further treatment was refused. The growth rapidly extended and the patient died from exhaustion in July, 1899 An early amputation, prior to any septic action in the thigh, might perhaps have saved him for a time. I have thought it right to publish this case because it carries with it much useful instruction. I believe that any surgeon who had seen it would have fallen into error and pronounced it undoubtedly inflammatory. I think it one of the most striking cases which I have ever seen and one which illustrates the extremes of caution with which we should deal with such cases from a prognostic and diagnostic point of view.

CASE 2.—The second case was one of ulceration of the toe, followed by melanosis of glands in the groin. Through the kindness of Dr. B. R. Martin of Hammersmith I saw in January, 1899, a man, aged 49 years. For about 12 months the fourth toe on the right foot had given him trouble. He attributed this to the fact that a corn had formed underneath it, and that he rubbed this with his boot. Anyhow, an obstinate ulcer formed on the plantar surface of the toe and refused to heal. On examination an oval ulcer with irregular margins was seen to occupy the under surface of the toe; it was deep and nearly exposed the tendon. The base was covered with pale granulations and the edges were "heaped up"; they were white and callous, exactly like the tissues of a "corn" which indeed I opined it to be. The toe was amputated, the wound healed in a few days, and the patient left my care much relieved in walking. In April he came and showed me an enlarged gland of about the size of a filbert in Scarpa's triangle. This had been noticed accidentally. The swelling was moveable and elastic, and at one spot the sensation of fluid was evident. I believed this swelling to be a suppurating gland; but the possibility of a new growth entered my mind, and I urged upon the patie [illegible] the lump at once explored by [illegible], this advice was declined. Oth [illegible] the patient, largely swayed by the advice of irresponsible relations, allowed his case to take care of itself. I saw him from time to time, and fluctuation was so evident in the increasing swelling that the diagnosis of a chronic abscess seemed more and more certain. The thought of inserting an exploring syringe was not absent, but I feared to do this to a possible soft growth unless I had permission to proceed at once to operation. In May the swelling had increased to the size of a small orange, and had commenced to cause grievous pains down the course of the crural nerves. I now felt that there was ground for serious alarm, and I spoke very strongly to the patient regarding his grave condition. He entered the "pay wards" of Guy's Hospital and was operated upon by Mr. L. A. Dunn who kindly informed me that the swelling in his groin was a soft melanotic growth. This result much astonished me for I had looked at the toe very critically, and I feel sure, having seen several of these most deceptive cases, that any blue or black discolouration would have [illegible] I presumed that the extensiv [illegible] otic nodule in the toe had obl [illegible] acters of the disease. I have lately heard that this patient, as usual, succumbed to a general dissemination of the disease.

CASE 3.—This was a case of sarcoma of the tibia simulating an abscess. A married woman, aged 41 years, had obscure pains in the right leg for about three months. The site of greatest severity was near the right knee on the inner side She was a healthy-looking woman, all her bodily functions were well performed, and there was no evidence of syphilis There was a diffused and hard swelling on the inner side of the tibia just below the knee. This was a little red, hot, and exquisitely tender. Indeed, the symptoms were those of a localised periostitis and osteitis of a somewhat acute nature The patient was admitted into St. George's Hospital on July 29th, 1899, and was placed on large doses of iodides The pains were not relieved, and by the middle of August there was a fluctuating swelling of the size of a pigeon's egg over the tibia. Indeed, the diagnosis of abscess probably associated with necrosis seemed very certain. On August 19th, the swelling was opened by the house-surgeon under the supposition that it was an abscess. I may relate exactly what occurred, as it more forcibly illustrates the extremely interesting lesson which this case teaches. Being present, I remarked: "Do not lay that open at once, but make a puncture into it to be sure of your diagnosis Some of these swellings turn out to be soft sarcomata, and if you lay these freely open you will land yourself in disaster." He replied, "I do not think this is anything of the kind, but make the puncture" This was accordingly done with a fine knife, and instantly a jet of blood shot up to the height of several inches, slightly rising and falling with an ill-marked pulsation. The picture was one which no one who saw it could ever forget. I closed the puncture by a deep suture, put on pressure, and prepared the patient on the next day for a possible amputation should this be needful. On the 24th Esmarch's apparatus was applied and I turned up a quadrilateral flap over the site of mischief. A soft sarcomatous growth of the size of a small orange was disclosed, and it came through the compact tissue of the tibia by a curiously circumscribed hole which looked as though made by a trephine. This was obviously only part of a much more serious complication of the interior of the bone, and I therefore amputated in the lower third of the thigh, the patient making a good recovery. Dr. W. S. Lazarus-Barlow kindly examined the specimen and reported that the growth was sarcomatous and of the nature of so called myeloid disease and that it had originated in the medullary tissue of the tibia. A serious mistake was avoided in this case by a precaution which may well have seemed to be superfluous, and the timely establishment of the diagnosis may perhaps serve to re-establish the blemished reputation which the relation of the first case may have aroused in the minds of my audience!

CASE 4.—The last case I am about to relate is one of surpassing interest, especially to my medical *confrères*. In the year 1898, I saw a strong, robust-looking man, aged about 40 years. For six months he had been ailing, with vague pains about the back and the left side, and especially he complained of severe shooting pains down the left thigh and over the buttock. He had seen several physicians, as well as general practitioners of standing and sagacity. The consensus of opinion had been in favour of rheumatism, and he had gone abroad and taken "waters" without benefit. I have no doubt that diagnosis was really quite impossible at this early period of his case. On examining him I was struck with some enlarged veins over the left side of the abdominal wall, and on deep palpation a hard, irregular, and fixed mass could be felt under the left false ribs, close to the side of the spine. I watched the case for some weeks, though I was much pressed for an immediate opinion, and next it was noted that there was an irregular nocturnal rise of temperature, and I began to fear that the case was one of spinal disease with deep abscess. One day, however, the patient drew my attention to a swelling of the left testis, which he said he had suffered from since the onset of his symptoms. Moreover, the testis had gradually become larger. On examining the organ i[illegible] an enlargement affecting the body [illegible] and on carefully palpating the cord some masses could plainly be felt towards the inguinal region. Though no history of syphilis could be obtained the patient was placed on full doses of iodide of potassium, but though he continued the remedy for some weeks no result was obtained. The mass in the belly got more evident and could especially be felt posteriorly and the pain was worse. I now gave an opinion that the case was one of retro-peritoneal sarcoma, secondary to a testicular growth. This was afterwards verified by Sir William Broadbent and others. The case ran the usual progressively fatal course. A remarkable feature in it was the nocturnal rising of the temperature, which averaged 101° F. and sometimes rose to 102° or 103°. Towards the end of life severe attacks of phlebitis and thrombosis occurred in the femoral and iliac veins, giving rise to agonising pain and necessitating the free use of narcotics. No necropsy was allowed, but huge masses of growth were evident at the end of life, pressing the intestines forwards, obviously retro-peritoneal and secondary to the growth in the testis.

These four cases are related as forcibly illustrating the extraordinary problems which the different varieties of malignant disease may present. Mistakes are hardly to be avoided even with the extremes of caution. As errors of judgment are well said to teach us more than successes I venture to bring the subject before you because I am aware that similar instances have occurred in the practice of others and that the subject is one of unsurpassed interest and importance as well as of extreme difficulty.

Cavendish place, W.

NOTIFICATION OF PHTHISIS.—At a meeting of the Bath Town Council held on Oct 15th Dr. W. H. Symons, the medical officer of health, proposed that the system of voluntary notification of phthisis which had been adopted in Manchester, Sheffield, Brighton, Stockport, Blackburn, Stonehouse, Plymouth, Kendal, Norwich, and Carlisle should be adopted in Bath. After some discussion the matter was referred to a sub-committee.

THE ANÆMIA OF DYSPEPSIA CONSEQUENT ON DIRT-EATING.

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HITHERTO in the disease known as ankylostomiasis attention has been given principally, if not altogether, to the expulsion of the parasites from the intestines, merely because they have been regarded as the root of all the evils attendant on the disease. It is the object of this communication to point out that, far from being the chief object in view, it is but the beginning of a long course of treatment requiring great patience, careful dieting, and strict supervision. In necropsies on subjects of ankylostomiasis one has but to consider the great numbers of those worms occupying the upper intestines to realise how inconsistent is the theory which seems to be the general opinion of the profession as regards the causation of the disease. To me the idea of blood-sucking ankylostomata is entirely out of the question, and I have always wondered how the anæmia so produced has not more speedily put an end to the patient's life sooner than is usual with these cases, for be it said that it is a disease which comes on very gradually, symptom after symptom manifesting itself, until the combination of such symptoms ends the trouble, often after a considerable period from the onset. After two years' observation of these cases both in hospital and district practice I have had constantly in mind the consideration of the probable cause, other than the parasites, of this progressive and fatal disease as we have it in this colony. A great deal has been said and written about ankylostomiasis as a disease, more care and attention being specially directed toward removal of the parasites from the intestines. Of course, there can be nothing said against that inasmuch as they must be, and are, a great source of discomfort to their hosts, but the important question as to the etiology of the disease in itself is lost sight of or not at all taken into consideration, and notwithstanding the undoubted relief obtained by the administration of anthelmintics patients do not recover so readily as would be expected. Presuming that the ankylostomata as forming the chief agents in causing a disease productive of such profound anæmia and its consequences act merely by the local abstraction of blood there would, I think, be no doubt as to the treatment; but in considering the parasites only as a secondary factor, a mere coincident symptom as I believe them to be, it is plain that their expulsion, though absolutely necessary and affording considerable relief, does by no means bring about a perfect cure. The name "ankylostomiasis" is obvious in its meaning and the theory of ankylostomata sucking blood from the mucous membrane of the intestines is comparable to a considerable quantity of minute leeches continually draining the patient of his life's blood, a most horrible idea in itself and a state of things under which the patient's life could not be expected to last any time. Then, again, it is most probable that instead of the local abstraction of blood, as is supposed to be the case, the parasites may feed upon the soluble products of digestion which would otherwise have been absorbed and carried to the tissues. Of the two the latter supposition would seem to be more likely the case, but even then one could suppose sufficient soluble products to be absorbed to keep up the nutrition of the body and that by getting rid of the parasites health would result after a due allowance of time. The name "ankylostomiasis" would still be justifiable, the disease originating, as it then would, directly from the parasites; but I do not think anyone who has the opportunity of observing the disease as it occurs here and in other countries can have any reasonable doubt about its being a malnutrition and not merely an anæmia due to hæmorrhage. The dyspepsia I take to be the primary and most important cause of the so called ankylostomiasis, though blood-sucking is so firmly believed in that it will be a matter of considerable difficulty to get anyone to give up the theory. According to various people it seems to be one and the same disease though known under different names. In this country the coolie labourers are by far the greatest sufferers, and not surprisingly so if only one considers their habits and manner of living. Their diet is very simple and meagre, they are for the most part vegetarians, but and get it they are made to take all. They are a people peas, curry, and ghee, this latter being a specially-prepared butter in great use among the race. This frugal diet to men who are hard workers in the canefiel sun cannot be conducive to And when, in addition, there is whether acquired as a vice or, which is most probable, for the purpose of economy, the result cannot be otherwise than disastrous. I have always connected the disease known as ankylostomiasis with the dirt-eating habit and with good reason, for I have frequently come across coolie patients with gravel hidden on their persons or actually caught them in the act of eating such dirt, and the craving is so strong that the coolie will cry and beg for the dirt which he so much cherishes. This is generally a soft slate-coloured or greyish stone which is very much in use among them or sometimes it is the actual dirt made into cakes and not unfrequently rags, paper, and coke are eaten. On this account there is a considerable loss of labour yearly. Owners of immigrants have been aroused to the fact that the disease is greatly on the increase and are much embarrassed by the large number of disabled coolies. The result arising from such a habit is obvious and the hospitals, both those of the districts and the estates, are crowded with sick coolies The anæmia, which I take to be the direct outcome of such a prolonged and inveterate habit, is the cause of the greatest percentage of hospital patients, and though there must be no inconsiderable difficulty in effectually checking the habit, yet attempts might be made even to minimise this vastly increasing scourge.

There is no difficulty in recognising the advanced disease which to those accustomed to deal with it is diagnosed from merely looking at the patient. His appearance is characteristic, he is much swollen generally, his face is puffy and has a distressing look which seems to invite your attention to his hopeless condition, he walks into the surgery with slow and measured steps and shows you his legs which are swollen and tense with œdema, and he complains of pain in the whole body. There is a look of weariness and premature agedness about him which is marked; he has shortness of breath and is unable to speak but makes signs to indicate his distress. When asked to put out his tongue he opens his mouth, disclosing the organ lying in the floor of the mouth, and if urged to protrude it does so with great difficulty, purely from weakness. The tongue is shockingly anæmic, large, swollen, and flabby, and strongly marked by impressions of the teeth The conjunctivæ are exsanguine; the patient complains of severe headache, dimness of sight, and not unfrequently diarrhœa and pains in the abdomen. The incipient disease, however, is not so easily recognised and some care is necessary to arrive at a correct conclusion A patient will of course, never reveal that he is a dirt-eater and very strongly denies the fact, though if searched at the moment evidence might be found on his person of his doing so He is young, mostly between 20 and 30 years of age, and to all appearances is in good health. He complains of pain in his legs and all over his skin, of shortness of breath on exertion, and pain in the pit of the stomach. There is no marked anæmia or any of those symptoms mentioned above; he is apt to be put down as a malingerer and treated accordingly, even sometimes prosecuted and imprisoned. The physical examination of his chest reveals nothing as a rule, with the exception perhaps of a slight hæmic bruit along the left edge of the sternum There is one sign, however, which seems to be very constant among dirt-eaters, it matters not of what age, and that, one of the earliest indications of a malnutrition, is the condition of the skin This, I believe, to be a great point in helping one to arrive at the true state of things in the early disease If the skin of the face is pinched up between the index finger and thumb it is felt at once to be different from that of the healthy individual—it is thin, flabby, and lacking in firmness, and has somewhat the same feeling one experiences in pinching up the skin of an aged person; the atrophy and loss in tone are unmistakable This is a sign which is noticeable even in young children who are addicted to the habit. It is a symptom which might be thought peculiar to wasting diseases generally, but whereas in other diseases there are sure to be other symptoms more or less advanced to account for the malnutrition, here it is the commencement of the trouble, and no other cause can be found or assigned to it. Such a patient is put on the thymol treatment, and very put on an iron mixture, which is very wrong, so that no consideration is taken at all of the condition of the mucous membrane of his stomach. Often he is put on a diet which he is quite incapable of digesting, as is proved by the fact that one sees occasionally a whole meal passed in the stools almost unchanged. It is not to be supposed that a habit such as I describe, probably of many years' standing, can have had no ill effect on the physiological function of such an important organ as the stomach. Digestion suffers and the blood and tissues starve accordingly. The symptoms of anæmia and malnutrition increase gradually, the patient gets into a condition of hydræmia, and so from bad to worse until he gets into a state well-nigh incurable and eventually dies from heart failure, mere poorness of the blood, or exhausting diarrhœa. Diarrhœa in such cases is a very bad sign and one which indicates that the end is not far off or, at all events, that recovery is hopeless. It is not produced, as is supposed, by irritation due to ankylostomata, but it is partly the safety-valve action of the mucous membrane in relieving a serum-soaked system and partly the result of irritation from indigestible and decomposed food-stuffs. Post mortem examination shows extreme anæmia and degeneration of all the organs, with hydro-pericardium, hydro-thorax, and ascites; the stomach is always dilated, sometimes to a considerable extent—not the dilatation of obstructive pyloric disease but a uniform dilatation; its mucous membrane is atrophied. The intestines are atrophied and there may or may not be ankylostomata. All these signs seem to me to be brought about by a gradual abuse of the powers of digestion time. Taken in time the habit o tion of dirt into the stomach in sequent dyspepsia should form the main point to which we should direct our efforts. The disregard the intestinal paras them is the first step of the t not infrequent where all the symptoms of this form of anæmia are present and not even the most careful administration of thymol will bring away any worms. The presumption, therefore, is that there are none I remember one such case in a boy of dirt-eater and i improved consic watched very closely. He did very well and his formerly pasty complexion had just began to assume the colour of health when he left my care. A couple of months afterwards I saw him in the diarrhœa ward where he died with violent purging. What happened was that the watch kept on him was relaxed and he soon fell into his old habits again. At the post-mortem examination I failed to find any ankylostomata, though I looked for them very carefully. Finally, I will mention the case of a man who is now under my care and who, though he has not got the habit of eating dirt, nevertheless follows a calling highly favourable to the ingestion of earthy matters into the alimentary canal. He is a labourer on a cocoa estate and as such has his hands more or less constantly encrusted with the soil six days out of the seven, and in the hurry of his work seldom thinks of washing his hands. It is the usual thing with such labourers and the dirt is thus taken into the stomach during meal time. In addition the man's food was very bad, consisting principally of salt fish which was certainly not of the best. He had thymol administered twice in the space of a fortnight and only on the first occasion were ankylostomata found and these were not many. He is a Spaniard, 24 years of age, under treatment for shortness of breath and swelling. He is very anæmic and swollen, his face is bloated, and the skin when pinched up is loose, flabby, and wanting in elasticity The lungs are free, the heart area is normal, and a systolic bruit is heard. The urine is normal. The point of interest is that though his anæmia is fairly advanced there does not seem to be any remarkable quantity of the parasites in the intestines sufficient to produce the anæmia There are many cases where ankylostomata are not to be found at all, notwithstanding the care taken both in the administration of thymol and the straining of the motions. Moreover, a patient may be chosen for experimental purposes who has not the least symptom of anæmia and thymol given in the ordinary way and ankylostomata demonstrated sometimes to a considerable extent. In such cases the parasites are taken in drinking-water and do not seem to affect their hosts in the least.

Carriacou, W.I.

THE DIFFERENTIAL DIAGNOSIS IN GENERAL PRACTICE OF PLAGUE AND TYPHOID FEVER.

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It is evident that the early diagnosis and complete isolation of cases of plague are of supreme moment on account of their far-reaching results. As the Cardiff case as well as most of the Glasgow cases of plague have simulated an ill-defined type of typhoid or enteric—the term which I prefer to use—fever, I venture to submit the following note on these two diseases in the hope that it will enable the busy practitioner to arrive at an early and correct diagnosis of plague. I write from the point of view of a general practitioner, a portion of whose work is among people who from pecuniary considerations and ignorance expect you to make your diagnosis, no matter how difficult, on a first examination of a patient the dirt of whose skin may obscure any rash or mottling, and who may be lying in a room where sunlight seldom enters and where the artificial light is a paraffin lamp or a tallow candle. My remarks are based on the three Malloy cases, the first recognised Glasgow cases of plague, which were described in The Lancet of Sept. 8th, 1900, and the case of Rosina M——, which was described in The Lancet of Oct. 6th, 1900, p. 1040, as well as other Glasgow cases I have seen demonstrated by Dr. J. Brownlee in the wards of Belvidere Hospital. I am much indebted to the authoritative papers which I mention as references. I first discuss the symptoms and physical signs common to both diseases and then refer to a distinguishing feature of each disease.

Onset.—Three of my cases were ushered in suddenly with headache, nausea, vomiting, and general malaise. In one of them delirium set in at the onset and remained till his death seven days later, and in the fourth case there was a history of "raving" at the onset. In all forms of plague the two most common symptoms at the onset are headache and vomiting. In the cerebral type delirium and nervous symptoms predominate, while in the pneumonic form the most striking early symptom is a dyspnœa out of all proportion to the physical signs revealed on examination. The characteristic point of the onset in plague is that it is commonly sudden. In enteric fever the onset is, as a rule, insidious. The patient tells you that for a week, or perhaps a fortnight, he has been out of sorts. He has not been fit for his work and has no appetite. He has a dull pain in his head, is wakeful or dreamful at nights, and has a tired feeling, and a little cough. He is sure that he has a bad cold in his system which, if not speedily cured, will gradually lay him up. The whole history of the onset of enteric fever in an adult points to an insidious disease. It is only in children, or in adults whose vitality is too low to repel for any length of time the attack of the typhoid bacillus that we find a sudden onset. The extremely difficult cases would be a very mild case of enteric fever and a very mild case of plague. Fortunately in almost all the mild cases of plague buboes are present, and we can also call to our aid Widal's reaction to differentiate enteric fever.

Temperature.—When seen two days after the onset the temperature of one of my plague patients was 103° F., the temperature of another case three days after onset was 102°, the temperature in the third case also three days after onset was normal, while the temperature in the fourth case, which I saw for the first time 18 days after onset, was normal, but the medical man who was called in at the onset informed me that it was then 104°. As a rule, after the onset the temperature in plague goes up rapidly In severe cases it reaches its maximum in 24 hours, but more often on the second or third day. The degree varies between 101° and 106°. The amount of the rise is no test of the severity of the case, for in the most fatal cases the temperature may not rise above 101°. One of my patients whose temperature was 102° when I saw her late in the afternoon had the same temperature on admission to the hospital on the following day at noon. The day following this her morning and evening temperatures were respectively 102° and 101·8°, while the next day they were respectively 102° and 100 4°. The temperature fell during the succeeding day from 101 4° to 98·6° and the patient expressed herself as feeling much better. Now the important point about her morning and evening temperatures is that they were the converse of what we should find in a case of enteric fever. The characteristic of the temperature in enteric fever is its remission, falling in the morning and rising in the evening. Let me here make some practical remarks on temperatures indicating fever in general practice. When I find a child with a temperature with no evident cause to account for it and I suspect the fever is due to an infectious disease, I take the mother into my confidence and enlist her aid in isolating my patient till I am able to confirm my suspicions or to reject them as groundless. For example, if I suspect measles or scarlet fever and the child sleeps with two or three other children I ask the mother to put him in a cot by himself or in any temporary bed she can improvise. A common practice is for the child to sleep with his parents till he is better. If the case is in a densely populated street and the people will only pay for one visit, and there is a doubt between scarlet fever, measles, and rötheln, I agree with Dr. Goodhart that the public and not the patient ought to have the benefit of the doubt, and I notify it as scarlet fever. If the patient is an adult and I suspect enteric fever I try to get him not only a bed but, if possible, a room to himself. In all ill-defined fevered conditions I order the mother or wife to buy a pennyworth of permanganate of potassium crystals and I tell her how to make with them gallons of disinfecting fluid, warning her to keep the crystals in a safe corner away from children. I then tell her to sponge the patient with this fluid and warm water night and morning and also to use it for washing the utensils that the patient uses. I always find that the bed to himself and the sponging are gratefully welcomed by the patient. In a suspected case of enteric fever I tell the wife or mother to note the appearance of the motions as soon as they are passed and then to pour disinfecting fluid over them at once and to lose no time in emptying them down the water-closet. In cases of suspected enteric fever also if the people are too poor or, as is more often the case, too penurious to pay for the two visits in one day I make it a point of seeing my patient one day in the morning and the next day in the evening for the sake of comparing the morning and evening temperatures. The common practical teaching is that any fever in this country and in all non-malarial regions which persists longer than seven days with no discoverable disease to account for the pyrexia is most probably enteric. As my old and ever kind teacher Sir W. T. Gairdner points out in The Lancet of Oct. 13th, p. 1096, this does not mean that we are to wait for a whole week or perhaps a whole fortnight for the sole purpose of giving the disease a name and without attempting to isolate the patient or to notify the sanitary authorities. Why not at once—for our patient has probably been ill several days before we saw him—send the blood to be tested for Widal's reaction and if we get a negative result and there is still no evident disease to account for the pyrexia send another sample of blood? When I was called in to my first three cases of plague and I had a history of four apparently healthy individuals of the same household struck down within a day of each other with a disease characterised by fever I had no difficulty in pronouncing the disease infectious. As soon as I left that infected house I called on the medical man in attendance and he readily assented to my proposal that it was better for our patients, better for the neighbours and community at large, and better for our own professional reputations, to notify the sanitary authorities at once, although neither of us could give the disease a name. I notified them as probably ill-defined or doubtful cases of enteric fever requiring complete isolation and close observation for developments.

Respiratory symptoms.—On a physical examination of my patients I found in one nothing definite beyond congestive catarrh at the bases of both lungs. This was the natural sequence of cardiac failure, for the first sound of the heart was indistinct and he was extremely prostrate. He died on the third day after my examination. In another case there was a little bronchial catarrh and in the other two cases the chest was normal. The pneumonic form of plague is not only the most fatal form but the most difficult to diagnose, for "pain, tenderness, and enlargement of the lymphatic glands in the inguinal, femoral, axillary, and cervical regions, which are the most prominent external signs of bubonic plague, are absent." This is also the most infectious form, for the sputum is teeming with plague bacilli. One of the earliest and most striking symptoms is the dyspnœa which is out of all proportion to any physical signs revealed on examination. There is great pain in the chest and this, unlike the chest pain of acute pneumonia, is not localised but general and occasionally referred to the abdomen. There are cough and expectoration, but the sputum, while generally scanty and streaked with bright red blood, has not the glairy, viscid, rusty character of the sputum of acute lobar pneumonia. Rhonchi and râles can be heard but dulness and tubular breathing are seldom present. The characteristic pulse-respiration ratio of acute pneumonia is absent, although there are hurried breathing and quick pulse. Now in enteric fever we only find in the early stage a slight degree of bronchitis or bronchial catarrh. If pneumonia sets in it is a complication in a later stage when the disease has become typical. It is also in this stage that we find basal catarrh due to hypostatic congestion of the lungs.

Nervous symptoms.—In the case of the patient who died the nervous symptoms were a marked feature from the onset. He had "raved" all the previous night before I saw him. He was so restless that he could not be kept in bed, so he was allowed to get up, when he staggered aimlessly from place to place about the room [illegible] most of the time. When I saw [illegible] apathetic, and could answer [illegible] semi-comatose condition and very prostrate. Taking the case by itself with the mottling of the skin, as described in the Belvidere report, and no buboes being pointed out to him no man could distinguish it from a case of typhus fever. Another of my cases had a history of "raving" at the onset, while in the other two cases there were no pronounced nervous symptoms. The first case would be classed under the typhus form of plague, where the delirium, nervous prostration, muscular weakness, stupor, and coma are leading features of the disease. In enteric fever the nervous symptoms come on late in the disease, as a rule, when there is seldom any doubt in the diagnosis.

Diarrhœa.—In all febrile conditions the bowels are irregular and we find either constipation or diarrhœa. In two of my cases there was diarrhœa at the onset and in one of them it continued up till death. In the third case the bowels were normal and in the fourth case they were not noted at the onset. In the Glasgow cases diarrhœa was often present at the onset. It is stated that the general rule in plague is constipation unless in the intestinal form, when diarrhœa is present at the onset, and later blood, mucus, and epithelium appear in the stools. In regard to the appearance of the stools I was misled by a statement which was volunteered by a neighbour without any suggestion of mine. She said that the motions were like "pea-brae" (the word "brae" is the Scotch equivalent for soup) and that they had "an awful smell." I am afraid that she either meant that the stools were watery or she had heard of "pea-soup stools" and was too anxious to assist me in my diagnosis. In regard to the degree of offensiveness of stools I would place little reliance on the statements of patients or their attendants unless the attendant is a trained nurse. Now, in regard to enteric fever I agree with Dr. F. F. Caiger that "the fact cannot be too strongly emphasised that diarrhœa is by no means a necessary attendant of enteric fever." I have always found constipation to be present in ill-defined cases of enteric fever and they were ill-defined because there was no diarrhœa. At any rate, diarrhœa in enteric fever does not usually appear till the second week of the fever and when it does appear there is little doubt of the diagnosis.

Tenderness or pain in the right iliac region.—This was the most misleading of the three symptoms that favoured the view of the first three cases being probably enteric fever. It was no use trying to elicit it in two of the patients, for the one was semi-comatose and the other was a child. But the third patient, the mother of the other two, on palpating in the cæcal region, said that it was painful. I had no reason to extend my palpation along the right groin and if I had done so I would have discovered a large painful bubo to which she had directed the other medical man's attention and which he had ordered to be poulticed. The pain which I elicited was probably due to indirect pressure on this bubo or to an inflammatory condition of the deep iliac glands. Ever since that day—and I shall always continue to do so even in a woman—on palpating for cæcal tenderness I never fail to run my hand along the right groin.

Skin eruptions.—I found no rash or mottling of the skin in any of my four patients. One of them is described on admission to the hospital and after, I presume, a bath, which was much needed, as having a faint purplish mottling which was most marked across the lower part of the abdomen, the arms, and the buttocks. It resembled the mottling of typhus fever. There is no true skin rash in plague. There may be occasionally petechiæ or mottling but no distinct rash. As for the rose spots in enteric fever they are usually absent in ill-defined cases, and if they do appear it is never before the end of the first week when the case has become more or less typical.

The tongue.—In all febrile conditions for any length of time we find a tongue coated with white or yellow fur. The appearance of the tongue of my patient who died was the same as that of all patients in a low vital or typhoid condition. His mother's tongue was simply a febrile tongue and the appearance of the tongues of the other patients presented nothing specially striking. The typical tongue in plague is one "early coated with a creamy white fur except the tips and edges which are clean and red, later it is dry, covered with a yellowish or whitish-brown fur, the tips and edges remaining red and irritable." The appearance of the tongue in enteric fever varies from the ordinary febrile tongue to one glazed and morbidly red. I am afraid that the tongue, unless in association with other symptoms and signs, is of little practical value for differentiating the two diseases.

General aspect of the patient.—The aspect of the patient who died conveyed to my mind that of one in a very low or typhoid condition. The aspect of his mother was that of one who is very anxious to have some painful symptom relieved. Her one appeal to [illegible] sistent vomiting. [illegible] the aspect of the [illegible] again anxiety to relieve the painful buboes in each of her groins. It is one thing to study the aspects of a patient whom one is called in to relieve and another thing to study the aspect of a group of patients with the same disease lying quietly in the ward of a hospital. The characteristic physiognomy common to all forms of plague is—"In the early stage the countenance portrays anxiety and distress, later resignation and apathy, the eyes are red and congested, and the speech broken and hesitating and pronounced in a thick and husky tone like that of a drunken man." To the plague specialist the aspect would no doubt be a valuable sign, but it would be of little practical value unless in association with other signs to a man trying to diagnose his first case of plague—a disease which he has read about but never seen.

DISTINGUISHING FEATURES.

Buboes.—In the pneumonic and septicæmic forms of plague buboes are only found post mortem. It is therefore a blessing that "as a rule the first outbreak of plague in a community is bubonic in type, whatever it may become afterwards." In my cases the mother, according to the Belvidere report, noticed a painful swelling in her right groin, the day after the onset of the disease. The same report states that buboes were detected in the axillæ of the patient who died, as well as enlargement of the deep cervical chain of glands. The little boy was found to have a large submental gland of about the size of a marble. His mother was certain that it was not there prior to his illness. This [illegible] axillæ, neck, and groin were palpable but not distinctly enlarged. The young woman when I saw her 18 days after the onset of her illness had very palpable painful buboes in each groin. They were noticed by herself on the third day of her illness and were thought by the medical man in attendance to be gonorrhœal. I have pointed out[1] two points of differentiation—(1) the temperature of 104°, and (2) the rare situation in woman for gonorrhœal buboes—between plague buboes and gonorrhœal buboes. The time of the appearance of the bubo varies. It may be the first sign of the disease but it commonly develops while the temperature is rising on the second or third day. Its appearance is rarely delayed till as late as the eighth day of the illness. Very often pain and tenderness are present before any enlargement of the gland can be made out but they are soon followed by a palpable tender swelling. In the commonest type there is a large mass of several enlarged glands blended together by the surrounding exudation, but it may be only one inflamed gland with little infiltration present in the cases most rapidly fatal. The most common glands affected are those in the groin. In almost half of the cases the inguinal or femoral glands, or both, are alone enlarged. The next common situation is the axilla and in order of frequency the cervical submaxillary and parotid glands. Enlargement of the supra-trochlear, iliac, and popliteal glands rarely occurs.

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[1] THE LANCET, Oct. 6th, 1900, p. 1040

Widal's reaction —This is an absolute positive test and almost an absolute negative test of enteric fever. Of 206 cases of enteric fever the blood serum gave the reaction in 201, and in 103 cases which were not enteric fever the reaction only occurred in one case and that in a case of typhus fever. The reaction can be rarely obtained before the sixth or seventh day of the attack and in some cases it ceases to react before the expiration of three months from the onset of the disease, while it can often be obtained for two years or more after recovery, but usually in a less degree of completeness.

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Glasgow.

A CASE OF COMPLETE COARCTATION OF THE ARCH OF THE AORTA; NECROPSY.

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AND

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A MAN, aged 29 years, delicate looking and somewhat ill-developed, was admitted into St. George's Hospital on March 30th under the care of Dr. H. D. Rolleston. The patient stated that he had had an attack of scarlet fever when he was a boy, but had never suffered from rheumatism or chorea. In February, 1898, he was laid up with a severe attack of influenza, since when he had suffered from pains in the chest and palpitation of the heart, and more recently from cough. In January, 1900, he had a second attack of influenza, after which his breath remained so short that he was quite disabled. While in the hospital his chief subjective symptoms were referable to the heart itself and to an engorged state of the lungs. The heart's action was tumultuous and forcible, the impulse was diffuse, and the dulness was greatly enlarged. On auscultation the chief abnormal signs were a faint systolic murmur over the whole præcordium, a ringing aortic second sound, and a diastolic murmur in the aortic area, traceable down the sternum and audible also in the back. Marked pulsation was observed in the subclavian arteries, in the neck, and in the temporals; and on one occasion Dr. T. R. Whipham, medical registrar, observed pulsation in the back, between the left scapula and the spine from the third to the seventh rib. The radial pulses were equal, large, locomotor and collapsing. With rest in bed and tonic treatment, including small doses of digitalis and strophanthus, considerable improvement took place; and on April 25th the man was sent to the convalescent hospital at Wimbledon, where he came under the care of Dr. Lee Dickinson. The improvement, however, was not long maintained; dropsy set in with persistent hæmoptysis, enormous enlargement of the liver, and a scanty, lithatic, and highly albuminous state of the urine. A full trial was now made of digitalis, but without the slightest restraining effect upon the progressive cardiac symptoms, and death occurred on June 1st.

Necropsy by Dr. W. J. Fenton.—At the post-mortem examination it was found that the aorta was at first moderately dilated, but at the origin of the innominate artery it became slightly contracted, the contraction increasing along the arch until, at the origin of the subclavian artery, the lumen barely admitted the terminal phalanx of the little finger. Immediately beyond this point the lumen of the aorta was suddenly diminished to the size of a goose-quill by a sharp ridge which corresponded to a groove on its under surface. Between this and the junction of the ductus arteriosus the aorta formed a globular dilatation of about the size of a small marble, and then became suddenly and completely obliterated, the appearance externally being as if a ligature were tied tightly round the vessel, and internally that of two hollow cones placed in contact at their apices. The walls of the first part of the aortic arch were thickened and showed a few patches of atheroma, and the point of obliteration was encircled by a ring of early degeneration. The rest of the thoracic and abdominal aorta was narrow and thin-walled, but otherwise healthy. The ductus arteriosus was completely obliterated and reduced to a fibrous cord half an inch long. At the apex of the cone-like upper extremity of the descending aorta was a shallow depression which just admitted the tip of a bristle and corresponded to the end of the duct. The aortic valve was incompetent to the water test, and was provided with two cusps only, an anterior and a posterior, which were stiff and thickened and devoid of lunulæ. The coronary arteries arose behind the anterior cusp. The innominate, left carotid, and subclavian arteries, together with the left vertebral, which arose directly from the arch between the left carotid and subclavian, were dilated and thickened.

It was not practicable to trace out the anastomotic circulation with any completeness, but this had evidently been carried out chiefly by the internal mammary and first four intercostal arteries, which were greatly enlarged, thickened, and tortuous.

The heart, together with the arch and five inches of the descending aorta, weighed 33 ounces. All the cavities were dilated and their walls hypertrophied, especially the left ventricle, where these changes were extreme. The mitral and tricuspid valves and the pulmonary artery and its valves offered nothing for comment. The foramen ovale was closed. There was a fibrous tag on the front of the heart and the pericardium over the right auricle was opaque and thickened. There were several apoplexies in the right lung, the liver was nutmegged, and the spleen and kidneys were cardiac.

Clinical remarks.—Coarctation of the aorta is sometimes entirely latent and may be compatible with an active life and even the attainment of extreme old age; but in the majority of cases, sooner or later, the labour of carrying on the anastomotic circulation proves too great for the heart, which undergoes hypertrophy and dilatation—often to an extreme degree. The average age at which death thus results is said to be 34 years. In a considerable minority of cases death comes by way of rupture of a saccular or dissecting aneurysm of some part of the aortic arch; and, apart from aneurysm, there appears to be a noteworthy liability to rupture of the aorta, and even of the heart itself.

As for clinical diagnosis, given a fair development of the anastomotic circulation, and a sufficiently methodical examination of the patient before the essential lesion has been masked by secondary cardiac changes, there is no reason beyond the rarity of the affection why the diagnosis should not be achieved. Pulsation in the arteries of the head and neck is probably constantly excessive, while in the abdominal aorta it must be absent or much diminished. The femoral pulse, when it exists, is retarded beyond the radial. Sometimes there has been observed obtrusive enlargement and pulsation of the intercostal, scapular, mammary, epigastric, and other more or less superficial arteries; but there appears to be no absolutely fixed rule as to which vessels shall dilate, and even with complete coarctation the anastomotic arrangements may escape observation. In a clinical lecture on a presumed case of coarctation of the aorta, published in the *Medical Times and Gazette* of Oct. 17th, 1857, the late Dr. Walshe speaks of "heaving, expansile, forcible pulsation at two spots near the inferior angles of the scapulæ, with all the qualities of aneurysmal impulse," but in reality due to a dilated and knotty condition of the intercostal arteries, and in part of their posterior perforating branches So strong, indeed was that impulse that the idea of aneurysm of the arch itself, extending backwards, suggested itself for a moment to his mind. Something of the kind in a minor degree was observed in our case.

The greater part of Dr. Walshe's lecture, which is a delightful example of the logical method of clinical investigation, is occupied with the discussion of a special murmur upon d to turn. This murmur, gene- passage of blood through a con- coarctation, was of slightly ng quality, and very high pitch. at the second right interspace, close to the sternum, and it was conveyed upwards on each side, downwards and backwards to both vertebral grooves, but more intensely to the right than the left, on a level especially of the spines of the scapulæ. Barié in an able and laborious monograph published in the *Revue de Médecine* for 1886 speaks of the murmur having its maximum intensity over the course of the descending aorta between the left scapula and the spine, at the level of the third and fourth upper dorsal vertebræ. But obviously such a murmur is not to be expected when the coarctation is complete, and in our case it was certainly absent.

With regard to treatment we will only remark upon the failure of digitalis in our case and upon the fact that the same thing has been observed before.

Pathological remarks.—From the scattered literature of the subject[1] comprising 105 cases, we gather that coarctation of the aorta is of great, and, in its complete form, of extreme rarity. Only some 14 cases of the latter have been recorded. The male sex is more liable than the female in the proportion of seven to two. The coarctation is invariably situated at or near the junction of the ductus arteriosus with the aorta; sometimes a little below, rarely above, and never more than a centimetre distant. The constriction is generally produced by a fold of the inner coats of the artery, the outer coat being continued over it; very rarely the aorta has been found reduced to a fibrous cord for the length of about a centimetre, Occasionally, as in our case, the the intervening portion of the ve dilated. When the obstruction is incomplete the lumen may vary in size from that of a small probe to that of the index finger; when complete, the appearances are usually similar to those described in our case. The constriction may be either sudden or gradual; in the latter case the narrowing begins with the transverse arch, increasing as the ductus is approached, or it may begin at the origin of the aorta. Most frequently, however, the vessel behind the stricture is dilated or aneurysmal. In proportion to the degree of obstruction in the aorta the anastomotic circulation becomes over-developed, and the vessels chiefly concerned are thickened, dilated, and tortuous. These are the subclavian, the internal and external mammaries, the superior and inferior epigastrics, the intercostals and scapulars.

A full and illustrated description of the anastomoses will be found in Craigie's paper. In this connexion it is worth noting the marked contrast between the thickness and dilatation of the first part of the aorta and the thinness and diminished calibre of that succeeding the obstruction, the difference being probably explained by the lessened tension in the descending aorta, together with the conversion of a pulsating into a continuous stream, a point of some importance as bearing upon the diminution or extinction of the femoral pulse in these cases.

The changes found in the heart usually consist in dilatation and hypertrophy of one or both ventricles or of all the cavities. As a rule, aortic valvular disease exists, for the most part due to slow inflammatory changes induced by the abnormal strain to which the valve is subjected, and it is probable that the great weight of the heart in our case, as also in many others recorded in the literature of the subject, is due to compensatory changes induced by aortic incompetence rather than the direct result of the coarctation. In the great majority of cases the ductus arteriosus is closed and presents the usual appearances Thickening or other evidence of inflammatory change in connexion with this structure is quite exceptional

A point of great importance as bearing upon the pathogeny of aortic coarctation is the frequent association with it of valvular and arterial anomalies as well as congenital malformations in other parts of the body. The frequency of this association is given as no less than 37 per cent, and is possibly greater. Twelve chief associated malformations have been hitherto recorded: (1) patent ductus arteriosus; (2) transposition of the heart; (3) two aortic cusps; (4) patency of the undefended space; (5) absence of musculi papillares in the left ventricle; (6) hare-lip and cleft palate; (7) hypospadias; (8) deformity of the lower extremities; (9) two anterior communicating branches in the circle of Willis; (10) innominate and left carotid arteries arising from a common trunk; (11) triple division of the aorta at its origin; and (12) left carotid and subclavian arteries arising from a common trunk. To these must be added the irregular origin of the vertebral artery in our case.

From a study of the various theories we incline to the view that aortic coarctation arises shortly after birth from a congenital vice of development affecting that part of the aorta which lies between the origin of the subclavian artery and the junction of the ductus arteriosus, forming the so-called isthmus aortæ. This throughout fœtal life is narrower, and its walls thinner, than the rest of the aorta and iary rôle, but develops rapidly to take its share in the systemic vents resulting in the malformation appears to be as follows. The early post-natal changes in the circulatory system, including closure of the ductus arteriosus, take place in the usual manner, the congenital tendency making itself felt shortly afterwards in non-development of the isthmus aortæ, which, by retaining its fœtal narrowness, results in the enlargement of an anastomotic circulation. In some few cases retrogressive contraction of the isthmus takes place, amounting, it may be, to complete obliteration.

As already mentioned, the ductus is generally closed and the absence of evidence of inflammatory change in its neighbourhood, which by extension to the aorta might have produced coarctation, or of any direct connexion between the obstruction and patency or otherwise of the duct, seems to support the view that they are for the most part independent processes. In the few cases in which the duct remains open it seems probable that a degree of narrowness of the isthmus has existed in fœtal life sufficient to prevent its early closure; non-development of the isthmus then keeps it permanently open until a collateral circulation is established when the causes of patency cease to obtain, but the time for involution having passed the duct contracts, but remains pervious.

A CASE OF SEPARATION OF THE EPIPHYSEAL HEAD OF THE FEMUR.

By J. JACKSON CLARKE, M.B. LOND., F.R.C.S. ENG.,
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INTRA-CAPSULAR fracture of the neck of the femur in young persons appears usually to be of the nature of a separation of an epiphysis. One of my colleagues at the City Orthopædic Hospital, Mr. John Poland,[1] has recorded a case in every respect similar to that which I now describe.

The patient was a well-grown girl, aged 15 years, who presented no evidence of rickets or other affection of the bones. Five months ago she fell down in the street and experienced such pain as to cause her to faint, and on regaining consciousness she found that she could not stand. She was seen by Dr. Rees who rightly diagnosed a fracture and had the patient removed on an ambulance to a hospital. On arrival in the casualty department she was examined, but the severity of the lesion was not, apparently, made out, since she was not admitted into the hospital but was told to rest and to rub the affected part with liniment She did this for some time and then with some difficulty began to get about again. In February last the patient came to me at the City Orthopædic Hospital. She was very lame and she said that she felt much pain on taking a step with the right foot. On examination I found that the right limb was markedly everted. The right great trochanter was displaced upwards and approximated to the anterior superior spine. The limb was an inch shorter than its fellow, and the gluteal fold on the affected side was shortened and curved up at its outer end. These features are shown in Figs. 1 and 2. On the front of the right hip-joint there was a prominence which suggested an anterior dislocation of the head of the femur. Passive adduction of the affected limb was easily accomplished, but *abduction* and *flexion* were painful to the patient and were greatly limited in their range. There was no crepitus felt in carrying out these movements. A good radiograph was obtained which clearly showed a break in the neck of the femur. The outline of the shadow of the head and the upper part of the bone, traced from the radiograph, is shown in Fig. 3. I must confess that until I had studied the radiograph I was a little doubtful as to the exact nature of the lesion. Once the latter had been ascertained the proper course of treatment was clearly indicated: nothing but excision of the separated head of the femur could give the patient relief. Accordingly, I recommended her for admission and she was taken into the hospital under the care of Mr. John Poland whose permission I have to mention the further history of the case.

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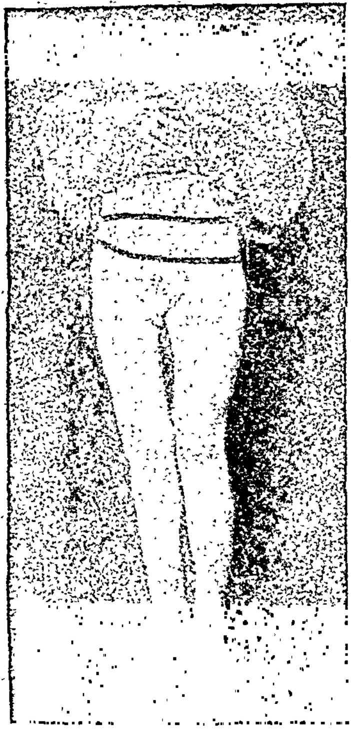
[1] Barié, Revue de Médecine, 1886 Ziemssen's Cyclopædia of Practice of Medi Medicinische Wochenschrift, 1883; Peacock, irurgical Review, 1860, E. Craigie, Med Wilks, Transactions of the Patholog of London, and Walshe, Medical Times and Gazette, Oct. 17th, 1857.

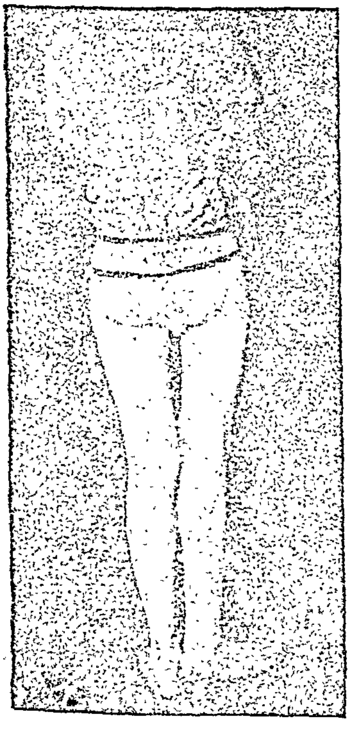
[1] Traumatic Separation of Epiphyses, p. 623.

Fig. 1.



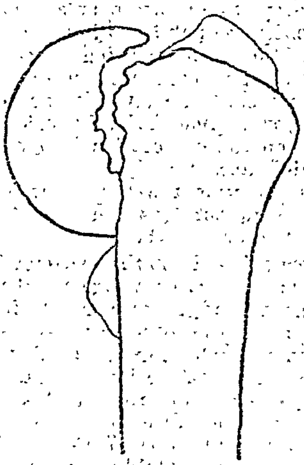
The appearance of the limbs seen from the front. The black tapes are placed respectively just below the anterior superior spines and just above the trochanters, and serve to show the elevation of the trochanter on the right side.

Fig. 2.



The limbs seen from behind; the gluteal fold curves upwards on the right side.

Fig. 3.



Outline of the shadow of the parts at the upper end of the femur traced from the radiograph and reduced to ½ scale.

At the operation the patient was anæsthetised by Mr. Henry Davis. It was observed that under anæsthesia there was some crepitus when the limb was moved. Mr. Poland, assisted by Mr. Chisholm Williams and myself, opened the joint from the front, the dissection passing externally to the rectus and iliacus muscles which were drawn inwards exposing the capsule of the joint. The capsule was then incised parallel with, and internal to, the ilio-femoral band. The fractured surface of the neck of the bone, thickened by an irregular formation of callus, was then seen, the head of the bone being entirely out of view and out of reach. (See Fig. 4.) Mr. Poland removed much of the callus, which was readily detached, and finally sawed

Fig. 4.

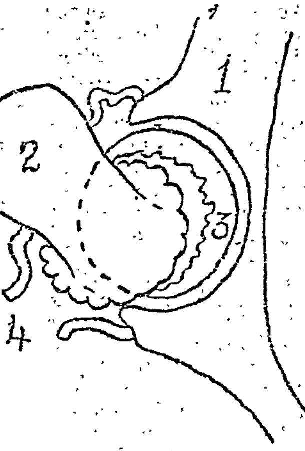
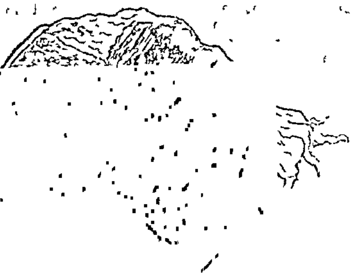


Diagram to show the relation of the fragments as in horizontal section: 1. Os innominatum with the acetabulum. 2. Neck of the femur with callus. 3. Head of the femur displaced backwards. 4. The anterior incision in the front of the capsule.

off the prominent inner end of the neck. The fractured surface of the head of the femur was now seen and it was levered out with an osteotome, the ligamentum teres being ruptured in the process. The wound was then closed throughout save where a small drain of iodoform gauze moistened with a 1 in 20 solution of carbolic acid was laid in from the acetabulum to the middle of the suture-line. The parts removed consisted of the head of the femur (which was entire), the inner end of the neck, and separate fragments of granular callus. The head had remained [illegible] the neck by two portions of the cervical [illegible] at its [illegible] [illegible] and another [illegible] teres also [illegible] [illegible] necrosis, but there was no attempt at bony union, the callus having been formed entirely from the neck of the femur. The separation had taken place exactly in the plane of the epiphyseal cartilage, no trace of which remained. (See Fig. 5.) The fragment of the neck which was removed was somewhat sclerosed.

FIG. 5.



Vertical frontal section of the head of the femur after its removal. The sawn surface of the anterior fragment is drawn its natural size.

The absence of crepitus until the patient was anæsthetised and the existence of a certain amount of ligamentous connexion between the fragments may account for the severity of the case not having been recognised by the young men who were first responsible for its treatment. The assistance of the x rays in the diagnosis of the case was very real. The deformity present in this case recalled what is seen in some cases of coxa vara, and coxa vara may sometimes arise suddenly owing to a green stick fracture of the neck of the femur in a rachitic subject. Although the patient in the present case had no definite signs of rickets there probably [illegible] of the bone from slight [illegible] in the juxta-epiphyseal [illegible] the accident. I may add [illegible] ly successful.

Old Cavendish street, W.

NOTES ON

CASES OF INJURY BY LIGHTNING: ONE FATAL.

By PHILIP EDWARD HILL, V.D., M.R.C.S. ENG., L.S.A.,

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ON July 27th, 1900, when acting as senior medical officer of Bulford Camp, Salisbury Plain, a terrific thunderstorm passed over the camp whereby one man was killed and 14 others were simultaneously prostrated by a single flash of lightning.

The fatal flash occurred at 1.15 P.M. I was at the time sitting at lunch close to the pole of the mess-tent, when my plate suddenly appeared to be filled with the electric fluid. I mechanically dropped my knife and fork, and as I did so an orderly hurriedly informed me that a private belonging to the 1st V.B. South Wales Borderers had been killed by lightning and that he had been removed to the regimental hospital tent to which I at once proceeded. Upon entering the tent I was impressed with the strong sulphurous smell that pervaded it. I found the patient lying on his back quite unconscious. His respiration was slow, deep, and interrupted, the pulse was slow and soft, the pupils were dilated, and the general appearance was that of an apoplectic seizure. *Stimulants were administered and every effort was* made by Surgeon-Lieutenant [illegible] [illegible] myself to [illegible] [illegible], but the [illegible] [illegible] the body after death cadaveric rigidity [illegible] been asserted that rigor mortis does not occur in persons killed by lightning, but this case does not substantiate the fact.) The only appearances that presented themselves were slight scorchings on the right thigh and buttock. No post-mortem examination was made. At the inquest, which was held on the following day, I gave the cause of death as nervous shock and heart failure.

The stocks of several of the rifles in the deceased's tent were shattered and split by the electric fluid passing down them, but there were no marks of burning, only slight fusion of the metal in some of them.

The following are the notes by Lieutenant H. Hardy, R.A.M.C., of the nature of the injuries which were received by the men who were admitted to the stationary hospital:—

1. Private, 1st V.B. South Wales Borderers. There were numbness and coldness of both legs, and slight marking on the right leg.

2. Private, 3rd Gloucestershire Regiment. There were slight marking and scorching of the left leg.

3. Private, 4th Gloucestershire Regiment. There was scorching of the left hand and foot, with deafness.

4. Private, 3rd [illegible] [illegible] the patient was unable to move [illegible] There were scorching and [illegible]

5. Private, 3rd Gloucestershire Regiment. The patient was unable to move the right leg below the knee and he was marked and scorched down the left side and arm. His clothes and boots were torn.

6. Private, 3rd Gloucestershire Regiment. Both legs and the left arm were scorched. The right arm was scorched slightly.

7. Private, 3rd Gloucestershire Regiment. There were loss of movement and numbness in the left arm.

8. Private, 3rd Gloucestershire Regiment. The left foot was painful. There was marking on the buttock.

9. Private, 3rd Gloucestershire Regiment. Both legs and the right hand were scorched and numbed and there was scorching over the abdomen.

10. Corporal, 3rd Gloucestershire Regiment. The face and leg were scorched.

11. Private [illegible] There were numbness in [illegible] left breast.

12. Private [illegible] The patient's left leg and left hand and his first, second, and third fingers were numbed.

13. Private, 1st Royal Welsh Fusiliers. There was numbness of the leg but no markings were present.

14. Private, 1st V.B. South Wales Borderers. There were tingling and numbness in both legs.

In many of the cases the effect upon the nervous system was very marked. Several of the sufferers were very restless and moaned piteously and so impressed were they with the dread of impending death that great difficulty was experienced in assuring them that they would recover.

Crickhowell.

HEALTH OF GLOUCESTERSHIRE.—*The report of* the medical officer of health and sanitary committee of the Gloucestershire County Council for 1899 shows that 8802 births were registered (2363 in urban and 6439 in rural districts), giving a birth-rate of 23 6 per 1000 (against 29 3 for England and Wales) 5458 deaths occurred (1568 urban and 3890 rural), equal to 14 97 per 1000, as against 18 3 per 1000 for England and Wales 1081 cases of scarlet fever were notified with 18 deaths; 361 cases of diphtheria, with 61 deaths; 163 cases of typhoid fever, with 34 deaths; and 21 cases of puerperal fever, with 12 deaths. Only one case of small pox was notified and the report adds that "the Vaccination Act is working successfully, the domiciliary visits and the use of sterilised calf-lymph seem to have disarmed the opposition of objectors and the neglect of the indifferent"

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WEST LONDON HOSPITAL.

A CASE OF GANGRENOUS FEMORAL HERNIA; ENTEROSTOMY; SUBSEQUENT ANASTOMOSIS BY HALSTED'S METHOD AND OCCLUSION OF THE GUT.

(Under the care of Mr. LEONARD A. BIDWELL.)

THE decision as to the treatment to be accorded to the intestine in gangrene after strangulation must rest finally on the general condition of the patient. The ultimate advantages of an immediate resection are so great and so obvious that this operation should be performed whenever the patient's general condition will admit of it. Before gangrene of the bowel in a hernia can occur the obstruction must have been somewhat prolonged and the patient will in all probability have been reduced by the vomiting to a condition almost of collapse. In such a subject any operation must be badly borne and therefore any operative procedure should be as rapid and as simple as possible. The resection of the affected portion of bowel, however skilfully and rapidly performed, may easily prove too much for the already exhausted patient and he may succumb though he might have survived the formation of a temporary artificial anus. There are, however, cases in which the depression already existing is less and in these the surgeon is justified in endeavouring to save his patient the inconvenience of an artificial anus and the danger of subsequent operations by the performance of an immediate resection. No strict rule can be laid down. Some patients will be so exhausted as to be unable to survive any operation however slight; others will have strength sufficient to permit the formation of an artificial anus but nothing more; while in other cases an immediate resection will prove successful. For the notes of the case we are indebted to Mr. H. G. Woodhill, house surgeon.

A married woman, aged 60 years, was admitted into the West London Hospital on June 4th, 1900. Six days before admission a left femoral hernia had come down and since that time the patient had passed neither fæces nor flatus; stercoraceous vomiting had occurred during the last two days. Taxis had been freely employed without any effect. On admission the pulse was rapid and the tongue was dry and furred. In the left femoral region there was a large swelling, the skin over which was tender, red, and œdematous. The patient was immediately given chloroform and under the direction of Mr. Bidwell, Mr. Woodhill made a vertical incision over the swelling and exposed the sac; this was opened and a quantity of offensive blood-stained fluid was evacuated. The contents of the sac were found to consist of a mass of gangrenous omentum and a knuckle of gut which was also quite gangrenous. The omentum was first ligatured as high up as possible and cut away. A fine silk suture was then run round the margin of the lower part of the sac so as to diminish its size, the redundant part of the sac was cut away, and the remainder was sutured to the lower part of the knuckle of intestine. Gimbernat's ligament was divided and an incision was made into the gangrenous gut; and as practically no fæces came away a small rubber drainage tube was passed into the intestine under Poupart's ligament; through this a great quantity of fluid fæces escaped. The patient recovered well from the operation and rapidly improved in her general condition, but as the whole of the motions were passed through the artificial anus a considerable amount of irritation was set up round the wound, and the patient, after much persuasion, consented to have a further operation performed.

On July 27th Mr. Bidwell opened the abdomen by an incision in the mid-line below the umbilicus; the dilated portions of ileum going to, and the contracted portion coming from, the hernial sac were isolated. These two portions were then held together, and a lateral anastomosis was performed between them by Halsted's method at a point about two inches from the femoral ring. All the sutures having been passed openings about two and a half inches long were made into each portion of bowel, and the mucous membranes were united with a few points of suture. The anterior row of sero-muscular sutures were then tied, completing the anastomosis. The abdomen was closed, each layer of the abdominal tissues being sutured separately. The patient made a very good recovery and the amount of fæcal matter escaping from the artificial anus diminished. During the following four weeks attempts were made to stop the fæcal discharge by strapping and pressure, but as they were not successful Mr. Bidwell determined completely to exclude the artificial anus from the alimentary canal.

On August 13th the abdomen was reopened by a vertical incision in the left linea semilunaris and the two portions of intestine between the anastomosis and the artificial anus were clamped close to the anastomosis with rubber drainage tubing, and close to the artificial anus with clamp forceps, both pieces of gut were divided between the clamps, and the two ends, immediately below the anastomosis, were closed by a continuous suture for the mucous membranes and by interrupted quill sutures for the serous and muscular coats. A pair of dressing forceps was then introduced into the artificial anus and passed up the canal inside the gut till its ends were seen inside the abdomen; the free ends of the gut were then seized with these forceps and dragged down the canal and were fixed with a suture in the groin. (See figure.) The peritoneum round the internal femoral ring was then drawn together with a purse-string suture; in this way the femoral canal and its contained knuckle of gut were shut off from the peritoneal cavity. The abdominal wound was then closed by sutures layer by layer. About the fifth day after this operation a slough consisting of the excluded portion of ileum came away from the wound, which then quickly healed. The patient made a complete recovery and left the hospital on Sept. 5th.

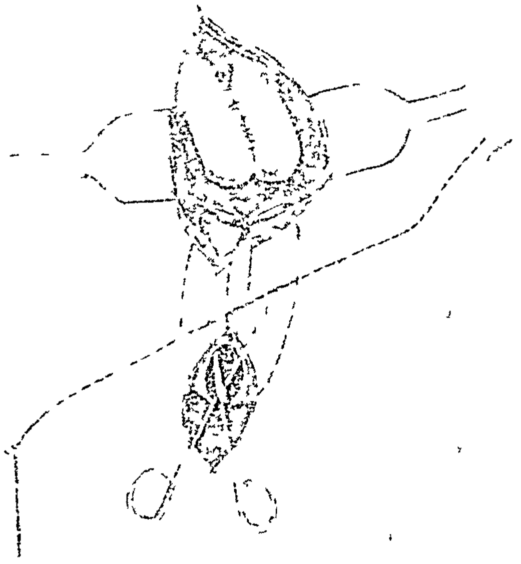


Diagram showing the lateral anastomoses and the method of drawing down the excluded knuckle of gut.

Remarks by Mr. BIDWELL.—The treatment of this case raises the question of the propriety of immediate resection of gangrenous intestine as advocated by Kendal Franks and others. The coil of intestine was firmly adherent to the walls of the sac, and so it would have been impossible to pull down healthy gut into the wound in order to perform an end-to-end anastomosis; moreover, the sac was full of fœtid contents and would have certainly infected the general peritoneal cavity had any communication existed. The method which I advised—namely, the formation of a temporary artificial anus—involved far less risk. It is noticeable that no fæcal contents escaped until a drainage tube was passed inside the gut through the femoral canal, so this procedure should be employed. When the patient had recovered from the operation the question of performing an end-to end or a lateral anastomosis presented itself. I decided in favour of the latter procedure, as it could be done with the least risk of fouling the peritoneal cavity, and I believe that a lateral is a much safer procedure than an end-to-end anastomosis, especially if done by Halsted's method; in fact, I have never seen any fæcal extravasation or peritonitis to follow this method when I have employed it. The operation of occlusion of the two ends of the gut going to the fæcal fistula completed the cure I have had to do this in another case of lateral anastomosis, also with a successful result.

With regard to the immediate resection of gangrenous gut followed by end-to-end anastomosis I have employed the method in two cases of femoral hernia both of which ended fatally. These, however, were cases of exceptional severity since in one case general peritonitis existed from rupture of the intestine above the stricture, and in the other the patient was practically moribund when placed on the table I am therefore strongly inclined to recommend the formation of an artificial anus in cases of gangrenous hernia, with subsequent treatment of the fæcal fistula by a lateral anastomosis.

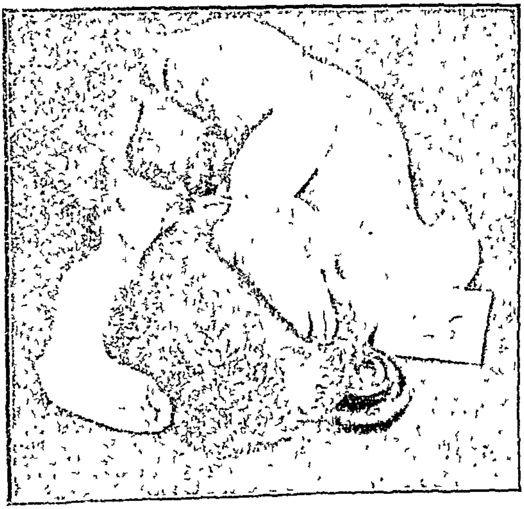
LIVERPOOL WORKHOUSE HOSPITAL.

A CASE OF PRESENTATION OF THE HEAD, CORD, AND FOOT; CONTRACTED PELVIS; CÆSAREAN SECTION; RECOVERY.

(Under the care of Dr. W. ALEXANDER.)

THE value of Cæsarean section is well shown in the following case. The mortality resulting from this operation has been found to vary greatly under different circumstances. The early figures compiled by Dr. Thomas Radford[1] gave 84 per cent of maternal deaths. Since that time the record has much improved, so that comparatively late statistics give mortalities varying from 40 to 25 per cent or even less. The much higher mortality after this operation which formerly obtained in towns as compared with country practice no longer exists, as it was due to septic complications which are now easily avoided. It is interesting to remember that at the end of the last century an "École Anti-Cæsarienne de Paris" endeavoured to get the operation declared illegal[2] For the notes of the case we are indebted to Dr. Henry Peet, resident medical officer.

A married woman, aged 25 years, was admitted into the lying-in wards of the Liverpool Workhouse Hospital on the afternoon of May 22nd, 1900. She had been in labour for three days and was beginning to show signs of exhaustion On examination the os was found to be fully dilated, the membranes had ruptured, and the liquor amnii had all drained away. The head was presenting with one foot beside it and the cord was prolapsed and pulseless. The bony pelvis was contracted in all diameters and the vagina also was very dry and contracted, so much so that it was impossible to introduce two fingers without great force and much pain to the patient. The pains were feeble and the patient was much exhausted and was crying out for delivery. Her previous history was as follows. She had been married two years and nine months She had had a miscarriage four months after marriage There had been no other confinement.



Showing the presentation.

Chloroform was administered and a short attempt at turning the child was made As this was found to be impossible it was decided to perform Cæsarean section at once, as some efforts at artificial delivery had been already tried outside. The operation was commenced as soon as the instruments could be got ready The usual preparations for an abdominal section were made The bladder and the rectum had previously been emptied An incision five and a half inches long was made, commencing above at the umbilicus and extending down the middle line to within two inches of the pubes. The incision was carried down to the peritoneum, the bleeding points being secured with compression forceps The peritoneum was opened and the incision was completed with scissors. The uterus was then pressed up out of the incision by an assistant, the uterine wall was opened in a line with the skin incision, and the child was seized by the knee and quickly extracted and given to an assistant. It was found to be dead, evidently for some time, and weighed eight and three-quarter pounds. The uterus was then pressed out of the abdominal wound by the assistant and the hæmorrhage was more or less controlled by firm pressure at its sides and neck. A subcutaneous injection of ergotin acted immediately and most effectually. The placenta, membranes, and clots were removed from the uterus, the uterine cavity was washed with a 1 in 1000 lotion of perchloride of mercury, and the walls were firmly pressed together, sponges being placed round the abdominal wound. Eight deep sutures of strong catgut were rapidly passed into the gaping uterine
bout half an inch from the edge
lecidual surface. These were
edges being tucked in The
hæmorrhage whic
severe then practi
was completed by
opposed peritone
neal surface of the uterus were then well washed with warm water. The parietal peritoneum was sutured with fine catgut and the abdominal wound was closed by eight perforating sutures of silkworm gut entering deeply into the muscular tissue. The whole operation occupied about 25 minutes.

The patient passed a fairly good night after the operation For the next fortnight the temperature varied between normal and 100° and 101° F. This was owing to the formation of a stitch abscess which necessitated the removal of three stitches and slightly re-opening and fomenting the wound. In other respects the patient made an uninterrupted recovery and was discharged from the hospital on Sept. 13th. The accompanying illustration shows the presentation of the child

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WATER-SUPPLY OF KINGSBRIDGE.—At the meeting of the Kingsbridge (Devon) Urban District Council held on Oct. 16th it was decided to adopt a scheme for supplying the town with water from Capton Moor, Woodleigh, at an estimated cost of £10,000.

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[1] Quoted in THE LANCET, May 19th, 1894 p 1242.

[2] Brit Med. Jour, vol 1, 1891, p. 1192.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Wind Exposure and Phthisis.

A MEETING of this society was held on Oct. 23rd, Dr. F. W. PAVY, the President, being in the chair.

Dr. W. GORDON (Exeter) read a paper on Wind Exposure and Phthisis. He remarked that in view of the near prospect of the erection of sanatoria for phthisis in various parts of this country it might not be thought inopportune to discuss a subject which bore upon their choice of localities. The data upon which his paper was based were elicited when he was studying the distribution of the phthisis death-rate in Devonshire. After describing the methods which he had adopted he proceeded to consider the relation of the phthisis death-rate to the general death-rate, taking the latter as a guide to general conditions of sanitation. So far as could be judged the distribution of the phthisis death-rate in the rural sanitary districts of Devon was due to some other cause than that of general sanitation. The relation of the phthisis death-rate to the rainfall was next discussed, and it was shown that Tavistock with the highest death-rate had the most rain and Axminster with the lowest had the least rain; but other considerations went to show that instead of the rainfall causing phthisis the two must have a common cause, and this was probably the wind which brought the rain. Turning to the geology, it seemed evident that the soil alone would not account for the variation in the phthisis death-rate. As regards the relation of phthisis death-rate to wind Dr. Haviland had drawn attention to the fact that exposure to prevailing winds produced increase in phthisis mortality. Dr. Gordon next inquired into the degree of exposure of the different districts and found that Tavistock, which was more exposed to the west and south-west than any other district, showed the maximum phthisis mortality. The investigation of other districts led him to believe that on the whole it might probably be concluded that exposure to the west and south-west winds increased the mortality of phthisis. Dividing the different parishes of Devon into groups he found that the group of parishes where the dwellings were well sheltered from west and south-west winds had an annual phthisis death-rate of 0 24 per 1000. Parishes where dwellings were imperfectly sheltered from these winds presented an annual death-rate of 0 57 per 1000. Parishes where the dwellings were fully exposed to west or south-west winds or to both showed a death-rate of 1 34 per 1000. With regard to smaller areas, in Newton Abbot district the death-rate from phthisis in exposed parishes was more than half as much again as in sheltered parishes and imperfectly sheltered ones showed an intermediate mortality. Whatever influence was exerted by the soil it was subordinate to the influence of wind exposure. He did not think the difference in temperature, sunshine, or purity of air could account for the differences in phthisis death-rate, but unfortunately there were no means of scientifically measuring them. The conclusion at which he arrived was that certainly for the districts of St Thomas's, Newton Abbot, Okehampton, and Barnstaple, and probably for Devonshire generally, the paramount influence which determined a higher or lower rate of phthisis mortality was the degree of exposure to, or shelter from, the west and south-west winds. The paper was illustrated by maps tinted diagrammatically.

Dr. WILLIAM CAYLEY remarked that he did not think they would be justified in concluding that the prevalence of south-west or any other violent winds was the sole cause of the higher death-rate in certain districts. Wider investigation would be necessary. Some years ago when visiting the Scilly Islands he was struck by the number of deaths from phthisis. The climate of these islands was very mild, but the winds were very violent He noticed that the windows of the houses were very small and he suggested that the prevalence of phthisis was due to the inhabitants shutting themselves in at night and excluding all fresh air.

Surgeon-Major A G. BLACK thought it would have been interesting if Dr. Gordon could have given the duration of some of the cases—e g, were they longer in the north-west winds and shorter in the south-west winds? These winds undoubtedly introduced other causes which might themselves be the reasons of alterations in the death-rate noticed.

Dr. G. B. LONGSTAFF remarked on the laborious nature of such an investigation, but it should be remembered that they had to consider not only the conditions of the country around but the conditions of the dwellings of these people and their occupations. These circumstances had a very considerable influence on the phthisis death-rate, and without knowing these conditions they would not be justified in drawing conclusions as to the influence of winds and exposure as a cause of death. Lace-making was a very potent cause of the disease, and in some villages all the female population was so employed. Then there were the copper and tin mines at Tavistock. The question of the permeability of the soil was probably overshadowed by the immediate surroundings of a house or farmstead. The Devonshire people were notoriously dirty, especially in the way they kept their farmyards. The distribution of rainfall was an important factor, and differences of race ought to be considered. The question of diagnosis was also an important one when dealing with small figures, and especially when extending over a short period of time, as in this paper. He would have liked to have seen the tables from which the conclusions were drawn. They could then have seen the actual number of deaths on which the percentages were based. Another fallacy was the removal of cases to workhouses and other institutions; these sometimes affected the death-rate in a certain district in a very remarkable fashion. Was there any reason why the south-west winds should produce a higher phthisis death-rate? It might be by inducing "chills" or it might be that people shut themselves up at night in close bedrooms so as to exclude a violent wind.

Sir R. DOUGLAS POWELL thought that Dr. Gordon's investigations appeared to show that the death-rate was influenced by strong winds, but there were other factors than the prevailing wind which rendered a district unsuitable for phthisis. Dr. Haviland had shown some years ago that in the windy parts of England phthisis was more prevalent. It was not a question of the quarter from which the wind blew but the strength of the wind which was important. Moreover, he thought that this cause acted probably because it led the inhabitants to shut themselves up. He was very glad to have heard Dr. Longstaff's remarks, in which he concurred. It would be interesting to have similar observations from other parts of the country like those which Dr. Gordon had prepared.

Sir HERMANN WEBER remarked that the question of the influence of high winds on consumption was important, not only climatologically, but therapeutically. For purposes of sanatoria such observations were valuable. The "windiness" of a district rendered it unsuitable for a sanatorium. In his belief strong winds of any kind or from any quarter were injurious to consumption and increased the phthisis mortality; but the causes of phthisis were very numerous and it was very difficult to take one factor and examine that alone.

Mr. J. O R. BRAINE-HARTNELL remarked that exposure to high winds was, in his belief, the most important condition in phthisis, far more important than rainfall. At Nordrach and other sanatoria there were abundant woods and other shelter all around where patients could walk. They were not allowed to expose themselves to high wind. He would like to know whether the south-west wind was more injurious than the north-east wind.

Dr. P. H. PYE-SMITH wished to recognise the labour of such investigations, but he thought it was difficult to get sufficient numbers of cases for the [illegible] statistics. People ought not to speak of percentages until there were at least 100 cases Small areas constituted another source of fallacy, but this could probably be remedied on account of the widespread nature of phthisis. There were, he remarked, two sets of causal factors, one which led to the development of pulmonary tuberculosis, and another which hastened death after the patient had contracted the disease, and a different set of causes might be in operation for each of these.

Dr. W. P. HERRINGHAM remarked that three sets of observations could be made about a disease. One set of observations related to an individual case; another set consisted of observations on a series of cases; and a third set were those which related to the hygiene and surroundings of the cases. It was certainly advantageous for a person who knew the district well to make an inquiry such as this.

Sir WILLIAM BROADBENT questioned whether the facts revealed really connected the south-west wind with consumption It was always difficult in diseases when the causes were so complex as those of consumption to differentiate a

single factor.
prejudicial, th
patients
shutting themselves up at night. In his belief it was the strength of the wind and not its direction which was detrimental.

Dr. GORDON, in reply, said that he did not wish to state that the south-west wind was detrimental in all parts of the world, but it certainly seemed to increase the phthisis death-rate in Devonshire. He thought it was quite possible that the evils of wind might be partly due to shutting up at night. He doubted whether occupation much affected his statistics. He believed that the chief reasons why the south-west and west winds were bad was because they were the most prevalent, the most violent, and the wettest winds in Devonshire, to which, of course, all his remarks were confined.

MEDICAL SOCIETY OF LONDON.

Some Remarkable Cases of Sarcoma.—The Occurrence of Arthritis in Association with Appendicitis.

A MEETING of this society was held on Oct. 22nd, Mr. JOHN H. MORGAN, the President, being in the chair.

Mr. A. MARMADUKE SHEILD read a paper on Some Remarkable Cases of Sarcoma revealing some of the sources of error which attend the diagnosis of that disease. The
is issue.—Mr.
had published
of these was a
n the trachea
subsequently
disappeared entirely, although microscopical examination had shown it to be undoubted sarcoma. The patient remained healthy for six months and
Removal was attempted
tumour again subsided,
necropsy confirmed the sarcomatous nature of the growth, though at the time of death it had undergone considerable involution. The second case was one of multiple melanotic growths at the back of the neck which were removed, and although the patient remained under observation for some three years or more the growth never recurred. He was surprised to find what a number of cases—35 or more at the time he investigated the subject some years ago—were on record of undoubted sarcoma which had entirely disappeared. He referred to the great difficulty which might be experienced in the diagnosis between abscess and sarcoma and mentioned a case in point of alveolar sarcoma of the spine which had had all the features of abscess.—Surgeon-Major A. G. BLACK referred to a case of abscess of the breast which had been mistaken for sarcoma and also another case which was diagnosed as abscess which proved to be an encysted hæmatocele.—Dr. H. D. ROLLESTON referred to the capricious behaviour
Though
usually ver
the skin
were slow i
es which
he had seen in St. George's Hospital where melanotic growths remained local for some time and then spread slowly by the lymphatics. Some of the cutaneous melanotic cases were carcinomatous rather than sarcomatous.—Dr. CAMPBELL POPE referred to a case which he had seen some years ago of a man who presented all the symptoms of phthisis and subsequently abscess of the mediastinum. He one day brought up from the mouth a quantity of material which turned out to be of sarcomatous nature. This patient pursued an occupation which involved the inhalation of a good deal of dust.—Mr. H. F. WATERHOUSE referred to the case of a girl, aged 19 years, who went to the Charing-cross Hospital after an accident which resulted in fracture of the right humerus. The arm was put up in splints, but the bone was ununited at the end of four weeks. At the end of eight weeks, as there was still no union, an operation was performed and sarcoma was found to be deposited in the bone-ends. Amputation at the shoulder-joint was then performed. She had no return for eight years; then pleurisy developed on the opposite side which turned out to be of a sarcomatous nature and she shortly afterwards died from sarcoma of the left lung. He commented upon the length of time between the primary and secondary growths.—The PRESIDENT remarked on the advantages of reporting such cases. Nothing was more interesting than the growth and variety of sarcoma and it often caused much difficulty in diagnosis. The presence
was a most interesting point in Mr. Sheild's first case, for this was very unusual in sarcoma, though he remembered the case of a little boy in which this had occurred in the os calcis. He also referred to a case very closely resembling Mr. Sheild's second case, which commenced as an ulceration of the big toe, followed
of
the glands in the groin. He
of
always giving patients with tu
as
a matter of routine.—Mr. SHI
ief
object had been to illustrate the difficulties of diagnosis rather than rarity in his cases. Of all situations tumours of the breast were, perhaps, most likely to lead to mistakes. He thought that the giving of iodide of potassium should never be allowed to impair patients' chances of recovery by operation. He would have liked to have heard remarks on the occurrence of a rise of temperature in cases of sarcoma. It was not generally known that this occurred, and it was specially liable to give rise to errors in diagnosis, because there was a daily rise and the chart exactly resembled one of suppuration. He would also have liked to hear the views of other surgeons on the occurrence of thrombosis in these cases.

Dr. F. J. POYNTON read a paper on the Occurrence of Arthritis in Association with Appendicitis. He commenced by stating that the association of arthritis and appendicitis, though not common, was of interest because it seemed likely to throw light upon the etiology of perityphlitis. Some observers had suggested that rheumatic fever was an important cause of appendicitis and based that opinion upon (1) the associative occurrence of perityphlitis with acute rheumatism; (2)
resembling that of acute r
shortly after, an attack of
able reaction of some cases of perityphlitis to treatment by salicylates; and (4) the similarity in structure of the tonsil and vermiform appendix which it was suggested implied a similarity in pathological tendencies. Dr. G. A. Sutherland, in the Edinburgh Hospital Reports for 1895, published examples of this association occurring in children. Dr. Poynton brought forward a somewhat similar

a fortnight after which a sharp attack of perityphlitis commenced. Rapid improvement was followed by a relapse and a fresh outbreak of arthritis. Complete recovery ensued without operation under salicylates. The pyrexia was high and very irregular. As to the value of the treatment of perityphlitis by salicylates many explanations were offered. Dr. A. Haig considered it to be an evidence of the gouty origin, others of a rheumatic orig
Beverley Robinson had been
rheumatism and perityphlit
might be justly inferred fror
the success obtained by the treatment with salicylates was no proof of the rheumatic nature of the symptoms. Dr. Poynton thought that the evidence in support of the rheumatic origin of perityphlitis was not conclusive as yet. He had while registrar at St. Mary's Hospital investigated 60 cases of perityphlitis with the idea of gaining some more information upon the clinical side of the question. As his guide he had taken the manifestations of the rheumatic state as laid down by Dr. Cheadle in the Harveian Lectures for 1888. Every type of case was represented in this series, and in 31 the diagnosis had been verified by operation. In 11 there was a history of family or personal rheumatism, but in none of the cases could any causal relation between the two diseases be traced. In two of these cases there was polyarthritis. A good deal of light seemed to be thrown upon these difficult cases of polyarthritis by the papers of Plard
with appendiciti
experimental pro-
y injections of pure
papers had emphasised the point that metastases were especially liable to occur when the local lesion in the right iliac fossa was not well marked. Akerman had shown that intravenous inoculations of the bacillus coli into young rabbits would produce

osteomyelitis and also effusions into the neighbouring joints. These effusions were clear, turbid, or purulent, according to the local virulence of the process. Many observers had laid stress upon the importance of the bacillus coli in appendicitis and these organisms had been demonstrated in the metastatic abscesses. Dr. Poynton thought it was not surprising that the polyarthritis which sometimes complicated appendicitis should in the face of these observations closely resemble a rheumatic arthritis. The joint affections were multiple, might disappear during life, and might, as he had seen, react to treatment by the use of salicylates. Yet if death resulted a gangrenous appendix and visceral abscesses might be found, pointing indubitably to the metastatic origin of the arthritis. The severity of the joint lesions was probably dependent upon a local virulence at those sites. Death or recovery was probably dependent upon the virulence of the general poisoning. It seemed most probable that this polyarthritis was usually of the nature of a pyæmic rather than of a rheumatic lesion, and if this was the case it was an indication for immediate operation. Finally, allusion was made to cases of monarticular rheumatism of the right hip-joint in children, which for a while might closely simulate perityphlitis. The diagnosis was usually an easy one, for other rheumatic manifestations soon appeared in such cases as these, and the position was then clear. The active surgical measures that were now adopted for perityphlitis made the diagnosis of some importance. In conclusion, he was inclined to think that clinical evidence was, on the whole, against the explanation that appendicitis with polyarthritis was rheumatic, but upon this point he was anxious to obtain the opinions of the fellows of the society.—The PRESIDENT remarked that he thought that Dr. Poynton's view that the arthritis was of pyæmic and not of rheumatic origin was a correct one. He had seen cases which supported this opinion.—Dr H. D. ROLLESTON had hoped that Dr. Poynton would advance bacteriological evidence in support of the rheumatic origin of appendicitis. Dr. J. Cavafy had long been in the habit of treating appendicitis with salicylates. He (Dr. Rolleston) thought that the structural analogy between the tonsil and the appendix supported the view that appendicitis might be of rheumatic origin. There seemed to be a prejudice against this view founded on the idea that operation might in consequence be neglected. He suggested that the initial stage of appendicitis might be rheumatic but the other forms of infection might be added later and introduce a septic element. Some cases of appendicitis certainly recovered under salicylates. He could not remember to have seen appendicitis during rheumatic fever, nor had he seen definite joint mischief in the course of appendicitis.—Mr. F. C. WALLIS expressed the opinion that arthritis might be due not only to appendicitis but to other lesions of the bowel as well. He had seen and recorded cases of ulceration of the lower bowel associated with painful condition of the joints accompanied by swelling and effusion which were entirely relieved by removing the portions of the diseased bowel. He thought that a good many of the unexplained joint cases might be due to septic matter absorbed from some ulcerating surface. He was inclined to question the rheumatic nature of appendicitis —Dr. T. D. SAVILL mentioned the case of a man, aged 30 years, who had suffered from prolonged arthritis of many joints which would not yield to salicylates or other remedies. The patient died from perforated appendix and there seemed every reason to believe that the chronic joint mischief was of a pyæmic nature secondary to septic absorption from the appendix. He could not subscribe to the rheumatic origin of appendicitis.—Dr. H. A. CALEY referred to the scarcity of arthritic or other rheumatic manifestations in association with appendicitis, which he regarded as a strong argument against the existence of an intimate relationship between rheumatism and appendicitis. There seemed, however, to be a distinct bearing upon some cases of catarrhal colitis and rheumatic symptoms, and in this way—through the medium of the colitis—the rheumatic state might at times be concerned in the etiology of appendicitis.—Surgeon-Major A. G BLACK thought that a connexion might be traced when an abscess round the appendix became absorbed into the femoral sheath.—Dr. POYNTON, in reply, said that he had no wish to dogmatise. Certainly Dr. G. A. Sutherland's cases were very instructive. The children were undoubtedly rheumatic and they had had appendicitis. The occurrence of arthritis in appendicitis was probably rare but this might be accounted for in the present day by the prompt surgical measures which were adopted. As regards Mr. Wallis's question, he could not say whether any of the cases he referred to had had colitis or not.

HARVEIAN SOCIETY OF LONDON.

The Advisability of Early Operation in Cases of Acute Inflammation of the Appendix.

A MEETING of this society was held on Oct. 18th, Dr. W. H. LAMB, the President, being in the chair.

Mr. C. W. MANSELL MOULLIN read a paper urging the Advisability of Early Operation in cases of Acute Inflammation of the Appendix. After giving a brief account of the pathology of inflammation of the appendix, showing that it always originated from invasion of the mucous membrane by septic organisms from the interior of the bowel, he divided the cases, so far as surgical treatment was concerned, into three main groups. The first, by far the largest, included all those mild attacks which subsided of themselves or under the simplest treatment. In these the organisms were destroyed or removed before they could do any permanent harm; the lymph, which had been poured out, disappeared again without leaving any adhesions, and the appendix regained its normal shape, size, and mobility. These cases needed no surgical treatment. In the second group were comprised all those cases in which the absorption of the exudation was incomplete. In some it became organised; in others it broke down into pus; in others, again, a concretion was left behind. But all agreed in this one particular—that perfect recovery did not take place and was impossible without operation. Finally, there was the third group, fortunately by far the smallest, in which acute septic peritonitis broke out and in which the only possible chance of recovery was immediate operation. In all acute attacks it was absolutely essential to group the case in one of these three divisions within 36 hours of the onset of the symptoms or it might be too late. It was known that the interior of the appendix was full of septic organisms; it was known that if the conditions were favourable to them they could penetrate the wall with ease and infect everything; and it was known that the appendix was hanging free in the peritoneal cavity. The danger was not in performing a simple exploratory operation but in delaying to do so. All that was necessary was an incision one and a half inches long and the introduction of the finger in order to ascertain exactly the condition of the appendix and the peritoneum around it. Mr. Mansell Moullin then discussed the symptoms by which the cases which would recover of themselves might be distinguished from those in which operation would be required, sooner or later, either because of diffuse septic peritonitis or because of the formation of adhesions, strictures, or concretions. The pulse was the most valuable of all. If the pulse rate at the end of 36 hours while the patient was lying in bed was over 100 in the minute, or if in the course of the last few hours it had increased much in frequency, there was no doubt that the attack was a severe one and that operation would be required. The temperature was no certain guide unless it continued to rise. The intensity of the pain was of great significance, and so were also, but perhaps in less degree, local tenderness, muscular resistance, and a sense of fulness in the right iliac fossa. Vomiting, constipation, and the other symptoms usually present could not be relied upon in the same measure. Mr. Mansell Moullin laid great stress upon the fact that the absence of any individual symptom was of no account and that operation should be performed in any case in which the pulse was very rapid, even if the other symptoms did not point to any great degree of severity. If morphia had been given this rule should be even more stringent. The limit of 36 hours, he admitted, was a perfectly arbitrary one. All could not wait so long. Some could wait longer without undue risk. Each case must be judged upon its merits and this must be regarded merely as an average. The point to bear in mind was that at the beginning of a severe attack they could not as yet distinguish cases which might be allowed to wait from those which might not; that they would all of them have to be operated upon at last, some for adhesions, some for abscesses, and some for concretions or other causes (for severe cases did not recover without leaving some complication behind) and that it was wiser that a simple and practically safe operation should be performed at once upon all alike than that the disease should be allowed to run its course, and that those in whom diffuse septic [illegible] allowed to die in ord[illegible]n which they would [illegible] adopting the genera[illegible]ossible danger ahead [illegible] the condition of things [illegible] it was wiser to see how matters stood, provided it could be done without undue risk, than to trust to chance. But a preventive operation of this kind must be clearly distinguished from what were commonly called early operations—those performed upon the fourth or fifth days, which nearly always were too late and simply served to bring surgery into discredit.

Mr. RAYMOND JOHNSON was glad that Mr. Moullin had insisted upon the importance of a rapid pulse as an indication that an attack of appendicitis was a severe one. He entirely agreed with this view and had often noticed the serious importance of increasing rapidity of the pulse-rate in many acute abdominal conditions even when the other symptoms seemed to be favourable. He advocated early operation in the sense in which the term had been used by Mr. Moullin. He did not believe that in a case of acute appendicitis in which the inflammation was from the first localised by adhesions the risk of subsequent peritoneal infection was considerable. If performed early the operation would undoubtedly be done in a considerable number of cases in which a satisfactory result would have followed without it, but here and there it would save a life which would otherwise be lost. The practice could only be justified if in itself the operation involved no serious risk to life. It was strongly felt that the danger of the operation was very small indeed and that the risk of subsequent trouble from bulging of the scar was largely preventable if division of the muscular layers of the abdominal wall was avoided, the muscle fibres being merely separated. Mr. Johnson would hardly have anticipated that altogether reliable evidence as to the condition of the appendix could have been obtained by the introduction of the finger through the very small opening used by Mr. Moullin, and he would have feared the risk of disturbing the adhesions around a small collection of pus. For these reasons it was thought that a more free exploratory incision was advisable.

Dr. F. W. COCK, Dr. S. H. BELFRAGE, and Dr. E. CAUTLEY also took part in the discussion.

OPHTHALMOLOGICAL SOCIETY.

Cases of Blindness from Gunshot Injury of the Orbit.—Orthoptic Treatment of Convergent Squint in Young Children.—Cysticercus of the Eye.—Exhibition of Cases.

AN ordinary meeting of this society was held on Oct 18th, Mr. G. ANDERSON CRITCHETT, the President, being in the chair.

Mr. E NETTLESHIP read a paper on Blindness from Bullet-wound of the Orbit in which he gave details of six cases in which the sight of one eye, or sometimes of both eyes, was lost or injured by the passage of a bullet through the orbit without wounding the eyeball. These had been written of as "indirect [illegible] of the eye" in which the passage [illegible] part of the orbit was followed [illegible]ing into the vitreous, and as this cleared up by various and mixed appearances of choroidal rupture, choroido-retinal exudation, and changes at the disc without shrinking of the eyeball or any sign that the globe had been ruptured. The question as to how these injuries were produced was answered by the description of a case in which the eye was excised by Cohn and examined by Waldeyer in 1871. Cohn concluded that a contusion which directly affected only the outer surface of the sclerotic might set up severe and extensive plastic inflammation in the subjacent retina and vitreous. Mr. Nettleship mentioned other cases by Cohn, as well as one shown before the society last year by Dr. F. Menteith Ogilvie. He then described his cases in detail. The feature of interest in them was the extensive damage of the choroid and retina without wound of the eyeball. These indirect injuries were to be explained by the force of the projectile being changed into radiating vibrations of the tissue particles, acting as Professor W. F. Stevenson of Netley says—"as secondary missiles." These, passing through the dense sclerotic without damaging it, seriously injure the less resisting choroid and retina, whilst the bullet dragging on the muscular insertions might also contribute towards the injury. Mr. Nettleship mentioned some interesting experiments by Cohn and Stevenson, which had also been verified by himself, in which they had fired bullets at cylindrical metal vessels, some containing air only and others water, in both cases with no lid on the top. He showed photographs and the actual cylinders from his own experiments. In the former cases the bullet went through without producing much effect on the surrounding parts, but in the latter, which contained water, the vibrations set up in the fluid had produced very marked changes around the holes the bullets made. In this way the spinal cord might be injured by vibrations passing through the bone without fracturing it. He then compared the results of bullet-wounds with those of optico-ciliary neurotomy and also with the experimental evidence produced by Poncet, who in healthy rabbits cut the optic nerves and the posterior ciliary nerves. This latter caused from the eighth day onwards degeneration of the nerve elements of the retina, with increase of its fibrous structures, marked papillitis, and some inflammation on the outer surface of the vitreous; later the choroid, near the disc, became atrophied, and finally the degenerated retina became pigmented In all these cases there was a great tendency for the retina and choroid to become united by inflammation, and this explained the slight tendency there was to detachment. In most of these gunshot cases other cranial nerves were involved and the commonest paralytic sign was ptosis.—Other cases were mentioned by Mr. DONALD GUNN, Mr. G. HARTRIDGE, Dr. R. GRUBER, Mr. TREACHER COLLINS (who had had two), Dr. S. JOHNSON TAYLOR, and the PRESIDENT.

Mr. C. WORTH described the Orthoptic Treatment of Convergent Squint in Young Children and said that he commonly commenced treatment as follows The refraction was corrected and glasses were worn constantly. In nearly 30 per cent. of constant monolateral squint this treatment sufficed to render the eyes "straight," and in some of them binocular vision was obtained and the case was cured. In the 70 per cent. which were not cured by glasses operative treatment was postponed until the age of from seven to eight years, but only a small proportion of these obtained binocular vision, the time having gone by when this might have been developed. There were three chief difficulties to be overcome in carrying out orthoptic treatment in young children: (1) the child would only submit to treatment so long as he found it interesting; (2) the suppression of the vision of the squinting eye; and (3) the angle of the squint was usually so great that an ordinary stereoscope could not be used even if there were no suppression. This difficulty was overcome by an instrument invented by Mr. Worth by which the stereoscope could be adapted to suit a squint of any angle or direction and so stereoscopic vision was possible (The instrument was shown and carefully described.) He found that those who saw binocularly naturally arranged themselves into three distinct classes according to the degree in which they possessed this faculty, thus—first grade, simultaneous macular perception; second grade, true fusion with some amplitude; and third grade, sense of perspective. Mr. Worth then described the treatment, but before commencing it the visual acuity of the child's squinting eye was obtained The instrument was then adapted to suit the angle and direction of the squint and a cage, for instance, was shown before the fixing eye and a bird before the squinting eye The child then saw only the cage with the fixing eye The illumination of this was gradually diminished while that of the bird was increased until the bird was seen Should the cage then have disappeared the illumination was modified until the bird was seen in the cage. Many other devices were used until the child learned to blend the two images, and so they got Grade I. After a time the angle of the instrument might be altered slightly without destroying the picture; the eyes followed the object and maintained fusion, and so Grade II. was produced. Exercises were then continued until the third grade of binocular vision was produced. Next, the illumination of the object slides was gradually equalised and then an attempt was made to separate the mirrors more and more while the visual axes followed the deviation of the objects. Mr. Worth had found that this treatment in some hundreds of cases caused a disappearance of the squint and the acquisition of the highest grade of binocular vision. In other cases, though patients had Grade III. while looking into the instrument, the squint did not disappear. An occasional visit with exercises was sufficient to preserve the fusion faculty until the child had arrived at an appropriate age for operation. The desire for fusion then overcame any slight defect which might remain and a perfect cure resulted. The special points of this instrument were: (1) its adaptability to any form or degree of squint, including those cases in which the globe was rotated about an antero-posterior axis; (2) suppression of vision of squinting eyes was gradually overcome by unequal illumination; and (3) the variety of devices shown in the instrument interested and amused the child, so that he would readily give all the help he could at a most important point.

Mr. Nettleship related a case of Cysticercus in the Eye which had come under the care of Dr. David Wood of Cape Town. The patient was a cook first seen by Dr. Wood on April 6th, 1900, after spending some time on the Modder River. On dilating the pupil he saw some choroidal changes and on the outer side a large round greyish body. On May 2nd he saw the living cysticercus moving its suckers and the crown of hooklets was also visible; the vision was failing. In June the vision was worse and by July 15th it amounted to light perception only, and this was due to the fact that the retina was becoming detached. The cyst was then loose in the eyeball, but no details of the head were visible. On arrival in England in August Mr. Nettleship saw the patient. There was then a large cyst seen at the upper part of the vitreous covered with fine white calcareous bodies. A dense white patch was seen in one part which frequently gave a heaving movement. On Sept. 7th movements were still visible. The eye being blind the question of operation was not entertained. The patient had now gone back to South Africa and this was the last note up to the present time. The man had first noticed some affection of the eye in November last.—Mr. W. Lang expressed surprise that in the early stage, when it was (he thought) sub-retinal, no operation was undertaken. He cited an instance in which successful extraction of a cysticercus from near the macula was performed by Alfred Graefe.—Mr. Nettleship, however, stated that he gathered from Dr. Wood's notes that it was in the vitreous when he first saw it.—Dr. D. Little said that he had seen five or six cases of cysticercus in the vitreous and in appearance they resembled that described by Dr. Wood. If left to themselves the eye became blinded by slow but progressive choroido-retinitis. In two he tried to extract the cyst, but this was not successful, and in both the eyes became worse and had to be excised a few months later. Some had been successfully removed, but his own experience led him to look upon the prognosis as extremely bad, no matter whether an operation were attempted or not.

The following cases were shown:—

Mr. H. Work Dodd: Voluntary Bilateral Nystagmus.

Mr. E. K. Campbell: Double Cataract after Typhoid Fever.

Mr. H. B. Grimsdale: Double Congenital Lacrymal Fistula.

Mr. W. Lang: Rupture of Nerve Fibres at the Optic Papilla.

Dr. F. W. Edridge-Green: A case of Trichromic Colour Blindness.

Mr. John Griffith: Symmetrical Exostoses in the Neighbourhood of the Lacrymal Sac.

Mr. Treacher Collins and Dr. J. S. Hinnell: Diminished Tension and the Appearance of Optic Neuritis persisting for nine months after a Wound of the Orbit from a shot from an Air-gun.

Mr. J. Herbert Fisher: Tubercle of the Conjunctiva.

Northumberland and Durham Medical Society.—The annual general meeting of this society was held in the library of the Royal Infirmary, Newcastle upon-Tyne, on Oct. 11th. The following officers were elected for the ensuing session:—President: Mr. J. Rutherford Morison. Vice-Presidents: Dr. W. Robinson, Mr. J. L. Crisp, Dr. J. W. Smith, and Mr. G. W. Ridley. Secretaries: Dr. Thomas Beattie and Mr. Albert M. Martin. Committee: Dr. R. S. Peart, Dr. J. Adamson, Dr. W. Gowans, Dr. J. Murphy, Dr. G. H. Hume, Dr. D. Drummond, Dr. James Drummond, Dr. James Limont, and Dr R. A. Bolam.—The first ordinary meeting of the session was then held, the newly elected President occupying the chair.—Mr. W. G. Richardson exhibited two cases aft [illegible] Suppurating Peritonitis resulting [illegible] both cases following a few hours aft [illegible] appendicitis there had been sudden abdominal pain with collapse, and though operated upon 30 hours later when in an apparently hopeless condition the patients had recovered. Pus in each instance was diffuse in the peritoneal cavity and treatment had consisted in a free incision sufficient to permit of evacuation and adequate drainage, and the avoidance of lavage and in its place careful [illegible] drainage being effected by strips of gauze placed in [illegible] hepatic pouch, &c.—The exhibition [illegible] a general discussion on appendi[illegible] evidences indicating operation, i[illegible] Davies, Dr. A. A. Martin (North Shields), Dr. G. R. Murray, Dr. Beattie, Dr. Robinson, Dr. Gray, Dr. R. Buttercase, and Mr. A. M. Martin took part.—The President, after reviewing the discussion, stated in answer to questions asked that, in his opinion, the most important points indicating operation were—(1) a second attack; (2) a lump; and (3) a sudden acute onset.—Mr. W. G. Richardson also exhibited a child after operation for Cerebellar Abscess. The child, aged seven years, had been operated upon one month previously for cerebellar abscess following suppurative otitis media. Recovery from such a condition was much rarer than its occurrence.—Dr. J. Gray read notes of a case of Phthisis cured in the Durham County Sanatorium, with brief notes of 14 other cases. The man, aged 22 years, had suffered from hæmoptysis, cough, and consolidation of the right apex. Tubercle bacilli had been plentifully demonstrated in the sputum. After ten days' treatment the cough and expectoration had disappeared. Four months later the patient was discharged; he was able to walk 15 miles and had gained a little over two stones in weight, but there were still slight physical signs. Dr. Gray then read a detailed table of 14 cases at various stages of phthisis, showing results of sanatorium treatment.—Dr. W. Robinson also brought forward a patient treated in the same sanatorium who had also gained over two stones in weight, was able to walk 20 miles in the day, was in apparently rude health, and without detectable physical signs. He remarked that cases of consolidation offered a better chance of ultimate recovery than cases of excavation.—The following members also took part in the discussion: Dr. T. Oliver, Dr. G. R. Murray, Dr. Beattie, Dr. I. G. Modlin, and Dr. Ethel Williams.—Dr. G. H. Hume showed a patient after Double Intestinal Resection and Anastomosis for Malignant Growth. This man, aged 48 years, had but slight symptoms of six months' duration and presented a firm, nodular mass in the epigastric and left hypochondriac region of the size of a fist. On laparotomy there were no evident glandular involvement and no secondary nodules. The mass involved primarily the transverse colon and was adherent to and infiltrated the mesentery of a coil of small intestine, necessitating the resection of about 12 inches of colon and a similar length of small intestine. The cut ends of colon were joined by direct suture, the small intestine being anastomosed laterally by a Murphy's button. The Murphy's button had been removed from the rectum three weeks after the operation. The specimen was also shown and seen to be a sloughing carcinoma of the transverse colon, remarkable for the scant symptoms it had given rise to.—Mr. A. M. Martin exhibited a rare example of Congenital Deformity. The child, 15 months old, was born after a normal labour and exhibited the following condition of hands and right foot. Three middle fingers of both hands were partially arrested in growth and webbed; the webs showed deficiencies at the bases. The index finger of the right hand had at the situation of the terminal inter-phalangeal joint a deep transverse furrow, and at the situation of the first inter-phalangeal joint an attempt at formation of a supernumerary finger. In the right foot the second and third digits were completely webbed and the fourth and fifth partially. There was a supernumerary toe at the end of the big toe.—Dr. Oliver exhibited two cases of Splenic Enlargement. The first was that of a man aged 34 years. He had been under observation for two years and gave a history of enteric fever and also gonorrhœa followed by stricture. He complained of pain, weight, and increasing abdominal swelling; he presented an enormously enlarged spleen extending down to the pelvis and to the right of the middle line. There were no hæmorrhages. The blood was characteristic, presenting evidences not only of anæmia but also of leucocytosis and myelocytosis. The second case was that of a man aged 36 years. He had been in the army abroad and

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G. Turner: A series of 3 no-
logy of Appendicitis.—Dr. G. R. Murray: Pork with Cysticerci Cellulosæ with microscopic slide of same.—Dr. Hume: A large Hydronephrotic Kidney—Dr. Beattie: Aneurysm of the Pulmonary Artery in a Phthisical Cavity from which Fatal Hæmoptysis had occurred.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the session of this society was held on Oct 16th.—Mr. W. H. Horrocks, the retiring President, introduced the President-elect, Mr. F. Farrow, who then took the chair.—After a vote of thanks to the retiring President Mr. Farrow delivered his inaugural address, "Some Suggestions on the Work of a Medical Society," and in the course of his remarks urged (1) that a greater number of members should contribute papers and show specimens, not necessarily waiting till they had a rare case or specimen to communicate; (2) that members engaged in various branches of scientific research should bring before the society not only their finished results but should demonstrate and give accounts of their methods; and (3) that each member who experienced pleasure or derived benefit from attendance at the meetings should induce his medical friends to join the society. The greater the roll of members the larger was the fund of experience on which the society could draw. Further than this, a large membership was desirable in that it developed the social aspect of the society, which was quite as important as the scientific aspect and was of great value in causing the medical men of a district to have mutual knowledge of, and confidence in, one another and thus promoting a spirit of friendliness and *esprit de corps*.—Dr. J. Kerr showed a number of Sketches of the Fundus Oculi from recent cases The cases included glaucoma, pigmentation of the macula, and blocking of the retinal vessels.—Mr. Basil Hall showed the following specimens: (1) Sloughing of an Ovarian Cyst due to Stretching of the Pedicle; (2) "Baker's Cyst" of the Elbow from a case of osteo-arthritis; and (3) Bones from a case of Amputation of Both Feet for Gangrene.—Dr. C. F. M. Althorp showed the following specimens: (1) Sarcoma of the Breast from a patient 60 years of age; and (2) Vermiform Appendix from a case of Recurrent Appendicitis; the appendix contained a large concretion and was adherent to the ovary and Fallopian tube.—Mr. J. R. McGee showed an Oxalate of Lime Calculus removed from the urethra of a child aged five years.—Dr. H. Angus showed a Gall-stone of about seven-eighths of an inch in diameter which had caused acute intestinal obstruction and had been passed by the rectum after the administration of enemata. It had been probably impacted in an annular growth of the sigmoid.—Dr. William Craig showed the kidneys from, and read notes of, a case of Uræmia caused
by extreme attenuation of the kidney The
total weight of the two ains.
The patient was a single aver
She fell in the street, afte , while
stooping to pick up a handkerchief, and struck her head on the ground. When seen a few minutes later she was lying in a dazed state and though able to give her name and address she could tell nothing more. She had worked regularly up to the time of seizure, but occasionally had to leave work on account of "sick headaches." There was no history of alcohol, syphilis, gout, rheumatism, lead poisoning, or scarlet fever. On admission to hospital her temperature was 98° F., and her pulse was 60, irregular, and not of high tension. There was no cyanosis or dropsy. The pupils were contracted and equal. The tongue was dry and furred. The heart's apex beat was in the nipple line; the second sound was reduplicated at the apex; there was no accentuation of the second sound. During the first night urine and fæces were passed involuntarily More than a pint of urine was drawn off during the following day; the specific gravity was 1012; albumin was present in abundance; there was no sugar and no blood; hyaline casts were seen on microscopic examination. She lay in bed in a dazed condition. There was frequent jerking of the limbs. No paralysis was detected. On the day following admission she recovered somewhat, was able to swallow, and could move all her limbs. There was retention of urine. The pupils were unequal, the right being dilated. On the following day she passed into a state of coma
death. On opening the
congestion but no hæmc
the heart there was no
normal. The lungs were normal. The kidneys showed extreme cirrhosis; no cysts or hæmorrhages were seen. The right kidney weighed 401 grains and the left weighed 335 grains. The capsules were slightly adherent
tion showed chronic interstitia
overgrowth with catarrh in
the capillaries in the Malpig
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Dr Craig said that the
only be made after the necropsy, as before death cerebral compression from hæmorrhage or injury could not be excluded. Another point of interest was that the kidneys continued functionally active in spite of the extreme shrinkage of the secreting substance. The absence of cardiac hypertrophy and of vascular change was also surprising. Lastly, in the absence of the causes usually assigned to nephritis, it was difficult to see what was the exciting cause of the attack.—Dr. D. Goyder, Dr. W. Mitchell, Dr. H. J. Campbell, and Dr. J. Kerr discussed the case, and Dr. Craig replied.

IPSWICH CLINICAL SOCIETY.—A meeting of this society was held on Oct. 20th, Mr. C. K. Moseley being in the chair.—Mr. J. R Staddon showed a case of Congenital Dislocation of the Patella The left patella was dislocated outwards. The patient suffered no inconvenience, being able to walk, to ride a bicycle, &c., like a normal individual.—Mr. W. F. Fryer showed an oldish man with a large Papillomatous Growth rising from the skin of the back just above the left buttock.—Dr. H. H. Brown showed a specimen of a Ruptured Tubal Pregnancy. When first seen the patient was in a state of collapse, almost pulseless, and with a
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saline s to be
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double ligature was applied. After rallying slightly the patient died on the following day. The specimen showed
al.—Dr. Brown
Carcinoma of
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Uterine Pregnancy with notes of two cases. Case I.—The patient was a multipara, aged 36 years There had been no distinct menstruation for four months; abdominal swelling had been noticed for one month. The swelling was central, rising almost to the umbilicus; it was dull on percussion with resonance on both sides. The swelling was slightly tender. The cervix was fixed forwards behind the pubes. The uterus could not be well defined, being surrounded by what was taken to be inflammatory thickening. A sound was passed in to the normal extent and showed the uterus to be strongly anteverted. Slight losses of blood per vaginam occurred and the temperature after a time began to rise. An incision through the posterior vaginal wall where pus was thought to be gave exit to a small quantity of foul grumous material. The temperature fell, but the general condition of the patient became worse Laparotomy revealed a large cyst behind

months pregnancy and three weeks previously of what was supposed to be a miscarriage Only one slight hæmorrhage per vaginam occurred 18 days after admission to hospital. She complained of pain in the upper part of the abdomen. A rounded swelling could be felt on the right side reaching to within an inch or two of the umbilicus and separate from the uterus. The uterus was fixed with the cervix jammed down into the vagina Attacks of acute pain in the swelling led to operation. This revealed a large thin-walled vascular cyst close to the right side of the uterus. It contained blood, placental
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made an Hossack, Mr.

Reigate, Mr. J. R. Staddon, Dr. Fowler Ward, Mr. Fryer, and the President joined in the discussion which followed.—Mr. Wynne Davies showed (for Dr. R. K. Casley): 1. A case of Amputation at the Hip-joint by the Anterior Racket Method for a large Sarcoma of the Femur. The patient was a girl, aged 21 years. The growth was very rapid, involving the upper half of the femur and the vertical chain of glands in Scarpa's triangle. She made a good recovery and there was no sign of recurrence six weeks after operation. 2. A girl, aged 15 years, with an Intractable Intestinal Fistula the result of a typhlitic abscess two years ago. Three operations had been done with only temporary success. A fourth operation in which the bowel was thoroughly freed from all adhesions to the surrounding tissues, the sinus being cut out and a double row of Lembert sutures inserted, had resulted in a permanent cure.

Glasgow Southern Medical Society.—The annual dinner of the Glasgow Southern Medical Society was held on Oct. 18th in the St. Enoch Station Hotel, Glasgow. A large and representative gathering of medical gentlemen assembled under the chairmanship of Dr. William Watson, President of the society. Dr. John Stewart and Dr. William McMillan acted as croupiers. Sir Hector C. Cameron, Honorary President, was the guest of the evening, and among others present were Principal Story, Professor John Glaister, and Professor Ralph Stockman. At the close of a well-served repast the chairman proposed "The Queen and Royal Family" in felicitous terms.—To Dr. John Stewart was assigned the toast of "The Navy, Army, and Reserve Forces"—proposed in excellent words—and replied to by Surgeon Lieutenant-Colonel A. Napier.—Mr. R. H. Parry then gave the toast of "Our Honorary President," and in doing so made reference to the honours which had recently fallen on the shoulders of Sir Hector Cameron. From Her Majesty the Queen he had received the honour of knighthood, and by the University he had been selected for the chair of Clinical Surgery, and it seemed appropriate that at about the same time he should be elected to the position of honorary president of the Glasgow Southern Medical Society.—Sir Hector Cameron, in responding, thanked those present for the cordial manner in which they had received the toast. While he valued the honours of which lately he had been the recipient he could not but feel gratified by the knowledge that he was also receiving honour at the hands of his own professional friends. He could assure them that it would be a source of pleasure to him to be of service at any future date to the Glasgow Southern Medical Society.—Dr. E. Duncan proposed the toast of "The University" and emphasised the lamentable position of laboratory accommodation in the medical faculty.—Principal Story, in acknowledging, said that the present wants of the University resolved themselves into one of finance. He was glad to be able to inform them that already some of these wants had been supplied. For some time laboratory extensions had been in progress and he hoped that at an early date further extensions would be inaugurated. To this end money was required and he felt convinced that as soon as the wealthy men of Glasgow realised the present needs the necessary funds would be forthcoming.—The other toasts which followed included "Our Society," proposed from the chair; "Kindred Societies," proposed by Dr. D. MacGilvray and replied to by Professor Glaister and Dr. S. Sloan; "Our Guests," by Dr. J. W. Allan, acknowledged by the Rev. D. McCorquodale; and "The Chairman," by Dr. C. E. Robertson.

South-West London Medical Society.—A meeting of this society was held at Lavender-hill, S.W., on Oct. 10th. Dr. B. Duke occupied the chair in place of the President, Dr. M. G. Biggs, who was absent through illness.—Mr. Noble Smith, surgeon to the City Orthopædic Hospital, gave a demonstration on the use of apparatus in orthopædic surgery generally and for spinal curvatures in particular. He showed how advantageously the medical man could apply his surgical knowledge in the efficient construction and application of such apparatus so as to fix diseased joints very thoroughly. He considered that if such a course were generally adopted there would be far fewer severe operations required, operations which left the patient minus a joint or a limb. If tuberculous disease of the spine could be almost always cured by fixation and general treatment—as it could be—then there could be no reason why the same disease in other than spinal joints could not be treated with equally good results. It was chiefly a mechanical question, a question of efficient fixation. Mr. Noble Smith then demonstrated the application of a spinal splint made of malleable iron which could be adjusted and fitted by the surgeon himself with great accuracy. By use of this apparatus in angular curvature gradual and considerable straightening of the curvature and expansion of the thorax and freedom of respiratory movements were obtainable. It was in every respect more effective than the ordinary "jacket." In treating lateral curvature where an apparatus was necessary the use of the muscles was encouraged and not interfered with. A series of photographs was exhibited.—Mr. Noble Smith further showed some plaster casts portraying the stages of treatment of severe varus as carried out at the City Orthopædic Hospital. The ultimate result was very satisfactory, producing a natural foot freely moveable, without that rigidity which almost invariably followed severe operations on the bones.—Several members of the society who took part in the subsequent discussion expressed themselves as having been very favourably impressed by the results of the treatment of spinal deformities in cases which had come under their own observation.

Glasgow Pathological and Clinical Society.—The first meeting of the present session of this society was held on Oct. 8th, Mr. A. Ernest Maylard, Vice-President, being in the chair.—Dr. T. K. Dalziel showed: 1. A specimen of Epithelioma for which the horizontal portion of the right lower jaw had been removed. He aimed at avoiding hæmorrhage during, and cicatricial contraction after, the operation; with the former in view he cut gradually down from without, ligaturing the vessels as they were divided; to avoid cicatricial contraction he sutured the mucous membrane of the cheek to that of the floor of the mouth and obtained union by first intention. Six weeks later the displacement of the remaining half of the jaw was barely half an inch, while by a slight effort the patient could oppose his teeth perfectly. 2. Hypertrophied Mammæ which he had removed from a girl aged 15 years. The organs weighed respectively 7 lb. and 4½ lb.—Dr. T. S. Meighan showed a patient who had suffered from Diplopia due to traction inward of the eyeball by the cicatrix following the operative treatment of a pterygium. Dr. Meighan had dissected up the scar and slid into the space upper and lower flaps of conjunctiva, completely curing the deformity and the diplopia.—Dr. Alfred A. Young showed a specimen of a Myxoma from the scalp of a man, aged 38 years. The tumour was thought to be a wen till cut into at the operation. It was situated superficially to the aponeurosis and was firmly attached to the skin, part of which had been removed along with the tumour. Microscopically it presented some of the features of angeio-myxoma.—Dr. J. H. Teacher read a further note on Menstrual Decidua.—Dr. John Gordon showed a specimen in which the Gall-bladder Communicated with the Transverse Colon by a Tubular Canal, probably of the nature of an inflammatory adhesion.—Professor R. Muir showed a fresh specimen of an Appendix Perforated by Ulceration and containing a Concretion.

Foreign University Intelligence.—*Copenhagen:* Dr. Wanscher has been appointed Extraordinary Professor of Surgery.—*Florence:* Dr. Livio Herlitzka has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Genoa:* Dr. Carlo Tarchetti has been recognised as *privat-docent* of Medical Pathology.—Dr. Buccelli of Naples has been recognised as *privat-docent* of Neurology and Electro-therapeutics.—*Halle:* Dr. Karl Grunert, *privat-docent* of Otology, has been granted the title of Professor.—Dr. Tschermak of Leipsic has been recognised as *privat-docent* of Physiology.—*Helsingfors:* Dr. Tigerstedt of Stockholm has been appointed to the chair of Physiology.—*Kiel:* Dr. F. Klein, *privat-docent* of Physiology, has been granted the title of Professor.—*Modeno:* Dr. G. Palazzi has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Naples:* Dr. Alberto Solaro has been recognised as *privat-docent* of Medical Pathology, Dr. D. Ventra as *privat-docent* of Psychiatry, and Dr. Nicola Sorrentino as *privat-docent* of Dermatology and Syphilography.—*Prague* (*Bohemian University*): Dr. K. Kuffner has been appointed Professor of Neurology and Mental Diseases. (*German University*): Dr. Schloffer has been recognised as *privat-docent* of Surgery.—*Rio de Janeiro:* Dr. Antonio Bittencourt has been appointed Assistant Professor of Medical Physics and of Organic Chemistry.—*Tubingen:* Dr. Sarwey, *privat-docent* of Gynæcology, has been appointed Extraordinary Professor.—*Utrecht:* Dr. T. Ziehen of Jena has been appointed to the chair of Psychiatry.

Reviews and Notices of Books.

Optique Physiologique. Leçons professés à la Sorbonne par le Dr. TSCHERNING. (*Physiological Optics.* Lectures delivered at the Sorbonne by Dr. TSCHERNING.) Paris: Carré et Naud. 1898. Pp 335.

THE talented young author of this book, who is well known as a translator into French of the works of Dr. Thomas Young, has endeavoured to give to the student within the limits of a portable volume an intelligible account of physiological optics. The mathematics introduced into the text are not beyond the comprehension of a moderately well-instructed reader and are not more abstruse than those that are to be found in Donder's classical treatise on the Refraction of the Eye published by the New Sydenham Society. He divides the book into three parts, the first treating of Ocular Dioptrics; the second of the Functions of the Retina; and the third on the Movements of the Eye and Binocular Vision. The early chapters are devoted to the consideration of the ordinary laws of dioptrics and catoptrics with definitions of such terms as "point of fixation," "visual line," "optic axis," and the "angle *α*." A particularly good account is given of the images of Parkinje and the mode in which they can best be observed, no less than six images are described. A chapter is occupied with the principles of ophthalmometry, and Dr. Tscherning describes an ophthalmophakometer that he has devised to determine the angle *α*. He speaks warmly in praise of Dr. Young's optometer. Anomalies of refraction are considered at some length and their relief by glasses is explained. The subject of regular and irregular astigmia is particularly well treated and many illustrative drawings of the latter are given.

An interesting chapter is devoted to the consideration of the various theories that have been advanced from the time of Kepler to the present on the accommodation of the eye. Dr. Tscherning, it is now well known, has advanced a theory of his own to explain the phenomena of accommodation, but he remarks in a note on Helmholtz's theory that great men should really be very reserved in their statements for fear of misleading their followers and partisans. Helmholtz, for example, suggested that the cornea is an ellipsoid, and although he especially states that the cornea does not resemble such a surface, the idea has been so rooted in men's minds that it is difficult to eradicate it, and so with his theory of accommodation, as will be seen if the trouble is taken to compare the doubtful phrases which he uses with the positive statements contained in books professing to give his views. The participation of the posterior surface of the crystalline lens in accommodation, a principle that everyone regards as certain, was in Helmholtz's estimation only highly probable. Dr. Tscherning himself holds that accommodation is effected by the transient formation of an anterior lenticonus by muscular effort, and this he considers to be the result of traction exerted upon the periphery of the lens. The lens, he maintains, has a soft outer layer, to which he applies the term "accommodation layer." The defective capability of accommodation of the eye in advancing years is due to the reduction in thickness of this soft external layer. It has been erroneously held, he is of opinion, that traction exerted on the zonule effects the flattening of the surfaces of the lens and that compression exerted on the periphery of the lens augments its curvature. The exact opposite really obtains—namely, that compression exerted on the periphery of the lens flattens the surfaces, whilst traction effected on the zonule augments the convexity of the lens at its centre whilst flattening that body at its periphery. Dr. Tscherning's observations on the change of form of the lens and on the images of Purkinjé were ingeniously made on himself by the use of an ophthalmoscopic mirror. In considering the subject of ophthalmoscopy he demonstrates that the size of the image of the disc seen in the inverted image of the fundus of an emmetropic eye through a + 13 D. glass is enlarged about five times In speaking of skiascopy or retinoscopy he reconciles the different expressions used by Parent and Leroy to explain the nature and movements of the shadow in that mode of examining the eye.

The functions of the retina are briefly discussed under the several headings of the luminous, the chromatic, and the form senses The several theories of colour are dwelt upon at considerable length, leading him to remark that the subject of colour has not as yet found its Newton. The last part of the book is occupied with the movements of the eye and binocular vision. Enough has been said to indicate that these lectures should be read by every student of ophthalmology, and we venture to say that all who do so will derive pleasure and profit from their perusal.

Flesh Foods, with Methods for their Chemical, Microscopical, and Bacteriological Examination. By C. AINSWORTH MITCHELL, B.A. Oxon, F.I.C., F.C.S. London: Charles Griffin and Co., Limited. 1900. Pp. 336, Price 10*s.* 6*d.*

OUR knowledge of all that pertains to flesh foods is certainly very widely scattered and a *résumé* of the various contributions on the subject was needed. In the work before us Mr. Mitchell has undertaken this task in a thorough manner and with success The subjects involved are not easy to collate, especially as they embrace so many departments of specific knowledge. The author defines the work as a practical handbook for medical men, analysts, inspectors, and others. Physiology, bacteriology, and chemistry are all necessarily indicated in an inquiry into the nature and character of flesh foods. Again, the microscope is an essential aid in discriminating normal or abnormal flesh and in indicating the existence of parasites and in identifying them. Nor is a macroscopic examination without value, and, indeed, a close study of the appearance of meats enables the examiner to pass judgment on the fitness or unfitness of meat for human consumption. The importance of the book is accentuated when this particular bearing of the study of flesh foods is regarded. The work is exhaustive, as will be seen from the following broad synopsis of its contents. Chapter I. deals with the structure and chemical composition of muscular fibre, Chapter II. with the structure and composition of connective tissue and blood, Chapter III. with the flesh of different animals, Chapter IV with the examination of flesh, Chapter V. with the methods of examining animal fat, Chapter VI. with the preservation of flesh and the composition and examination of preserved flesh products, Chapter VII. with the composition and analysis of sausages, Chapter VIII. with the proteids of flesh, Chapter IX. with meat extracts and flesh peptones, Chapter X. with the cooking of flesh, Chapter XI. with poisonous flesh, Chapter XII. with the animal parasites of flesh, Chapter XIII. with the bacteriological examination of flesh, and Chapter XIV. with the extraction and separation of ptomaines. Of these chapters those relating to chemistry, composition and analysis are in our opinion the best written. The chapter on meat extracts and flesh peptones is specially valuable in usefully presenting in review the chemical methods in vogue for the valuation of meat extracts, peptones, &c. It must be confessed that the differentiation of the various digested products by chemical means is still far from satisfactory and, further, we have no definite idea as to the real physiological value of the various definite products which have been thus chemically separated. It is the fashion now to determine the total proteids by means of bromine water and the albumose by "salting out" with zinc sulphate, but who shall affirm that the physiological value of a given preparation varies directly with the amount of constitutents indicated by these precipitants? The chapter to which we have referred is, however, valuable, as we have said, because it recounts the methods of analysis employed by various observers in the separation of proteids and, moreover, gives the results obtained with several well-known meat preparations. To some extent, therefore, we are enabled to comprehend the various methods at a glance and to get some idea of their comparative worth or worthlessness in throwing a light upon the value of the preparations as real nutrients.

With the general plan of the book we have no fault to find; the subject is admittedly difficult of classification. A decided improvement in the arrangement of the subject-matter, however, would have been a greater display in type of the headings of the various chapters so as more sharply to distinguish the headings of the chapters from the headings of the paragraphs. In some cases the headings of the paragraphs are in larger capitals than the headings of the chapters. This is a disadvantageous arrangement when searching through the pages for the different subjects. We are aware of no work in the English language which is devoted entirely to "flesh foods," although the importance of having at hand all that has been usefully written upon the subject compactly between two covers is obvious. The possession of a copy of Mr. Mitchell's work will save medical men, analysts, sanitary inspectors, and others an infinite amount of reference which previously had to be made to a score of books each touching upon the subject only here and there.

The Origin and Character of the British People. By NOTTIDGE CHARLES MACNAMARA. London: Smith, Elder, and Co. 1900. Pp. 234. Illustrated. Price 6s.

WITHIN the last few months a veritable epidemic of works on ethnology, anthropology, sociology, and the allied sciences appears to have infected authors and publishers alike, and what with Keane's "Man, Past and Present," Deniker's "Races of Man," Ripley's "Races of Europe," and the recent translation of Haberlandt's "Ethnology," we must confess to a certain sense of bewilderment. As regards the volume under review, in that it deals with a subject of such personal interest as the evolution, moral and physical, of our own race, there can be no doubt that it will appeal to a large number of English readers for whom abstract works on ethnology would have fewer attractions. Starting with the primitive inhabitants of these islands, from the evidence of craniology and palæolithic research, we are presented with a very fair picture of the general physical and mental development of the race from which we originally sprang. The picture becomes still clearer when we come to the period of foreign immigration which set in in a westward direction and left its mark by intermarriage and association on the natural characteristics and qualities of a people who seemed almost incapable of independent mental evolution.

As far back as the time of the Roman invasion the Iberian or primitive stock was already mixed with a Mongolian and Aryan element, and before the time of William the Conqueror there had been a further fusion with Teutonic races. This free intermingling with the hardy Teutonic elements has endowed the British people with great vigour and pliability of character—virtues which were not conspicuous in our original Iberian progenitors. Contrasting the diverse elements which constitute our composite character it is not altogether reassuring to learn that there are indications of a re[illegible] to the Iberian type to be noticed among the other than good results. of efficient f[illegible] working classes of London and other large towns, and that this tendency is not c[illegible] alone but unfortunately [illegible]

The psychological similarities and differences which are peculiar to different races, the reasons for their manifestation, and the effect of their operation, constitute sociological problems which are suggestively and ably dealt with by the author in his concluding chapter. For instance, concerning the future settlement of South Africa, we are reminded that the Boers are derived from the same branch of the human family as we are ourselves, and that they possess distinctive racial characteristics—"a brave, self-reliant people, who under just laws and with strict regard to their prejudices and hereditary sentiments will in time fraternise with the Anglo-Saxon." But whether or no abstract sociology has general application in practical politics this advice with regard to our "brother Boer" has a practical and withal a familiar ring. In those portions of the book which have reference to the evolution of man we cannot help thinking that the author exhibits less breadth of view than when dealing with the more general questions of ethnology. While admitting that all evidence goes to prove that man and the anthropoid apes are descended from a common ancestor he maintains that the main factor which has determined their distinctive differences is to be discovered in the method of ossification to be observed in their respective skulls. The skull of man possesses greater "innate power of growth" and the frontal sutures remain longer open: the brain is in consequence allowed greater freedom of expansion than obtains in the case of the animals lower in the scale. A distinction of such fundamental importance can hardly be drawn with justice from the evidence of craniology alone. The problem is one of general biology which admits of no such simple solution. If it be true that the gorilla has been condemned to eternal brutality merely because the protective envelopes of his brain refused to expand and that man became man because the same structures spontaneously enlarged, there is less in the influence of environment and the response of protoplasm to external stimuli than many of us are inclined to believe.

Dealing, however, with a subject of wide human interest Mr. Macnamara has marshalled his facts and theories in a logical and scholarly spirit and has contributed a scientific and literary volume to the goodly library of works by medical authors.

Diseases of Women. By E. C. DUDLEY, A.M., M.D. Second edition, revised and enlarged. With 453 Illustrations, of which 47 are in Colours, and eight Full-Page Plates in Colours and Monochrome. London: Henry Kimpton. 1900. Pp. 717. Royal 8vo. Price 21s. net.

AS it is only two years since the first edition of this book was published the author has had merely to modify and re-arrange the work and make such changes and additions as were necessary to secure greater accuracy and completeness. One of the defects that we noticed when the book first appeared—viz., that no separate account was given of the functional disorders of menstruation and of sterility—has been remedied by the addition of another part to the book. This includes a detailed account of the disorders of menstruation and of sterility. The pathological states in which these symptoms are present are described and their appropriate treatment is pointed out. These chapters will no doubt increase the usefulness of the book to students and practitioners.

The sections upon diagnosis and cystitis have been largely added to. Dr. Dudley points out "that the management of cystitis has risen from the plane of empiricism and has taken its place upon the scientific basis of pathology." This change is due mainly to recent investigation (especially bacteriological) into its etiology and improved modes of examination and of treatment. Attention is drawn to the important fact that in a large number of cases the urine remains acid and that cystitis is only a symptom and not a distinct disease. The value of the endoscope and cystoscope is very great and by their use alone can a certain diagnosis be made and efficient treatment be carried out. Routine washing out of the bladder is condemned. In the chapter upon diagnosis an interesting account is given of "Harris's Segregator," an ingenious instrument for collecting the urine separately from each ureter. It consists of two catheters, their straight portion being inclosed in a flattened tube and each being separate and moveable upon its longitudinal axis. The instrument having been introduced into the bladder the catheters are rotated so that their curved bladder ends lie one on either side of the trigone. A metallic lever which can be attached to the catheters by a metal arm is introduced into the vagina and its upper end is elevated so as to raise that portion of the bladder wall which lies between the two separated ends of the rotated catheters, and so form a watershed. The urine as it escapes on either side from the ureters flows out through the catheter of the same side. The instrument is certainly ingenious in conception. It is claimed that it has advantages over the ureteral catheter in that it can be used by the non-expert, does not invade the ureters, and therefore cannot injure or infect them. The book retains its chief characters and we still think, as we remarked in our notice of the first edition, that it is of unequal merit and somewhat badly proportioned. It gives, however, a very interesting view of the practice and opinions of one of the prominent American gynæcologists. It is a pity that the author has been compelled to increase its size by some 78 pages. 31 new illustrations have been added and six very excellent coloured plates. At the present day the art of book-illustration has been carried to such a high pitch in America, and such beautiful examples of it have recently appeared in some of the American text-books, that it is a little disappointing to find how poorly many of the illustrations in this work are reproduced, especially such as are original. We can commend the work to those who wish to know something of the American school of gynæcology.

LIBRARY TABLE.

Ethnology. (Temple Encyclopædic Primer Series.) By Dr. MICHAEL HABERLANDT. Translated by J. H. LOEWE. London: J. M. Dent and Co. 1900 Pp. 167. Illustrated. Price 1s.—This little work on ethnology, one of the latest additions to the "Temple Primer" series, has been translated from the German of Dr. Michael Haberlandt by Mr. J. H. Loewe. Dr. Michael Haberlandt, although an accepted authority on the subject of ethnology, has not the gift of literary fluency, his style is ponderous even for a German. Unfortunately the translator has kept so closely to the idiomatic style of the original German that the reader is frequently forced to a mental paraphrase before he arrives at the meaning which certain sentences are intended to convey. The subject-matter, although necessarily condensed, is interesting and suggestive from start to finish and it affords the reader a very fair insight into what may be called the alphabet and grammar of the science Although ethnology is by no means confined to the prehistoric history—if we may use the paradox—of the races, so far as this little work is concerned the story of mankind mostly leaves off where written records and papyri take up the narrative. The contents are divided into three sections. The first deals with the forces in the life of nations which have contributed to their development; the second section is concerned with the culture of the different races; and the third and largest section gives a short statistical survey of the present distribution of nations and a systematic history of the more important races of man. The reader who has made himself acquainted with the contents of this unpretentious little volume will be sufficiently well versed in the moral, mental, and physical characteristics of man in all their ethnological manifestations to form a thoroughly reliable picture of mankind.

The Human Frame and the Laws of Health. (Temple Encyclopædic Primer Series.) By Dr. REBMANN and Dr. SEILER. Translated from the German by F. W. KEEBLE, M.A. London: J. M. Dent and Co. 1900. Pp. 140. Illustrated. Price 1s.—This little book could hardly be more condensed: in 140 pages it contains as many facts relating to physiology, anatomy, and hygiene as in less able hands could well be spread over three volumes of the same size. The subject-matter is, however, presented in such an attractive and interesting form that the reader is by no means conscious of the degree of condensation until he takes stock of the knowledge which he has acquired by the perusal of the book. From beginning to end it would be most difficult to detect an unnecessary or redundant sentence, and the authors have evidently been at great pains to reject controversial and theoretical matter and to emphasise only established facts and necessary essentials. The first part is divided into seven chapters, which deal in order with the Skeleton, the Muscles, the Nervous System, Metabolism, Excretion, Temperature, and the Larynx. The reason for the separation of the larynx from the organs which are usually arranged in association is not altogether evident, and wedged in as it is between chapters on Temperature and tables of chemical constituents it tends to upset the continuity of scheme which is manifest throughout the other sections of the work. The second part, which is concerned with the laws of health, is further subdivided into the three following subjects: (1) the Necessaries of Life, (2) Hygiene for Special Circumstances, and (3) the Care of the Body. The importance of applied physiology in the development of mind and body, especially in children, renders this second part particularly valuable for board school teachers and others who have the charge of young persons It is to be hoped that many of those who hold these responsible positions will avail themselves of the opportunities afforded by this little work for acquiring the necessary knowledge in an easy and effectual manner.

The Diagnosis and Treatment of Eczema. By TOM ROBINSON, M.D. St. And., physician to the Western Skin Hospital. Second edition. London: J. & A. Churchill. 1900. 8vo. Pp. 136 Price 3s. 6d.—The differences between this, the second edition, and the first, which appeared in 1887, are very slight; here and there a word is altered or a sentence is added or a phrase is removed, but there is certainly no indication of the extension of our knowledge during the last 13 years. The index has been reprinted without any alteration so that the references to pages are often inaccurate. This is a pity, as it would have been easy to have made it correct. Allowing for these defects it may be said that the account of eczema which this little book contains may prove useful to those who have but little acquaintance with the subject

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SANITARY INSPECTORS' ASSOCIATION.—A meeting of the western branch of this association was held on Oct. 13th at Tiverton under the presidency of the Mayor. The borough surveyor gave an address on Sanitary Work in Tiverton and the deputy medical officer of health (Dr. R. Shiels) read an interesting paper on Tracing Epidemics. The newly erected isolation hospital was inspected and the members were entertained at dinner by the Mayor.

THE LANCET.

LONDON: SATURDAY, OCTOBER 27, 1900.

WE have this year, as we have in previous years, called attention to the inaccuracy of the Medical Register. We recur to the subject at this season, when the date of publication of the Medical Register for 1901 is approaching, in the hope that the General Medical Council will use every means in its power to make the official roll of the profession correct and reliable—a task in which it is the duty of all medical men to give assistance. For we have always allowed that the responsibility for the inaccuracy of the Medical Register lies in the first instance on the side of the practitioners who do not keep the Registrar adequately informed concerning their addresses and qualifications. The Registrar prints yearly "important notices" at the beginning of the Register urging on practitioners the duty of giving immediate notice to the Branch Registrar by whom they were registered of any changes in their addresses and the advisability of registering their full qualifications. But his words go unheeded. For many years medical men agitated for an authoritative or official list that the public might find in it the correct names and styles of all persons duly instructed in the healing arts and might no longer have an excuse for recourse to quacks. Yet now that the machinery exists for the compilation and publication of the list many medical men take no steps to have their names correctly entered upon it. We recommend the penalisation of the indifferent in the manner provided for by the Act (*vide infra*). Allowing, as we do, that the blame for a great part of the present unsatisfactory condition of the Medical Register rests primarily with the medical profession, we think that the General Medical Council would be well employed in bringing the fact home to the profession.

But in the case of a large group of errors the fault cannot be said to be with the medical profession—we refer to the inclusion of the names of dead persons upon the Register. A dead man cannot communicate with the Registrar and the General Medical Council might here take the initiative. The following table is a list of dead persons whose names are to be found upon the official list of the medical profession for 1900. The list does not claim to be exhaustive—indeed, the Medical Directory for 1900 contains in its obituary list for the year 58 other names the owners, or late owners, of which figure in the current Medical Register as living—but it is as nearly correct as we have been able to make it and the General Medical Council is welcome to the information which the table contains. In the third column are references to the publication of obituary notices of the deceased. In many cases similar notices have appeared also in the *British Medical Journal*. We do not think that our contemporary's files or our own can be regarded as inaccessible to the General Medical Council; and after the death of a member of the profession has been announced in the columns of either journal it might be well if the Registrar obtained

Names of Deceased Medical Men retained on the current Medical Register (1900).

Name.	Date of death.	Reference to published obituary.
Adam, Alexander	November, 1893.	Australasian Medical Directory, 1896.
Aherne (or Ahern), Patrick Leonard	Feb. 10th, 1898.	THE LANCET, Feb. 19th, 1898, p 542.
Arnold, Charles Arthur ...	August 22nd, 1894.	THE LANCET, Sept. 8th, 1894, p. 613.
Baber, John	May 4th, 1894.	THE LANCET, May 26th, 1894, p. 1344. *Obituary notice.*
Blumenreich, Theodore Meyor (or Mayer)	Sept. 28th, 1892.	Australasian Medical Directory, 1896.
Brown, Fergus Malcolm ...	May 31st, 1893	Australasian Medical Directory, 1896.
Burroughs, Thomas John	Dec. 23rd, 1892.	THE LANCET, Jan 14th, 1893, p. 119.
Campbell, Loftus	July 26th, 1894.	Australasian Medical Directory, 1896.
Clarke, Horatio St. John..	June 30th, 1895.	Australasian Medical Directory, 1896.
Edger, Robert Phillipson (or Philipson)	Sept. 21st, 1892.	THE LANCET, Oct. 29th, 1892, p. 1027. *Obituary notice.*
Fadelle, Alfred	March 28th, 1893.	THE LANCET, June 17th, 1893, p. 1475
Fitzgerald, Charles Egerton	Dec. 11th, 1898.	THE LANCET, Dec. 24th, 1898, p. 1745. *Obituary notice.*
Hanham, Frederick William	March 13th, 1898.	THE LANCET, March 26th, 1898, p 904.
Horne, Robert Main... ...	March 31st, 1896.	THE LANCET, April 11th, 1896, p. 1035. *Obituary notice.*
Jackson, Chas. Granville	1894.	Australasian Medical Directory, 1896.
Jee, Henry Christian ...	Sept. 30th, 1893.	Australasian Medical Directory, 1896.
Johnson, Edmund Charles	Jan. 3rd, 1895.	THE LANCET, Jan. 12th, 1895, p. 125. *Obituary notice.*
Jones, Shadrach Edward Robert	July 15th, 1895.	Australasian Medical Directory, 1896.
Leslie, Louis Gordon ...	September, 1892.	Australasian Medical Directory, 1896.
Newbigging, Robert Pope	Oct. 5th, 1895.	THE LANCET, Nov. 9th, 1895, p. 1201.
Noonan, Francis Felix ...	March 9th, 1896.	Australasian Medical Directory, 1896.
O'Connor, Morgan	August 13th, 1895.	Australasian Medical Directory, 1896
Pughe, T. Wm. O.	Oct 8th, 1893.	THE LANCET, Oct. 14th, 1893, p 963.
Roeckel, Waldemar Joseph	Sept. 10th, 1894.	THE LANCET, Nov. 17th, 1894, p. 1191. *Obituary notice* Australasian Medical Directory, 1896.
Sellar, Alexander	April 14th, 1895.	Australasian Medical Directory, 1896.
Sheldon, Edwin Mason ...	1893.	THE LANCET, Dec 2nd, 1893, p. 1417. *Obituary notice.*
Sutherland, George Whitefield	March 3rd, 1896.	Australasian Medical Directory, 1896.
Taylor, William Marshall	July, 1893.	Australasian Medical Directory, 1896.
Walker, John Burnley ...	1894.	THE LANCET, Jan. 20th, 1894, p. 184. *Obituary notice.*
Webb, Chas. Louis	Feb. 22nd, 1896.	THE LANCET, Feb. 29th, 1896, p. 597.
Webb, Sidney Roberts ...	April 12th, 1895.	THE LANCET, May 4th, 1895, p. 1156. *Obituary notice.* See also THE LANCET, March 13th, 1897, p 745.
Welch, Henry	April 2nd, 1894.	THE LANCET, April 21st, 1894, p. 1039. *Obituary notice.*
White, Francis Buchanan White	Dec. 3rd, 1894.	Dictionary of National Biography, vol. lxi. THE LANCET, Dec. 22nd, 1894, p. 1519. *Obituary notice.*
Williams, David William	September, 1893.	THE LANCET, Sept. 30th, 1893, p. 849.
Wilson, Frederick Wm. ...	1894.	THE LANCET, Feb. 25th, 1899, p. 547.

corroboration of the correctness of the information by sending a registered letter to the latest official address of the practitioner in question. The Medical Act (1858) Clause XIV. runs as follows:—

> XIV. It shall be the duty of Registrars to keep their respective Registers correct in accordance with the provisions of this Act, and the orders and regulations of the General Council, and to erase the names of all registered persons who shall have died, and shall from time to time make the necessary alteration in the addresses or qualifications of the persons registered under this Act; and to enable the respective Registrars duly to fulfil the duties imposed upon them it *shall be lawful for the Registrar* to write a letter to any registered person, addressed to him according to his address on the Register, to inquire whether he has ceased to practise, or has changed his residence, and if no answer shall be returned to such letter within the period of six months from the sending of the letter it shall be lawful to erase the name of such person from the Register; provided always that the same may be restored by direction of the General Council should they think fit to make an order to that effect.

It seems to us clear that it is the duty of the General Medical Council to communicate with persons whose names are on the Register and whose deaths are announced in the medical journals, in the *Times* and other important daily papers, in the Dictionary of National Biography, and in a semi-official publication like the Australasian Medical Directory. Nor can we see that to do so would entail much work upon the secretarial staff of the Registrar. How the Registrar is to comply with the Act by sending a registered letter to the following gentlemen we admit that we cannot suggest:—

Duncan, James.
Foster, Thomas.
Forbes, William.
Blanchard, David.
Williamson, Walter.
Montgomery, R., L.R.C.S., 1829.
Osborne, John Hy.
Nussey, Thomas John Hartley.

for their only address on the Medical Register of 1900 is "Australia." We grant that the Registrar is in a difficulty, but the difficulty has been made by the General Medical Council in accepting such loose entries. The door to flagrant impersonation that has thus been opened wide should be closed immediately.

There is another class of names upon the Medical Register where we think the Registrar might well send the registered letter in accordance with the Act. The following names in the Medical Register of 1900 (and, again, our list does not claim to be exhaustive) are those of gentlemen who if they are still alive must be so advanced in years that they could only take an inquiry into the matter as a compliment:—

Lawson, George McF., M.D.Edin., 1818
Moon, Robert Henry, L.S.A., 1821.
Tinn, George, L.S.A., 1824.
Toulmin, Abraham, M.R.C.S., 1817.
Smith, Charles, L.S.A., 1818
Murray, Thomas, M.D. Edin., 1823.

If Mr. TOULMIN and Dr. G. McF. LAWSON are still alive they must be well over 100 years of age, in which case we congratulate them upon their longevity.

* * *

AT this time of the year, when a number of young students are entering upon studies which will, they hope, render them responsible in the future for the health of their fellow-citizens, it is as well to take a broad view of the medical student's career and with a bird's-eye glance over the whole field to try to notice a weak spot. The satisfaction with which we may thus regard modern medical education is very great if we compare it mentally with that of even only a few years ago. When we make this comparison, however, and particularly if we compare our own day with that of, say, our great-grandfathers, one reflection arises that may ruffle our general content. Are we to-day taught practically enough? With the enormous strides in scientific education, with the additional knowledge in physiology, chemistry, and bacteriology that our students now acquire, does there exist a proportionate increase of skill in the actual practice of their profession. To discuss this question in full would be too extensive an undertaking and we propose to limit ourselves to the consideration of one important art which in practice almost every medical man must at some time or other be called upon to exercise. We allude to the administration of anæsthetics. There is probably no branch of his profession in which the average medical man, whether in town or country, is more likely to be required occasionally to exercise such skill as he may have, and there is certainly none in which a deficiency of skill may more easily have unpleasant if not disastrous results. Medical practice is carried on largely with drugs that cannot do harm within pretty wide limits of dosage, surgical practice devolves chiefly upon those whose skill is in constant exercise, *but anæsthetisation where only potent and dangerous* materials are of use is demanded at times of every medical man.

There can be no case, then, in which knowledge and experience are more desirable in a medical man than in this, which is both of a critical nature and of common occurrence. In large centres, of course, there are plenty of men who devote themselves to the administration of anæsthetics whose wide experience reduces risks to a minimum and whose services are available for surgeons and general practitioners. But, taking the country as a whole, a large proportion of anæsthetics are administered by those whose experience in the matter must of necessity be occasional only. For such men to be proficients in the art is obviously impossible. For them to be safe exponents of it it is essential that they should have been well trained in its principles and in its practice. Do the vast majority of medical students obtain such a training? That it is available for them a mere glance at the prospectuses of the chief medical schools assures us. At almost all of them there are anæsthetists of experience whose duties are not solely to administer anæsthetics for the surgeons but also to deliver lectures and to instruct students practically. Unfortunately the mere fact that excellent opportunity and teaching are at hand is not always enough to induce a student to learn. It is not that he is inherently indifferent. The average student of to-day is keen and eager in all that pertains to his medical education, but the measure of his keenness must largely be the examination value of the subject on which it is exercised. The immediate object of his existence is to pass examinations—to "get qualified" is the *Ultima Thule* of his present ambitions. The market value of a sound knowledge of anæsthetics as an asset at the examination hall is practically *nil*. The subject is not even one for which it is essential that he should be "signed up." Now, there follows from this a corollary which still further lessens any eagerness which a student may feel towards proper education in anæsthetics. Since the examining bodies apparently think little of the importance of the administration of anæsthetics the medical schools, which naturally take their cue from these bodies, cannot insist upon much attention to the subject. Consequently, at many medical schools there is no formal necessity for a student ever to obtain instruction in the matter. At many schools a student must give evidence of proficiency in administering anæsthetics before he is allowed to hold a resident appointment, but even this is not everywhere the case. Moreover, the number of students who become resident officers is necessarily but a small proportion of the whole. At hospitals which have no medical schools attached to them it must often happen, as it assuredly does in private practice, that a man administers an anæsthetic without ever having watched such an administration with care or with the purpose of learning therefrom the dangers to be avoided and the principles to guide him on the path of safety. There is one inherent difficulty in the proper teaching of the way in which to give anæsthetics to all students. This lies in the practical nature of the matter. A student may attend all the lectures available and read all the books, but until he has himself given an anæsthetic he can never become a safe anæsthetist. Now it is impossible for all students at a large school actually to give anæsthetics, under the supervision, of course, of their teachers, except to a very small extent. Even this small extent, however, is of great importance, for if the principles have been already acquired a student need not many times administer anæsthetics under skilled supervision to become a safe administrator, in all ordinary cases at any rate. In cases where a patient about to undergo an operation is seriously ill, or where the nature of the operation offers particular difficulties to the anæsthetist, then a man of only occasional experience in the matter should not undertake the administration, unless, of course, he alone is available.

Having regard, then, to the importance of proficiency in the use of anæsthetics in the after-welfare of the great majority of medical students we strongly urge them to avail themselves of the opportunities offered at their schools. May we suggest to those in authority over them that perhaps regulations requiring some attention to the matter from all students, whether candidates for resident appointments or not, would be of advantage to the medical practitioner of the future and an additional guarantee of the public safety.

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DR. OSLER has found time, in spite of all his labours in the study and practice of medicine, to go more deeply than most previous historians of LOCKE into an investigation of the relations of that great man to medicine. LOCKE'S work in philosophy and in the vindication of liberty has been so important that we have been too apt to overlook and to forget his connexion with our profession. It has been left for a physician living more than two centuries after him, and himself at the very front of modern medicine, to remind us of that connexion forcibly. By careful study of manuscripts in the British Museum and of notes and journals wherever accessible DR. OSLER has now shown that in LOCKE English medicine had potentially another SYDENHAM, and that the well-known intimacy between these two great men was, as was the friendship of JOHN HUNTER and EDWARD JENNER, based on likemindedness and on the rich possession by both of large endowments of common-sense and the faculty of close and careful observation. The love of medicine, if not the first love of LOCKE, was a very early one and was one that never forsook him. The distractions were many. Love of letters, foreign travel, intimate relations with the foremost statesmen and men of science of his day, study of the moral and mental constitution of men, delicate health—none of these ever really estranged him from an interest in medicine, though they drew him finally from the practice of it. And we are proud to think that the world is much indebted to his medical knowledge—or, if we may so say, to his medical mind—for the common-sense which characterises his philosophy and which is apparent in every page of his greatest work. DR. OSLER'S address is so full and so original as a contribution to the study of LOCKE as a physician that we may assume that it will be carefully studied by the medical profession. We shall do well to follow the example which DR. OSLER sets us and individually to study for ourselves the working of such a mind as LOCKE'S in the matter of medicine. We shall all be better practitioners for studying his reasonings and experiments, remembering that he not only followed and appreciated SYDENHAM but that SYDENHAM appreciated him and discussed with him the great problems of disease in individual cases, including LOCKE'S own, in respect of which he wrote to LOCKE affectionately, "and with the same intention of mind as if my life and my son's were concerned therein."

In the few remarks which we make by way of emphasising our gratitude to DR. OSLER and our own pride in the fact that his hero really and historically belongs to the medical profession, we do not follow so much the line of DR. OSLER'S address as indicate in a few sentences the points which appear to us to be of greatest interest in LOCKE'S medical character and history. It is important to notice that, like many other great medical men, he was for the greater part of his life more or less a patient. He had a frail body. He suffered from what some of his biographers called "consumption and asthma." In the middle of his life his illness compelled his absence from England for years. Doubtless this made him more sympathetic and helpful as a physician. No complaint was too humble, no remedy too simple, for his thoughtfulness. "Costiveness," equally with consumption, exercised his reasoning faculty and led him to the application of physiological principles for its relief supported by personal experience. Notwithstanding that he was so delicate he contrived to keep his frail tenement together and in pretty active occupation to the age of 72 years and to leave the world richer in wisdom and freedom and virtue for all time. He was also successful in preserving his historical patient the first Earl of SHAFTESBURY in spite of his "imposthume," or, as we see it, his hydatid of the liver, the history of which extended over years, and he conducted him to recovery with a minuteness of care which is well illustrated in the medical notes and journals unearthed by DR. OSLER. Secondly, LOCKE was no specialist. His study of medicine was broad, and it included the cases of men, women, and children. His book, "Concerning Education," shows how deep was his interest in health and in those principles of health or hygiene which need to be intelligently appreciated by those who have children or the care of youth. Whether his patient were the Earl of SHAFTESBURY, the kitchenmaid of the Earl, or one of the children of his friend "EDWARD CLARKE of Chipley, Esq.," or Lady NORTHUMBERLAND, he brings to bear on all their cases his experience and his common-sense Dr. OSLER justly observes on the care with which he reported and recorded cases. The notes of the Earl of SHAFTESBURY'S case could scarcely be exceeded for their detail in our present time, save in so far as improved means of investigation have made a difference.

Most important of all in LOCKE'S system of medicine was the use of strong common-sense and of all the aids that a study of the fundamental sciences could give him. His friendship with BOYLE, with the other founders of the Royal Society, and with the scientific set—"the invisible college"—in Oxford, at once showed and encouraged the openness of his mind to all improvements and enabled him to do great service to his patients and to vindicate his friends, especially SYDENHAM, against the almost intolerable hostility with which their improvements in medical practice were met by many of their contemporaries. He was the forerunner of ACLAND and those of later years who have saved Oxford from being lost in the mazes of theology and who, while retaining the principle of reverence, have raised it above all mere human dogmatism and conceit His practice of physic seems, for his day, to have been eminently sensible. He was a sanitarian and took great pains to study the public health as shown in the mortality bills of great cities at home and abroad. He had a few prejudices that would shock some of our modern physicians—such as that against certain kindly fruits and that in favour of exposing children to cold, with imperfect shoes that should keep their feet continually damp and uncomfortable—but those who lived according to the general trend of his medical rules would live well. He enjoined one meal of meat a day and plenty of bread ("imputing a great part of our diseases in England to our eating too much flesh and too little bread"), and extreme moderation in wine and strong drink, allowing only small beer, and a hard bed. Physic was to be used sparingly and nature was to be much trusted. These are instructions rather for the care of children, but they are meant to lead up to a hardy and virtuous manhood to be possessed on the same principles. For LOCKE held that "the great Principle and Foundation of all Vertue and Worth is placed in this: That a man is able to *deny himself* his own desires, cross his own Inclinations, and purely follow what Reason directs as best, tho' the appetite lean the other way." Such were the medical views of the great philosopher of the seventeenth century whose general wisdom was such that men like SHAFTESBURY and SOMERS consulted him in the affairs of State as SYDENHAM and MAPLETOFT consulted him in questions of medicine.

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IN an article in THE LANCET of Oct. 20th (p. 1125) Mr. R. HAMILTON RUSSELL, F.R.C.S., of Melbourne raises, not for the first time, a very important practical question—no less than this, whether every child, except young infants, the subject of inguinal hernia should not be submitted to operation. What we may call the orthodox view is that the great majority of such cases are cured by the persistent use of a well-adjusted truss. All are agreed that by this treatment continued over a period of years the parts may become so altered that even under severe strain no hernial protrusion will occur. And it is contended that this fact justifies the use of the word "cure." It is maintained that under the pressure of the truss the sac is kept emptied, that its natural elasticity is able to exert its effect in reducing its size, and that the pressure may either set up an adhesive inflammation in the sac and so obliterate it, or that it acts as a local stimulant and excites that nutritive change which normally obliterates the funicular process of peritoneum—a change which has been arrested in cases of hernia. Under the empty condition of the sac the fibrous structures around it are freed from distension and displacement and become strong and efficient supports of the inguinal canal.

Mr. RUSSELL inferentially admits that the obliteration of a hernial sac may occur in a young infant, and, so far as we are aware, no surgeon of experience has yet urged that such *an event never takes place. It would seem certain that* nature has the power to accomplish quite soon after birth the obliteration of the funicular process which should have been perfected before birth. This is a mere delay in the normal development of the parts. A very large number of infants are found to have inguinal hernia or hydrocele in an unobliterated funicular process of peritoneum, and the large majority of them appear to undergo cure without surgical operation. Mr. RUSSELL'S contention is that while this may happen during infancy it never occurs in childhood or later. If the natural closure and shrinking of the tube of peritoneum is arrested it is not effected by the pressure of a truss or by any means which merely keeps the sac empty for a period of months or years. The evidence on this point is partly clinical and partly pathological, and is certainly not conclusive. Clinically we find that boys and youths, after wearing a truss for many months or a year or two, often show no trace of their former hernias, and even after all the tests of straining that are usually adopted there is no protrusion into the inguinal canal. If the truss is discontinued they are able to pursue an active life without re-descent of the hernia. But in a certain number of these cases a sudden descent of the hernia occurs at some subsequent period. We are all conversant with cases where after two, three, or more years of freedom from hernia it suddenly recurs, showing that the sac has not been obliterated but is only empty and probably narrowed at the neck. Again, there are very many cases of inguinal hernia which suddenly appear during adolescence or early manhood in which there is no ascertainable history of infantile hernia. The sudden descent of the hernia into the scrotum proves that there was a sac ready formed into which the bowel or omentum could drop as soon as it passed the barrier at the neck. The occurrence of what Mr. FURNEAUX JORDAN well-named "water-bottle hydrocele" also shows that a peritoneal sac may become very narrow at the neck and remain for many years quiescent without yielding any sign of its presence, but yet form a serous sac into which a hernia may possibly be forced. Pathologists, too, know that in patients who give no history of hernia a hernial sac or an unobliterated portion of the funicular process of the peritoneum may be found. We may therefore say that it is indubitable that a potential hernial sac may exist for years without any evidence of its presence, and the mere fact that under the ordinary tests no hernial descent occurs is no proof that a sac does not exist, still less is it a proof that a sac known to have existed formerly has become obliterated by the pressure of a truss.

This, however, does not bring us quite to the position advocated so earnestly and so ably by Mr. RUSSELL. For if men may go on for years with a patent hernial sac, without descent of bowel or omentum into it, it is evident that there is another element in the causation of hernia than the mere presence of a sac. This seems to us the weak point in Mr. RUSSELL'S case. The neck of the sac may become so narrowed that this affords a great if not insuperable barrier to the descent of a hernia, and the valvular action of the inguinal canal may be so efficient that nothing can escape down the canal even although there is a patent sac. We consider that Mr. RUSSELL does not attach sufficient importance to the defects in the muscular and aponeurotic walls of the inguinal canal which certainly play some part even in the hernia of children. While, therefore, we think that most surgeons will quite concur in his view that trusses do not often cure hernia (after infancy perhaps) in the sense of leading to an obliteration of the peritoneal sac, the evidence is too strong to be set aside that in many cases there is no future descent of the hernia into the still patent sac. And if this is so, many surgeons will hesitate to urge operation upon all these patients but will wait until the hernia has again declared itself. There is, however, no finality in surgery, and Mr. RUSSELL has done good service in calling attention to a very interesting and important subject.

Annotations.

"Ne quid nimis."

BRITAIN'S FAITH IN HER SANITARY SYSTEM: AN APPRECIATION.

IN view of the limitation of our knowledge as to the behaviour of bubonic plague it is not our intention to take upon ourselves the mantle of prophecy and to predict that, even for the present, the plague has receded from our shores. Our respect for the unknown future precludes any such liberties. The history of plague warns us that its waves may have, like the cardiac rhythm, their periods of systole and diastole, and that the disease may, in its general progress, wax and wane. For aught we know to the contrary, material from one or another of our ports may be at this moment undergoing examination in the laboratory, and the passing away of an inoculated guinea-pig may, before these lines are read, have been instrumental in announcing to certain signatory powers, in accordance with the provisions of the last Venice Convention, that fresh cases of pestis minor or major are with us. But whatever the port medical officer of health or the bacteriologist may have in store for us we are concerned at this moment with a little appreciation of the past. The public is not accustomed to enter into a very detailed analysis of its feelings, be they of apprehension or of security, but the presence or absence of such feeling is sufficiently obvious in the public press, when a national danger threatens. With respect to plague prevention there is only one conclusion to be drawn as to the public opinion of this country and that is that it places implicit confidence in the system by which the introduction of exotic diseases is checked; indeed, there are signs that the public may ere long look with only little more anxiety upon an occasional case of cholera, yellow fever, or plague, than upon one, say, of small-pox. This faith in our system has been gradually and imperceptibly brought about by the admirable manner in which the more or less desultory bombardment of our coasts by plague and cholera within recent years has been met. It has been met by a system which these islands may well view with satisfaction, and which is being slowly accepted by European Powers, and, in principle at least, by countries outside Europe. The proper appreciation of this system by Britain and the partial recognition of its merits by other Powers, have been very largely due to the indefatigable efforts of successive medical officers of the Local Government Board, and more particularly, perhaps, to the powerful advocacy of the late Sir Richard Thorne at the several international congresses at which he represented Great Britain. For the present organisation of the machinery our thanks are due to the foresight and energy of the Central Health Department, the medical staff of which devotes no small amount of thought and action towards its share in administration. But the smooth working of the machinery, under the system of local government which obtains in Britain, would be practically impossible without the cordial support of the port sanitary authorities, and in this connexion it is gratifying to record the admirable example which has been, and is being, set by the liberal and rational spirit in which the sanitary authorities of ports such as London, Liverpool, Manchester, Southampton, and Plymouth have met their responsibilities, and have, where necessary, cooperated with the Government departments concerned with the movements by sea of our small but migratory army. It is to our port medical officers throughout the country, embracing in this term those who serve as assistants or inspectors, that no small meed of praise is due. Only those whose duty it has been to board and to examine vessels in all conditions of weather, to harangue obstructive skippers in languages not their own, or to diagnose a suspicious case of plague in the stuffy and ill-lighted forecastle of a small steamship, can appreciate the enormous responsibilities of the port medical officer or estimate what the country owes to him. So, too, those who are unfamiliar with the difficulty of dealing with an outbreak of disease without means of proper isolation and disinfection can have no idea of the anxieties with which an inland medical officer of health faces the presence of a disease like bubonic plague in his district. Fortunately, in a sense, we shall have now before us the excellent example set in Glasgow by its able medical officer of health, Dr. A. K. Chalmers; and the near future may show the desirability of carefully studying the Glasgow methods in order that certain sanitary authorities south of the Tweed may ascertain how their own districts would fare in presence of an invasion such as has visited Glasgow. That outbreak teaches us the immense importance of seeking out suspicious cases and of isolating them until all risk be past as well as the necessity for isolation provision and accommodation for "contacts." The sooner the more negligent of our authorities see to these points the better for them and for the country.

A NOBLE DEATH.

WE are rightly proud of the fact that the medical profession numbers many heroes among its ranks. It is no uncommon thing for a medical man to lay down his life owing to the exigencies of his profession; but the recent death of Mr. Alexander Stewart Brown, F.R.C.S. Edin., which took place on Oct. 17th, deserves special recognition owing to the circumstances which led up to it. A week or two ago Mr. Brown met with a carriage accident in which he injured his spine. In order to recruit his health he set out for the South of France and on arriving at Boulogne he was just getting into the train when he saw a young man with whom he had travelled from London fall off the quay side into the water. Mr. Brown at once waded into the water nearly up to his neck, got the man out, and finding that he was unconscious, wet as he was, proceeded then and there to perform artificial respiration. After two hours' hard work Mr Brown was successful and he continued his journey to Paris. When there, however, he became so ill that he thought it best to return home, which he did, but succumbed to pneumonia shortly after his arrival We cannot call the circumstances of his death sad, for if there is one desirable manner of death it is that which is incurred in saving the life of a fellow-creature, but none the less we offer our sympathy to Mr. Brown's relatives and friends. He was a well-known figure in the municipal life of Lewisham and was also a prominent Freemason.

MEDICAL MEN AND THE MORPHIA HABIT.

THE *Medical Temperance Review* for October contains a short paper on Morphinism among Physicians. If we are to credit the writer the habit of taking opium and allied drugs is more or less prevalent among from 6 to 10 per cent of medical men. The statement is a vague one and no precise data are advanced in support of it, though the reader is referred to a former report dealing with this subject. It would be better for all purposes if a paper of this kind, which contains only the most general assertions, were elucidated by verified details; lacking these its value cannot be estimated or even recognised. It would be idle to deny that medical men, like all other men, are occasionally liable to propensities which do not make for their advantage and from which not even a knowledge of the action of drugs can always deliver them. On the other hand, indefinite assertions like those contained in this brief paper cannot be accepted without those proofs which are absent from it. That accidental opium-poisoning has repeatedly cut off a useful professional career is unfortunately true. Little more than a week has elapsed since a medical practitioner died at Bolton, Lancashire, from the effects of an excess of opiate which was taken to procure sleep. But a morphia habit which controls one in every 10 or 20 men is certainly not known to exist in the medical profession. Such a habit, if it does exist, must be quite exceptional It is probably unknown among practitioners engaged in active duty. We observe that the writer above-mentioned speaks of the morphia habit as if it were merely a disease and nothing more. It has become customary with many persons to refer to this and other aggravated forms of self-indulgence in similar terms. They are regarded as vices which have ceased to give pleasure, as master-passions which are hated, but which will not be denied Against this tyranny the will is supposed to have lost its power of resistance. There are doubtless cases of habitual excess the character of which is fairly so described. We are of opinion, however, that too much has been made of such cases It cannot be, and it is not, true that a vice even after long indulgence is always master and cannot be withstood. It is equally certain that apparently confirmed inebriates and morphia-takers have been enabled to release themselves and have remained in a state of freedom. The force of habit whether innocent or hurtful is usually very great, but this by no means implies that it must necessarily even after long duration annihilate the other controlling force of will. To what extent it may have done so remains in many cases an unsolved problem and in this very uncertainty lies the germ of hope. Unless we recognise this patent fact, all prospect of reform, all reason for the efforts of temperance even may be abandoned. No amount of therapeutics will make a bad man good or a drunkard abstemious unless he is allowed credit for such will power as he has and is assisted or obliged to use it for his moral reclamation. While therefore we do not deny the existence of the states known as dipsomania or morphinomania, we deprecate as pessimistic and subversive of rational treatment the too general tendency to apply these and like terms to all aggravated cases of self-indulgence.

THE INSANE JEW.

IN the October number of the *Journal of Mental Science* Mr C F. Beadles of Colney Hatch Asylum gives an account of the Jew in so far as he is liable to insanity, the records of cases which form the basis of his paper being taken from the London County Asylums and from other sources An examination of 1000 cases has revealed certain salient features regarding the insane Jew. First and foremost is the abnormally great preponderance of general paralysis amongst the men. Thus, reckoning on the admissions, it is found that over 21 per cent. of all male Jews admitted were the subjects of general paralysis, whereas the general proportion of general paralytics in all males admitted to asylums in England and Wales is (according to the report of the Commissioners in Lunacy for 1899) 13 per cent. Among the Jewesses the proportion of general paralysis is that of the females admitted generally throughout the country. It is thus evident that amongst the Jewish male admissions general paralysis is 60 per cent. more frequent than among other English and Welsh patients admitted to county and borough asylums. Mr. Beadles states that inquiry as to the relative prevalence of syphilis in the Jewish community is beset with difficulties, but that there is ground for belief that "syphilis is fairly frequent, though doubtfully to the same extent, as amongst the population in this country at large" Considering the fact that syphilis plays a most potent part in the production of general paralysis the need of accurate statistics is obvious. Drunkenness is said to be "less common among the poorer Jews than is the case amongst the lower classes of English On the other hand, sexual excess figures in high ratio as an assigned cause for insanity (among Jews)." It is shown that the mental strain resulting from the worry, anxiety, and excessive zeal in acquiring riches, plays an important part in bringing about neurasthenia and mental breakdown in the Jew. In hospital and private practice it is often found that the Jewish male is neurotic and that the Jewess is a sufferer from hysteria. "Hereditary insanity probably figures high in the race, but it is impossible to get at the proper proportion" The average age at which Jews become insane is distinctly earlier than in non-Jews, and this holds good for both sexes. The average age of admission for Jews into the London County Asylums was 37 years and that for Jewesses was 35 years, whereas the average age of all admissions into the London County Asylums in 1898 was 43 years for both men and women. The ages at death bear somewhat similar proportions. Male Jewish patients died at the age of 44 years and Jewesses at 47 years, whereas the other London County

Asylum male patients died at the age of 51 years and the female patients at 55 years. Jewish patients discharged from asylums relapse twice as frequently as all other patients. While general paralysis was relatively common among Jewish males puerperal insanity was prevalent in a high proportion among the Jewesses who were admitted to asylums. "In over 15 per cent. of all Jewish female individuals admitted to the Colney Hatch Asylum the insanity was traceable to, and associated with, child-bearing," whereas in non-Jewish patients the proportion was 6·18 per cent. in all the London County Asylums. Mr. Beadles finds an explanation of this in "the neurotic temperament of the Jewish women, the early age at which marriage takes place, together with impaired nutrition from unhealthy occupations and surroundings in overcrowded centres." Over 80 per cent. of Jewish patients or their parents were found to have been born abroad. They mainly come from Russian Poland or from German States. The impoverishment and stress of living which many of these have experienced before reaching this country have helped to wreck their nervous systems. It is also concluded that Jewish patients furnish the most troublesome, degraded, and refractory of chronic and incurable cases in asylums.

DISINFECTION OF THE HANDS.

CONTINENTAL surgeons have taken up the question of disinfection of the hands very zealously, but it cannot be said that as yet any definitive solution of the attendant difficulties has been arrived at or even that methods which yield good results with one observer have been found equally efficacious by others. In a paper published in the *Archiv für Klinische Chirurgie*, 1900, p 463, Dr. Sarwey has given an account of some experiments which he and Dr. Paul have conducted with regard to several of the most prominent systems. Investigators vary, they found, not only as to their modes of procedure, but also in the way in which they test the efficacy of the measures adopted. Hagler of Bâle, for instance, rubs the disinfected hands with spun silk which is then tested for germs, while Kümmell steeps the extremities themselves into the nutritive media. The method of control preferred by the experimenters is that of Fürbringer, which consists in thoroughly scraping the hands back and front as well as between the fingers and round about and under the nails with sterilised pieces of wood of various shapes and sizes. Before proceeding to examine the more complicated systems of disinfection of the hands Dr. Sarwey and Dr. Paul tried the effects of vigorous brushing with soap and hot water, the brush, the soap, and the water being sterilised and renewed six several times, and the whole operation being prolonged over 35 minutes. A scrubbing of this severity, we might *a priori* suppose, should suffice for the removal of the most tenacious of microbes, to say nothing of the subject's epidermis, but Pétri's boxes sown subsequently with hand-scrapings were nevertheless found to be swarming with germs. The system of Ahlfeld, which is based on hot water and alcohol, was then essayed, with a somewhat more satisfactory result; but although the germs were found to be diminished in "notable proportions" they were not completely removed. The system advocated by Mikulicz was next investigated. According to it the hands to be disinfected are rubbed assiduously for five minutes with an alcoholised soap, all greasy matter having previously been got rid of by means of pumice stone steeped in alcohol. After a series embracing 12 repetitions the conclusion arrived at regarding this process was that although, as in the preceding method, the germs were greatly reduced in number there was always a more or less considerable residuum left behind. Lastly, the "mechanical disinfection" of Schleich was put to the test. The chief peculiarity of this system is the entire abandonment of the nail-brush, reliance being placed exclusively upon a special kind of soap which is made with wax and powdered marble (*wachsmarmorstaubseife*). It is claimed by the inventor that after 15 minutes of energetic friction with this compound in sterilised water (constantly renewed) the hands to be disinfected are freed from at least 97 per cent. of their germs, but Dr. Sarwey and Dr. Paul were unable to obtain anything like so good a result. On the contrary, notwithstanding their utmost care, so abundant were the germs which they found remaining that it was quite impossible to look upon the hands that had been operated on as sterilised. The explanation of this regrettable divergence of opinion is doubtless to be found in the mode of control adopted. Schleich used platinum rods to collect germs from the main parts of the hand only, dipping the rods when charged into gelatin tubes which were kept at the ordinary temperature of the room; whereas Dr. Sarwey and Dr. Paul, adhering to Fürbringer's method of collection as above described, made their cultures on agar in Pétri's boxes which were kept at a temperature of 99° F. On the whole, the conclusion to be drawn from these interesting experiments would seem to be that alcohol and soap with hot water are capable of largely reducing the number of the pathogenic germs which are located on the hands, but that as yet no method of ensuring absolute sterilisation has been devised.

UNREGISTERED PRACTITIONERS AND DEATH CERTIFICATES.

AN inquest was recently held to inquire into the cause of death of a man who had died at Dewsbury after being attended by a person calling himself "Dr. Haworth," whose name is not upon the Medical Register. This gentleman describes himself upon his doorplate as an "M.D. of Canada," and the registrar of deaths had declined to accept his certificate, in which, we believe, the cause of death was described indifferently as "hemorrhage" and "hemorage" of the lungs, the registrar's refusal having as its natural result an inquiry before a coroner's jury. "Dr. Haworth" has addressed to the local press a letter of protest, from which we give extracts, directed against the registrar on account of his action in the matter, and he states that he will follow it with a second dealing with the coroner. He writes:—

> "With respect to my late patient's death and the cause why our Registrar did not register it I have yet to learn. I am a duly qualified M.D. and C.M. of Canada ...... Registration in Great Britain is no evidence of qualification, and being unregistered indicates no lack of skill or ability to cure disease or injury. As a matter of fact the finest and most successful physicians in this country are those who have been educated abroad, and hold foreign honours. There is no more cause for our Registrar refusing to register the death of my last patient than the previous ones, and the fact of his having registered four before is of itself evidence that he ought to have registered this. I have seen him on the subject and he says that all future cases will be reported to the coroner ...... I not being a registered practitioner give a form of certificate used by all medical reformers, and which is received by the Registrar-General as part information of the cause of death. ...... The one reasonable excuse for a Registrar refusing to register a death is its being caused by accident or suspicion of secret murder, or other foul play."

We congratulate the Dewsbury registrar on the resolution which he has announced, and in support of the position which he has taken up rather than with any idea of correcting or convincing "Dr. Haworth," we point out that registration is direct evidence of qualification to pronounce upon the cause of death, while the absence of registration implies the absence of such qualification, if it does not directly prove it; so that a registrar who accepts the so-called certificate of an unregistered practitioner, whether it be given in a form "used by all medical reformers" or not, undertakes a heavy responsibility. From this responsibility he is free if he confines himself to registering deaths only when they are certified upon the official form issued to registered medical practitioners and to no one else, whereas any such practice as that of treating the certificates of the unregistered as "information" is one against which we protest on the ground that it is dangerous to the public. Again, registration is not to be refused only where there has been an accident or where foul play is suspected, but where there is any doubt as to the cause of death. If "Dr. Haworth" has really "yet to learn" the cause of his certificate not being treated as establishing the cause of his patient's death, we may suggest to him that since the registration of the other deaths he mentions it may have struck the registrar that Canada is not a university, and that the description "M.D. and C.M. of Canada" is consequently somewhat indefinite; while he may upon reflection have come to the further conclusion that certificates which may possibly without illegality be treated by a registrar or by a coroner as containing information may at the same time be destitute of any that a prudent man would rely upon.

THE LATE SIR HENRY ACLAND.

THE remains of Sir Henry Acland were interred at Oxford in a grave beside that of his wife on Friday, Oct. 19th. The Prince of Wales sent a wreath of red roses with the inscription "For Auld Lang Syne," and the company which assembled to pay their last tribute to the deceased *savant* was a very distinguished one. In addition to the chief mourners the Royal Society was officially represented by Lord Lister; Oxford University by the Vice-Chancellor and Proctors; Cambridge University by Dr. Clifford Allbutt; the General Medical Council by Dr. J. F. Payne; the British Medical Association by Sir John Burdon Sanderson, Mr. E. Dening (Stow-on-the-Wold), Dr. O. L. H. Pemberton (Banbury), Dr. W. T. Brooks (Oxford), Mr. T. H. Cheatle (Burford), and Dr. W. Collier (Oxford); the Corporation of Oxford by the Mayor, aldermen, and councillors; the Oxford Union Society by the President, Mr. H. T. Baker of New College; and the Oxfordshire Natural History Society and Field Club by Mr. G. Claridge Druce. Amongst others present were Sir Richard Douglas Powell, representatives of the Oxford Colleges, and many representative men in all walks of life. At the conclusion of the first portion of the service, which was held in the cathedral, a procession was formed and the body was conveyed to the cemetery.

A CASE OF SO-CALLED "BROWN-SÉQUARD'S PARALYSIS."

DR. RICHARD WOODS of Philadelphia reports in the *American Journal of the Medical Sciences* for August an interesting case presenting most of the symptoms of unilateral lesion of the spinal cord described by Brown-Séquard, the symptoms being so well marked as to make the diagnosis certain, although the patient came under observation more than one year after the injury The history was as follows. In January, 1898, the patient while leaning over a railing was struck forcibly in the back of the neck with a knife. He fell immediately to the ground and on attempting to rise he found that he could not raise his left leg or left arm. He was dazed but suffered no loss of consciousness. On admission to hospital there were the above symptoms, the temperature, pulse, and reflexes were normal, and he had incontinence of urine. In the fourth week he noticed some restoration of the power of movement in the left hand and during the following week in the left leg. He continued to improve and in the seventh week was able to walk a short distance. The wound in the neck healed by first intention. He was discharged from hospital in two months, being then able to use his left arm slightly and to walk, though in a very uncertain manner, the gait being unsteady and the left leg being dragged in walking. In May, 1899, he went to the Pennsylvania Hospital Dispensary. The knee-jerk was then much exaggerated on the paralysed side, and there was ankle-clonus on the same side. The reflexes in the paralysed arm were also exaggerated. The sensory alterations were very similar to Brown-Séquard's description and were as follows. In the paralysed leg tactile sensibility was increased over the whole limb (hyperæsthesia), while in the non-paralysed leg it was greatly diminished. There was hyperæsthesia to painful stimuli in the paralysed limb, whereas in the opposite limb there was analgesia. Muscular sense was lessened in the paralysed limb but was unaltered in the sound limb. Thermal sensibility was increased in the paralysed limb and lost in the opposite limb. The patient could easily locate a sensory impression in the paralysed limb but could not do so in the non-paralysed limb. In regard to the upper limbs, the alterations of sensibility were similar to those in the legs, with the exception of tactile sensibility which was present on the non-paralysed side, whereas the sensibility to pain was much diminished on the same side. As regards surface-temperature the paralysed leg was much warmer to the touch than the non-paralysed leg, but no change of temperature could be noticed in the arms. The following two points are of special interest. There was loss of motor-power in the arm and leg on the side of the lesion. This was due to the fact that the pyramidal motor fibres were destroyed or severed. There was anæsthesia for all kinds of sensibility (tactile, painful, and thermal) in the leg opposite the side of the lesion. This confirms the original theory of Brown-Séquard that the sensory fibres concerned with those impressions decussated in the spinal cord and passed up along the opposite side of the cord. The loss of muscular sense in the paralysed limb may be correlated with the fact that the muscular sense impressions passed up (along the columns of Goll and Burdach) on the same side of the spinal cord as the pyramidal tract.

LUNACY IN SCOTLAND.

THE forty-second annual report of the Commissioners in Lunacy for Scotland shows that on Jan. 1st, 1900, there were 15,663 insane persons under official cognisance, an increase of 264 over that of the previous year. Of these, 52 were maintained at the expense of the State in the lunatic department of prisons, 2374 were maintained from private sources, and 13,237 by parochial rates, As the average annual increase in the number of pauper patients in the five years 1891-95 was 194, and the increase in the number of pauper patients during 1899 was 235, it will be seen that the latter increase is not a considerable one and that it falls below the increase during the year 1898, which, for causes still unexplained, reached the exceptional figure of 438. Taking, however, quinquennial periods it is found that the average annual increase in the quinquenniad 1895-99 reaches the figure 303 for pauper patients. The number of cases discharged as recovered during the year amounted to 1289 among pauper patients and 250 among private patients. In proportion to the average number resident in establishments during the year, the total recoveries amount to 12·4 per cent. for pauper and private patients inclusive. The total number of deaths among pauper and private patients in establishments during the year amounted to 1099, or 8·9 per cent. as calculated on the same basis. The death-rates varied according to the classes of establishments as follows: in the lunatic wards of poorhouses it was 4·7 per cent., in parochial asylums it was 8·9 per cent., in royal and district asylums it was 9·3 per cent., and in private asylums it was

12 per cent. During the year 186 patients escaped from asylums, and of these all but 20 were captured and brought back within 28 days from the date of escape. Of 93 accidents and casualties which occurred 10 ended fatally, seven of the 10 being due to suicide. During the year 80 private patients were placed in single care and 2703 pauper lunatics were boarded out in private dwellings. The total expenditure for pauper lunatics was £309,356, or £24 2*s* per head.

THE CHARGES AGAINST LONDON HOSPITALS.

A CERTAIN section of the lay press has during the week been attributing ignorance and cruelty of the crudest sort to those responsible for the management, medical and lay, of certain of the London hospitals. Mistakes unfortunately will occur, but those who denounce our metropolitan hospital system are, we are quite certain, ignorant of the number of sick persons who pass through the hands of house physicians and house surgeons and of the proportion of error which results. The proportion is incalculably small, probably less than $\frac{1}{1000}$ per cent. It is unfair as well as grossly stupid to write, as has been done in one or two quarters, as if a certain spirit of inhumanity were innate in hospital management.

ELECTRIC LIGHTING BOARDS.

A VERY decided advance in the incandescent system of electric lighting has recently been made which will add considerably to the convenience and comfort of those using the electric light. By this new method, which is known as he Electric Lighting Board System, an electric lamp may be attached to any part of the wall, ceiling, or table without the impedimenta of sockets, plugs, holders, and a maze of flexible wiring. To switch on a lamp by this system means simply to stick in, so to speak, two pins into a pin-cushion. The electric board may be let into the ceiling or wall or table or floor, and it is only necessary to "prick in" the lamp at any point to obtain the light. The lamps for the purpose terminate in two pin-pricks in place of the usual points of contact which connect the filament with the main wires. Any number of lamps may thus be stuck in the electric board and in any place and the current thus tapped. Instead of plain lamps, standard lamps may also be used with pin-points projecting from beneath the base. The convenience of this system hardly needs pointing out. Everybody is familiar with the difficulty experienced of getting the electric lamp always in the right position. The difficulty occurs in the operating theatre, but by means of the electric board the lamps can be placed in whatever position is required. They can be inserted into the operating table itself. The same system is adapted to strips or cables and a lamp may be placed at any given point and the current drawn off for lighting purposes. Writing tables, again, may be fitted with the electric board and an electric light may be obtained at any point. Mirrors may have their frames fitted with the electric board and lights may be obtained at any point in a similar manner. By means of the electric board also it is easy to obtain definite designs in electric lamps. Thus a word may be easily portrayed on an electric board by placing the electric lamps in such a way as to form letters. All this may be done without wires, sockets, or holders. Many other interesting and convenient applications will occur to different minds, but, in a word, the system may be described as giving the light exactly where it is wanted without any trouble in regard to mechanical fittings at all. A very interesting demonstration of this new and promising system was given at the show rooms and factory of the Electric Lighting Boards Company, [illegible] street, Soho, on Oct. 23rd, when a number of literary and scientific gentlemen watched the new practical experiments with great interest.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

THE board of management of this hospital have recently had under their consideration the matters at issue between themselves and the medical staff of the hospital. As a result they passed on Oct. 17th last the following resolution:—

> That, in view of allegations in the [illegible] interests of the hospital, it is desirable [illegible] with held into the charges formulated [illegible] domestic condition and management [illegible] board should request some independent legal authority to conduct such inquiry.

Mr. Burford Rawlings, the secretary-director of the hospital, has written to the *Times* and in the course of his letter arrives at the conclusion that the system of hospital management in vogue at St. Bartholomew's Hospital "in itself disposes of the suggestion that the board [of the National Hospital] have not given full facilities for the coöperation of the medical staff in all matters concerning the medical work of the hospital." We cannot follow Mr. Burford Rawlings's argument, but there can be no doubt of this: if the National Hospital for the Paralysed and Epileptic is to enjoy the public confidence and scientific prestige which it has hitherto enjoyed and to continue its splendid charitable work among a particularly afflicted class of the poor, the board of management and the medical staff must work together. The obvious method for insuring such coöperation is the placing of seats on the board of management at the disposal of the medical staff.

KOPLIK'S SPOTS IN MEASLES.

IN the October number of the *Yale Medical Journal* Dr. W. J. Maroney of Springfield, Massachusetts, publishes a short paper on his experience of Koplik's spots in an epidemic of measles which occurred in the New York Foundling Hospital in March and April. During this period there were 140 cases of measles in the hospital. In 53 cases Koplik's spots were recognised only at the time when the ordinary eruption commenced, but it must here be explained that the large majority of this group of children did not come under medical observation until after the appearance of the eruption. In 51 cases Koplik's spots were recognised 24 hours before the appearance of the ordinary eruption; in all of the 51 cases the temperature was from 99° to 101° F.; in 35 of them there were slight coryza and conjunctivitis. In 20 cases Koplik's spots were recognised 48 hours before the appearance of the ordinary eruption; at this time the patients had slight fever but no coryza. In four cases Koplik's spots were recognised three days before the appearance of the ordinary eruption; these patients had slight fever but no coryza. In two cases Koplik's spots were recognised four days before the appearance of the ordinary eruption; these patients had slight fever but no coryza. In two cases Koplik's spots were observed but there was no eruption; both of these children were very delicate; hyperpyrexia and other symptoms of grave import intervened and death occurred in a few days. In eight cases Koplik's spots were not observed; four of these children were marasmic with very dry mouths; two had aphthous stomatitis covering the mucous membrane. It will thus be seen that in 79 cases Koplik's sign was present before any eruption appeared on the skin. In only two of the 132 cases in which Koplik's spots were observed did the characteristic eruption of measles fail to appear. Dr. Maroney, therefore, considers that Koplik's spots are pathognomonic of measles and enable the disease to be recognised at an early stage. These spots occur on the buccal and labial mucous membranes. They were first described by Flindt in 1884. In 1898 Dr. Henry

Koplik published his account of them in the *Archives of Pediatrics* He described them as "small, irregular spots of a bright red colour; in the centre of each spot is .. ... a minute bluish-white speck. There may at first be only two or three or six such rose-red spots with bluish-white speck in the centre."

"THE CONDUCT OF SANITARY INSPECTORS IMPUGNED."

IN THE LANCET of Dec 16th, 1899 (page 1681) we mentioned that a book entitled "The Revival of British Agriculture" had been published by Mr. Peter Anderson Graham, who had thought fit to make some very remarkable allegations against inspectors who are appointed to collect samples of food under the Food and Drugs Act. He said that they winked at milk adulteration, sent dairy-keepers previous notice of their intended visits, and received cheques from them. Sanitary inspectors, for their part, promptly resented these imputations The next issue of THE LANCET (page 1774) contained a letter signed by four sanitary inspectors for the vestry of Chelsea pointing out that the libel was a serious one and that investigation was urgently required. Mr Graham seems to have maintained an impenitent attitude until he appeared in the Central Criminal Court on Oct 23rd charged with having published certain alleged libels concerning the sanitary inspectors of England in their capacity of inspectors. The prosecution was instituted by the Sanitary Inspectors' Association. No evidence was offered, for the defendant's counsel said that he expressed regret, withdrew all the statements complained of, and apologised. The jury then returned a formal verdict of "Not guilty" and the defendant was discharged. It was cruel of Mr. Graham to cast wholesale aspersions on a meritorious class of public officials and contumelious of him not to retract the same until he was compelled. And such conduct does harm in another way. Mr Graham's ignominious collapse will tend to give genuine evildoers a sense of security.

HERPES ZOSTER WITH A GENERAL ERUPTION

SOME time ago we called attention in an annotation[1] to the "aberrant vesicles of herpes zoster" described by French dermatologists—isolated vesicles found disseminated over the body in cases of herpes zoster and similar herpetic vesicles. In 1898 M. Tenneson, after a careful study of the subject, said that if the entire skin of patients suffering from herpes zoster were examined every day these "aberrant vesicles" would be found in nine cases out of 10. In our annotation we remarked that this statement by the well-known dermatologist of the St Louis Hospital was startling, for these vesicles had never, so far as we knew, been observed in this country Subsequently[2] a correspondent called our attention to the fact that they had been observed in "An Unusual Case of Zona," published by Dr. W. A. Mackay in the *Glasgow Medical Journal* for October, 1897, which appears to have been the only case on record in English medical literature at the time Later, in the *British Medical Journal* of Feb. 11th, 1899 (p 388), Mr. W. L. Ffrench described the case of a man, aged 60 years, who had severe intercostal herpes, constitutional disturbance, and a temperature of 100° F. Scattered over his face, arms, and abdomen were a number of vesicles Varicella complicated with herpes had been diagnosed, but Mr. Ffrench was not satisfied with the diagnosis. Upon reading a description of these "aberrant vesicles" he recognised his case as an example. In the *St. Bartholomew's Hospital Journal* for August two cases of herpes zoster with a general eruption are published by Dr. J. A. Arkwright. In Case 1 a man, aged 23 years, had a typical eruption in five patches—(1 and 2) over the outer half of the spine of the right scapula, (3) an oval patch reaching from the middle of the right clavicle to a point three inches above the nipple, (4) over the biceps, and (5) in front of the right elbow. Scattered over the body were a few spots similar to those constituting the herpetic patches—viz, two papules just below and behind the lobule of the right ear, a vesicle over the middle of the sternum, and a vesicle over the sixth rib. On the third day the herpetic patches were healing, but another vesicle had appeared on the abdomen The herpes was thus distributed in the areas of the clavicular and acromial branches of the supra-clavicular nerves, the circumflex nerve, and the internal cutaneous nerve. In Case 2 a man, aged 60 years, had herpes in nearly the whole area supplied by the ophthalmic division of the right fifth nerve, and in part of the areas supplied by the superior maxillary and auriculo-temporal branches. On the fourth day a general eruption composed of spots like varicella vesicles was noticed Each consisted of a clear vesicle of about the size of a hempseed with a red line round the base. These vesicles were scattered sparsely over the neck, chest, arms, and abdomen There were about 20 in all On the seventh day a few vesicles had appeared on the lower limbs, the temperature being 101 8° F. Convalescence was slow, extensive ulceration in the right frontal and parietal regions took place, and an ulcer formed on the right cornea Dr. Arkwright remarks that the "aberrant vesicles" are difficult of explanation, but Landouzy's hypothesis that herpes zoster is but a local manifestation of a general infection, which we have advocated, at once explains them. If this view be accepted the difficulty lies in explaining the local and not the general eruption. But such a local result from a general intoxication occurs, as is shown by the existence of arsenical herpes

THE LATE MARQUIS OF BUTE AND MEDICAL CHARITIES.

THE late Marquis of Bute during his lifetime was a munificent supporter of hospitals and the assistance he gave, although unostentatiously rendered, was bestowed with no sparing hand. In the year 1881 he established at Aberdare in South Wales an accident hospital with accommodation for 14 patients and the whole cost of the institution has since been borne by the Marchioness of Bute. Two years later Lord Bute erected a cottage hospital of about the same size at Cumnock in Ayrshire, and under the terms of his will his heirs are directed to maintain both these institutions. At Cardiff for many years past H M S *Hamadryad* has done duty as a seamen's accident hospital and excellent work has been done between the decks of this hulk. With beds always occupied and cramped space precluding the possibility of extension there was felt to be a few years ago an absolute necessity for more room and it was decided to erect a building close to the docks, with accommodation for at least 70 patients at an estimated cost of £30,000 Towards this sum Lord Bute offered £10,000 conditionally upon other sums being raised. These conditions were fulfilled, but the managers of the institution were under some anxiety as to their ability completely to carry out their original scheme in its entirety This anxiety has now been removed for Lord Bute has bequeathed a further sum of £10,000 towards the building, provided it is needed. Some concern has been shown with respect to a stipulation which accompanies this particular bequest, which reads: "I further direct and request my trustees upon the said hospital being completed to arrange that the sick received in the said hospital shall be served by sisters of some Roman Catholic religious order, if such an arrangement can be made." In this connexion it may be remarked that hitherto the nursing upon the *Hamadryad* has been almost exclusively performed by male nurses.

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[1] THE LANCET, Sept. 24th, 1898, p 822.
[2] THE LANCET, Oct. 8th, 1898, p 970

"LIQUEURS."

THOUGH the taking of a "liqueur" after dinner may not be a pressing necessity, yet it is probably a physiologically correct proceeding apart from the question of the wholesomeness of the individual constituents of the sweet aromatic spirituous liquid. Liqueurs are, of course, decidedly stimulating and they induce a sense of warmth and comfort after a meal which may mask any feeling of gastric discomfort that might otherwise be experienced. This effect, however, is due to some extent to the spirit, but more particularly it may be referred to the aromatic oils. The oils of aniseed, absinthe (wormwood), cinnamon, caraway, &c, and most other aromatic oils, are carminative and soothing, and therapeutically these come under the general description of stomachics. The liqueur is not necessarily a product of distillation so far as its aromatic ingredients are concerned. The distilled products, however, are probably preferable to mere spirituous infusions from the dietetic point of view. Chartreuse and Benedictine are distilled from a mixture of various natural aromatic substances, many of which, it is said, are contained in the British Pharmacopœia. Kümmel, again, is distilled from caraway seeds and many authorities consider that this liqueur is the most wholesome. The colouring matters used in liqueurs are, of course, added, amongst the substances used being Prussian blue, sulphate of indigo, burnt sugar, spinach or parsley green, cochineal, logwood, saffron, and turmeric. Chloroform, it is said, is often a constituent of liqueurs and internally chloroform has a marked sedative action on the stomach and is an antispasmodic. Amongst other constituents used in the formulæ of liqueurs obtained by simple infusion are aloes, spirit of nitrous ether, acetic ether, and ammonia. It is not to be supposed that the best ingredients are necessarily added, since any imperfections would not be obvious to the palate on account of the powerful nature of the aromatic oils. Certain celebrated liqueurs have, as is well known, an interesting and classic history and the secrets of their manufacture are still most jealously guarded. Doubtless these liqueurs had their origin in the fact that their chief effect was that of a carminative during digestion owing to the aromatic oils.

PULMONARY STENOSIS: A VERY RARE FORM OF CARDIAC DISEASE.

STENOSIS of the pulmonary artery is one of the least frequent of cardiac lesions met with in practice. Dr. A. Kasem-Beck, in a recent issue of the *Centralblatt fur Innere Medicin* (No. 23, 1900), reports a very rare and interesting case of acquired stenosis of the pulmonary artery—a condition that is difficult to diagnose. The case was that of a man aged 50 years who suffered from cardiac trouble, with a systolic thrill felt over the cardiac area and most distinctly perceived in the second left intercostal space over the situation of the trunk of the pulmonary artery. There was a general increase of cardiac dulness and auscultation revealed a marked systolic murmur which was heard over the cardiac area, but most loudly in the second left intercostal space close to the sternum. A slight diastolic murmur was also present in the second right intercostal space and at the middle of the sternum. The pulmonary second sound (associated with the closure of the valves) was not accentuated. From the position and character of the systolic murmur it was at first thought to be due to mitral regurgitation. The patient died, however, and the necropsy revealed a stenosis of the pulmonary artery, the lumen of which was narrow, while the intima was rough and uneven and beset with nodules and scars close to the pulmonary valves. Microscopical examination showed these nodules to be of gummatous character. The pulmonary valves were partially adherent to these growths, the mitral valves showed a slight degree of incompetency, while the tricuspid valves were thickened and fibrous. The pulmonary arterio-valvular condition was the most marked lesion present. Dr. Kasem-Beck points out the difficulty of diagnosing between such a pulmonary stenosis and mitral regurgitation, because if a diagnosis of pulmonary stenosis should be made on signs and symytoms such as those above given, it would in nine cases out of ten turn out to be incorrect and mitral regurgitation would be found to be present instead. The presence of a history of syphilis would, however, render a diagnosis of pulmonary arterial lesions relatively more likely.

REFORM IN THE BRITISH MEDICAL ASSOCIATION.

AS is well known to our readers a committee was appointed at the late annual meeting of the British Medical Association at Ipswich to "consider and report upon the best means of re-organising the constitution of the British Medical Association, such committee to furnish a provisional report to the branches by Feb. 1st, 1901." This Constitution Committee, which consists of Dr. A. G. Bateman, Dr. R. C. Buist, Mr. H. T. Butlin, Professor J. W. Byers, Mr. James Cantlie, Mr. Andrew Clark, Dr. J. Ward Cousins, Dr. H. R. Crocker, Dr. Alfred Cox, Dr. C. G. Gooding, Dr. W. Gordon, Surgeon-General J. B. Hamilton, Mr. Victor Horsley, Dr. J. C. McVail, Dr. C. H. Milburn, Sir John W. Moore, Mr. C. G. D. Morier, Mr. Edmund Owen, Dr. A. Brown Ritchie, Dr. R. Saundby, Dr. J. Roberts Thomson, Mr. T. J. Verrall, Mr. J. S. Whitaker, and Dr. S. Woodcock, met on Tuesday, Oct. 23rd, in the council room of the British Medical Association, Strand. Mr. Edmund Owen was appointed chairman and Dr. R. Saundby (Birmingham) deputy-chairman. The committee spent a lengthened period in carefully considering preliminary details in reference to the scheme of re-organising the Association.

THE TREATMENT OF METACARPAL FRACTURES.

IN a recent number of the *New York Medical Journal* Dr. Carl Beck describes an ingenious method of treating metacarpal fractures. The use of the x rays has shown that these fractures are not so uncommon as was supposed. Previously they were often diagnosed as dislocations or contusions. As there is usually no displacement, the other metacarpal bones acting as splints, the results under any treatment are usually good. In cases of displacement the result may be different. When the displacement is dorsal it is easily recognised and after reduction the fragments can be kept in place by splints, but in lateral displacements the results may be unsatisfactory, considerable deformity and loss of function resulting. In patients who perform delicate work with the hands, such as musicians, watchmakers, cabinet-makers, &c., a badly united fracture may prove a serious hindrance. Reduction is easy, but skiagraphy shows that under the usual methods of treatment the displacement quickly recurs. Experiments made by Dr. Beck show that in a case of fracture of a metacarpal bone the fragments can be held in place by two rubber drainage-tubes lightly pressed into the adjoining interosseous spaces so that they partly fill them up. The tubes can be kept in position by strips of adhesive plaster. The whole is surrounded by a "moss splint," a material which, after being dipped in cold water, adapts itself to the contour of the hand like a plaster-of-Paris splint, over which it possesses the advantages of being absorbent and much lighter. In one case a young man sustained fracture of the fourth metacarpal bone on striking a blow. There was considerable lateral displacement Reposition was easy. The fractured area was surrounded by narrow pads which were supported by adhesive plaster, and a long palmar extension splint was applied. Two weeks later the fragments were found to have slipped away from one another. After filling up the third and fourth interosseous spaces with rubber drainage-tubes a skiagraph showed perfect apposition of the fragments. On removing the tubes the displacement recurred.

DRUNK OR DYING?

ANOTHER of those unfortunate errors in judgment associated with the death of the person most concerned was the subject of inquiry by the East London coroner, Mr. Wynne Baxter, on Oct. 18th. The error in this case was primarily that of a police-constable and the person who died was Mr. Alexander Thomas, a cork merchant. The widow of the deceased said that he left his home on Sept. 27th to go to Broadstairs on business. He was expected home on the same night but did not arrive. On Sept 28th she received a telegram asking her to meet him at Snow-hill station. She did so and noticed that he complained of his head and seemed dazed. He informed her that he had been locked up, charged with being drunk, and fined at Broadstairs. He himself said that he was not drunk but had been taken ill and had fallen down while running to catch a train. He was taken home, attended to by Mr. F. J. Oxley, and died on Oct 17th. A police-constable said that he saw the deceased staggering towards the railway-station at Broadstairs. He fell down three times and cut his head A cab was sent for to take the deceased to the railway, but he said that he was all right and knew where he was going A medical man was called who expressed the opinion that he was the worse for drink, so he was taken to the police station. According to the report in the *Evening Standard* of Oct 18th the coroner here said to the constable, "Did you know that his skull was fractured?" to which the constable answered "Yes" Deceased was locked up and a medical man saw him on the next morning A careful examination was made but no fracture was found. Blood was oozing from one ear and the medical man suggested that deceased should go to the hospital but he refused. He was charged before the magistrate and fined 5s. Mr. Frederick J. Oxley said that he saw the deceased for the first time on Oct. 1st He was very ill and witness diagnosed fracture of the skull. On Oct. 16th deceased became comatose and died on the 17th. A post mortem examination confirmed the diagnosis. Witness thought it was probable that the deceased had suffered from cerebral hæmorrhage previously to the fall, which would account for his staggering about Another almost exactly similar case formed the subject of inquiry before Mr. G P. Wyatt on Oct. 22nd except that the patient after having been locked up from 10 P.M. on Oct. 13th was sent to the infirmary about 6 A.M. on Oct. 14th, where he died on Oct. 16th. Now these are just the cases in which an accurate diagnosis is practically impossible to make off hand. As to the constable who is reported to have said that he knew the deceased to have had a fractured skull, he either did not understand the coroner's question or he had no idea of what a fractured skull was. Probably he thought it was the same thing as a cut head. The name of the medical man who saw deceased first is not mentioned, but he seems to have advised somewhat imprudently. We cannot too often repeat that a man who is seen to stagger, to fall down, and to cut his head, and who is picked up in a dazed condition, may be suffering from one or more of a variety of conditions. He may be simply under the influence of some drug—alcohol, opium, or chloral; he may be suffering from uræmic coma; or he may, as was probably the case in this instance, have a cerebral hæmorrhage. Finally, the drug-poisoning, the uræmic coma, and the cerebral hæmorrhage may co exist. All these conditions are antecedent to the fall and would make the man dazed whether he fell or not. Secondly, the fall may daze him from simple concussion; it may so seriously injure the base of the skull as to bring about a large effusion of blood; or it may have no effect at all. It is absolutely impossible to differentiate accurately between all these conditions without a most careful examination, and generally a decided opinion cannot be given except after the lapse of a few hours. Ignorant and blameable as the conduct of the police was we do not think that any treatment, however skilled, could have averted the fatal result, but none the less the carelessness was inexcusable.

A SEVERE CASE OF ALVEOLAR ABSCESS.

AN interesting case of extensive suppuration due to a tooth is recorded in the October issue of the *Journal of the British Dental Association* by Mr. Alfred Kendrick. The patient, a man, aged 22 years, was first seen in May, when he stated that a year previously the left mandibular first molar had been fractured during an attempt to remove it. When seen by Mr. Kendrick a serious condition existed. The left eye was completely closed, both eyelids being extremely swollen, and pus was escaping freely from a sinus in the lower orbital margin and from the upper eyelid. A large sloughy opening was present in the centre of the cheek and there were several sinuses along the border of the mandible. There were sinuses near the clavicle and a large one over the sternum. The pus had burrowed upwards alongside the ascending ramus into the temporal fossa, so that the whole temporal region was œdematous The tooth was removed, but as the patient did not show signs of recovering it was decided to open up the various sinuses. These were scraped and packed with iodoform gauze, the patient making a steady recovery. The case is interesting as an example of the extensive suppuration which may occur in connexion with teeth.

HYPERTROPHIC GONORRHŒAL OSTEO-PERIOSTITIS OF THE FEMUR.

AT the meeting of the Société Médicale des Hôpitaux of Paris on July 27th M. Edgard Hirtz described a case of this rare condition. A girl, aged 19 years, in the third month of gonorrhœal rheumatism showed a considerable swelling of the lower two-thirds of the right femur. The bone was more than double its normal volume. The consistence of the swelling was such that it suggested hyperostosis, but a skiagram showed that it contained very little bone and that the process was principally a hypertrophic periostitis. The swelling was quite indolent, had developed insidiously, and was noticed only by chance. At the same time arthritis of the right knee and leucorrhœa still persisted. Salicylate of soda and iodide of potassium were given without effect. M. Hirtz insisted on the rarity of this form of gonorrhœal hypertrophic periostitis of which the symptomatology and evolution were profoundly different from the gonorrhœal periostitis usually observed in the epiphyses and small bones of the hands and feet.

THE Harben Lectures of the Royal Institute of Public Health for 1900 will be given by Professor A. Calmette, M.D., Directeur de l'Institut Pasteur de Lille, on

THE WAR IN SOUTH AFRICA.

THE military situation is unchanged. Ex-President Kruger has left for Europe and marauding bands of Boers still hold the field.

It may be remembered that Mr. T. W. Edmunds, honorary secretary of the Durban Government hospitals, some time ago wrote a long and strongly condemnatory letter to a contemporary in which he charged a number of army medical officers with incompetency, and medical orderlies with brutality, and alleged a criminal lack of invalid accessories. He also stated that if the Commission were honestly desirous of getting at the truth evidence enough would be forthcoming to convince the most sceptical. It would hardly be believed that when called as a witness and confronted before the Royal Commission with these allegations he was unable to substantiate one of them, but such, according to the *Cape Argus* of Sept. 21st, was the fact. He had to confess that he had no personal knowledge and was going entirely on hearsay evidence. It is needless to add that he had to withdraw all he had said. Lord Justice Romer had not, however, done with him, but called his attention to the statement regarding the honest desire of the Commission to get at the truth. He withdrew this also. As the witness could give no information the President said there was no use in hearing unsubstantiated general statements.

In the report which we gave in our last issue (p. 1167) of the very interesting address of Professor Chiene, outlining his experiences as a consulting surgeon in South Africa, which he delivered in opening the winter session of the class in surgery in the University of Edinburgh, we notice among other things that he touched upon the subject of enteric fever and its causation. Speaking of what he had heard of the serious illness of comrades and friends attacked with this fever or suffering from dysentery Professor Chiene said: "Norval's Pont had been an important camping ground since Oct. 1st and was covered with dried enteric and dysenteric dejecta. Dust-storms drove the poison into every nook and cranny of tents and huts. From the very first every precaution had been taken, but it was no question of water or milk. It was one of dust and flies."

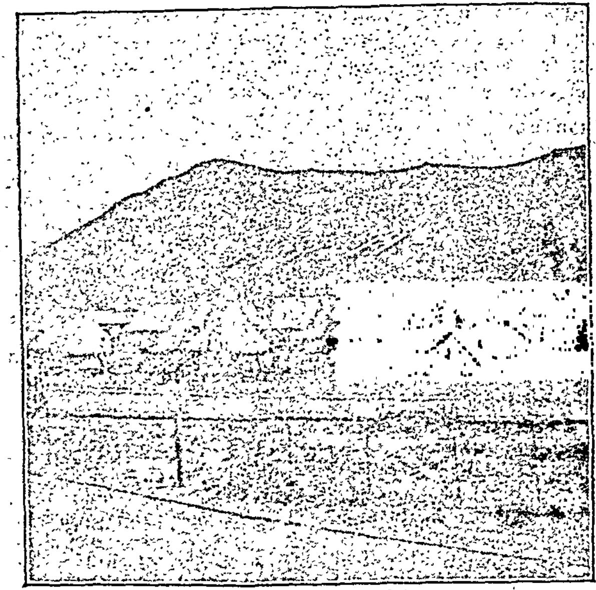
A TRIP FROM CAPE TOWN TO KROONSTADT.

(FROM OUR TRAVELLING CORRESPONDENT.)

I have just had a very pleasant and interesting trip in No. 5 Ambulance Train which enabled me to pay flying visits to all the larger military hospitals on the lines of communication between Cape Town and Kroonstadt—a distance of upwards of 800 miles. The train ran up to Kroonstadt with a large quantity of Red Cross, medical, and "Field Force Fund" stores for distribution at various stations, "loaded"—i.e., took on 96 sick and wounded—at Kroonstadt, and then ran back to Norval's Pont to unload.

Leaving Cape Town in the evening we reached Deelfontein, 30 miles south of de Aar, on the next afternoon. The train stopped here for nearly an hour, right in the middle of the Imperial Yeomanry Base Hospital, which at this point bestrides the line, the wards and administration huts being on the west side and the staff and convalescent annexe tents on the east. Colonel A. T. Sloggett, R.A.M.C., commandant, and Mr. H. A. Ballance, chief of the surgical staff, very kindly showed me over their magnificent hospital, of which they are justly proud. The Yeomanry Hospital has been so frequently described and lauded in the medical press that I need not weary your readers with a detailed description. It must be remembered that it is a *base* hospital, that it has not had to contend with the transport difficulties of hospitals farther up country, and that its treasury is always overflowing. There were 997 cases under treatment (this includes the convalescents in the bell-tent annexe) at the time of my visit. The serious cases occupy the wards (partly huts and partly tortoise tents) on the western side of the line, while the convalescents, the staff, and the orderlies live in bell-tents on the eastern side. Patients have not only every comfort, but every luxury imaginable and the administration of the hospital had been reduced to an exact science under the benevolent despotism of Colonel Sloggett, the tactful and popular commandant. Mr. Fripp has gone home and his place as surgeon-in-chief has been taken by Mr. Ballance. The site of the hospital—a narrow strip of ground under a high kopje—is not an ideal one, necessitating as it does crossing the railway main line to reach the convalescent and staff camps and cramping the huts and marquees rather closely together. The beds in some of the huts and tortoise tents appeared to me to be somewhat too near each other. Convalescent officers mess with the hospital staff. I think it is a pity that this practice has been adopted, as it is an objectionable one from many points of view; however, it seems ungracious to pick out slight defects in this splendid institution.

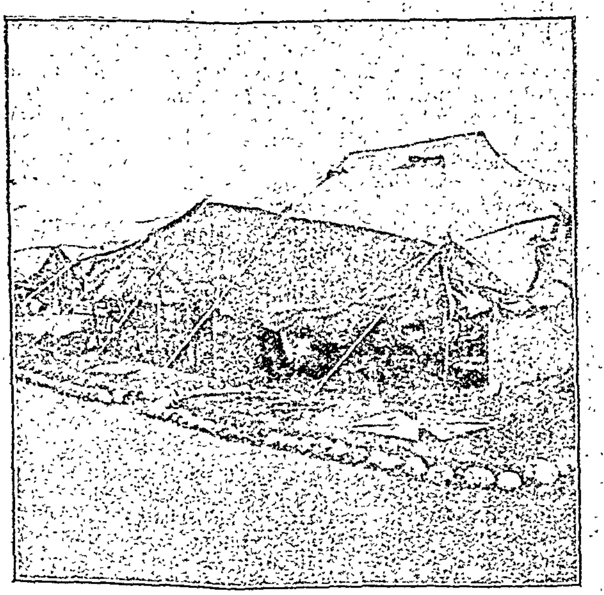
FIG. 1.



Imperial Yeomanry Hospital. General view of site at Deelfontein.

At De Aar and Naauwport I paid brief visits to the hospitals—No. 3 Stationary Hospital at De Aar, under Major J. W. Cockerill, R.A.M.C., 290 beds; and the section of No. 6 General Hospital at Naauwport, under Major Hassard, R.A.M.C., 150 beds. In both hospitals there were many vacant beds. I was very favourably impressed with the neatness, cleanliness, and general efficiency of both.

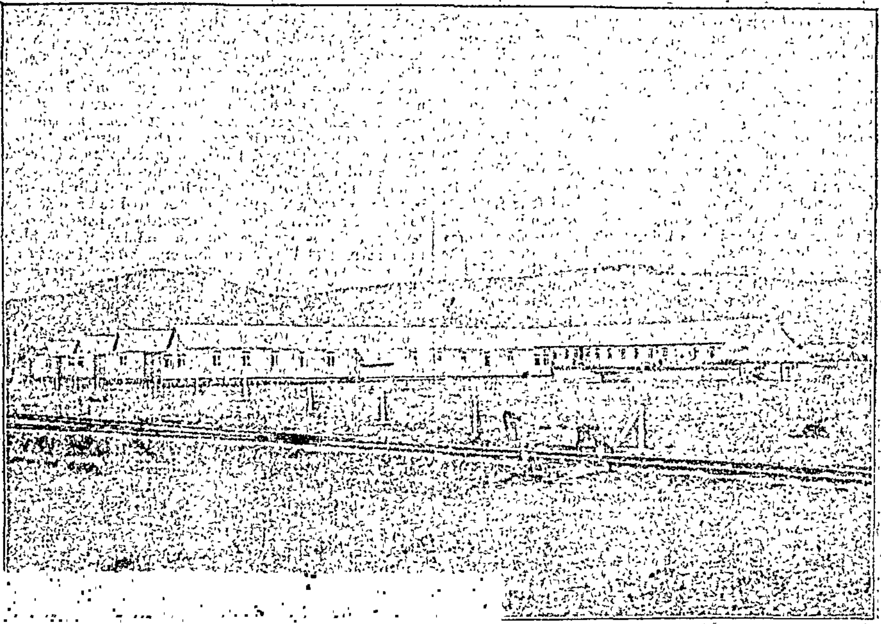
FIG. 2.



Imperial Yeomanry Hospital. Nearer view of a tent.

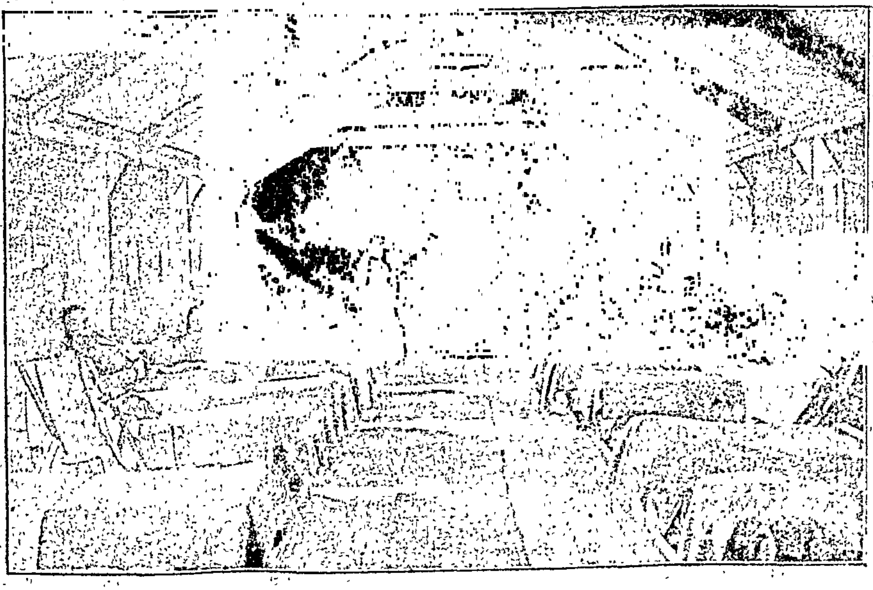
At Norval's Pont on the Orange river our train made a

FIG. 3.



Edinburgh Hospital, Norval's Point.

FIG. 4.



Edinburgh Hospital. Interior of a ward.

long halt. Here there is a large convalescent camp accommodating over 1000 men who all seemed very happy and comfortable. The camp is some distance from the station. Close to the station, with which it communicates by a special siding, is the pretty little Edinburgh Hospital, which by universal consent is believed to be the most perfect of its size in South Africa. Sir James Clark, commandant (since gone home), took me over the hospital and explained the entire system of working. Situated on an excellent dry site to the west of the line the hospital proper is composed of four long wooden single storey huts, raised from the ground so as to allow free passage of air beneath, and roofed with corrugated iron; the roofs are lined with white and the walls with green canvas. Each hut is divided into two wards of 20 beds each; between the wards are rooms for nurses and orderlies, and at the ends sculleries, urinals, and water-closets (dry earth system). The four huts are parallel with each other, the windows facing south-west and north-east. Verandahs were being built at the time of my visit and these will prove a distinct acquisition in the approaching hot weather. The interior of the wards is bright and cheerful to a degree; flowers, books, and papers strew the tables, and the walls are tastefully decorated with pictures. Each patient has a large bed-side table for his little belongings and lies on a comfortable "Abercrombie" bed. Space is more than ample and the hospital could easily take 20 more beds without overcrowding. Behind the wards is another large hut for the medical and nursing staff and dressers, with separate huts for kitchen, general, pack and medical stores, surgery, soda-water factory, and electric plant. The whole hospital is lighted by electricity. The latrines, a washhouse, and a disinfecting hut are situated well away from the hospital to the west. The water-supply, from a deep artesian well, is pure and practically inexhaustible. The hospital has its own electrical engineer who also manages the soda-water factory, its own resident builder, and a small corps of Kaffir ladies who do all the hospital washing. The operating theatre is somewhat small, and hot and cold water are not laid on; but as serious surgical operations are infrequent this defect is not a very important one. On the whole, the Edinburgh Hospital is practically perfect of its kind and Scotsmen may well be proud of their gift to the nation.

After a short halt at Springfontein, where I only had time to admire from a distance the mathematical precision of the lines of Colonel Duke's hospital (half No. 3 General Hospital), we reached Bloemfontein late at night, 50 hours after leaving Cape Town. Here I was informed that Professor J. L. Notter, Dr. Simpson, and Major Bruce, of the Enteric Fever Commission, had arrived and had commenced work. I have already in a former letter[1] given a fairly complete sketch of the Bloemfontein hospital arrangements. The Principal Medical Officer of the Army, Surgeon-General W. D. Wilson, has his headquarters here, but he hopes soon to transfer them to Pretoria. The Hospitals Commission left Bloemfontein for the north just as we arrived, in a magnificent special train adorned with huge red crosses. All who have attended the sittings of the Commission are agreed that so far the Royal Army Medical Corps has come out of the ordeal unscathed and that there is every ground for believing that the ultimate finding of the tribunal will convey an adequate recognition of the services of military and civilian surgeons out here.

Kroonstadt was reached late on the next night, exactly three days' journey from Cape Town. The hospitals here, No. 3 General Hospital and the Scottish Hospital, cannot be dismissed in a few words, and as my letter is already a lengthy one I propose dealing with them in a subsequent communication.

Kroonstadt, Sept. 19th.

"BIAS IN CLINICAL MEDICINE."

DR. JUDSON S. BURY of Manchester delivered an interesting address on the above subject on Oct. 17th, to the members of the Medical Society of University College, London, on the occasion of the society's annual public night held at University College. Dr. Bury said that as students and medical men one of their main duties was the examination of patients. His experience was that this was not always done in a satisfactory manner. There was need for more care; the examination was too often carried out in a perfunctory manner. For example, they found bronchitis and thought that that was a complete diagnosis, but they omitted to consider the aching pain through the left side of the chest which the patient had mentioned several times and which, as the necropsy showed, was due to an aneurysm of the descending portion of the aorta. The bias of bronchitis had entered the mind and its door was closed to the consideration of other symptoms. The customary use of the word "bias" was in accordance with its original meaning and a person was said to look at things in a biased manner or obliquely. The causes of bias were partly congenital and partly acquired. As an example of congenital bias Dr. Bury gave a description of a medical student afflicted with this peculiar mental blindness at work in the wards of a hospital. He appeared to have no idea how to proceed when asked to examine a patient whom he regarded as a strange foreign animal, and exhibited a distinct mental bias against approaching him too closely. When persuaded to go near the patient and prompted with certain questions to ask the patient he repeated the queries and although intelligent answers were given him they did not seem to afford his brain any guide as to the mode of procedure. Education might do something for this type of student, but the mental bias against scientific method was too strong for much success to be attained. By acquired bias was meant a condition that might affect the mind of good average development and promising scientific aptitude. One of the chief causes of this was imperfect education allowing the mental faculties to work in a fixed groove. Sir J. Russell Reynolds used to tell how once at the practical examination in medicine for the London M.D. he asked the candidates after they had examined one of the skin cases if they noticed anything else wrong with the patient and most of them failed to observe that one side of the face was completely paralysed. They were biased in favour of skin lesions and could not observe anything else, but if they had been told that it was a nervous case the facial paralysis would not have escaped their notice. The cure was to have a detailed methodical scheme and when anyone felt nonplussed over a case to be sure that all the headings of the scheme had been gone through. Another form of bias was the bias of authority, by which term was meant all statements with regard to disease and its terminology to be found in the best medical literature. It seemed paradoxical to affirm that the knowledge of disease already gained acted in some degree as a retarding agent, yet there was an element of truth in such a statement. A fresh discovery in medicine might turn the mind too much in one direction and destroy the comprehensive view necessary for real progress. All authoritative statements, even the names of diseases, might in a sense be regarded as productive of mental bias; the remedy was to strive to acquire a scientific habit of mind. If an original investigation was made into the classification of diseases into curable and incurable and observations were made with regard to the course and termination of morbid processes it was found less possible to draw sharp distinctions between curable and incurable diseases. In illustration of this Dr. Bury quoted a case of his own of a girl who exhibited definite objective signs of brain disease, which were observed and verified both in Manchester and in London. All the symptoms entirely passed away and the patient regained her sight and health and was able to resume her occupation. Such experiences tended to modify their views in two directions: they made them more careful in the treatment of ailments that tended to recovery and more hopeful regarding those which, as a rule, pursued a downward path. Proceeding further, Dr. Bury said that the bias of inclination was especially dangerous, and it came to the front in reports of cases and in essays and monographs on special diseases. The specialist, perhaps unconsciously, did not give full consideration to features which pointed to another conclusion—he regarded these as exceptional, and laid stress on facts which favoured what he wished to believe and ignored facts which told against his inclination. It was necessary to remember that having decided in favour of a particular diagnosis their mind must not be closed to the possibilities of future developments. The bias of specialism was another danger to be guarded against; a division of labour was necessary for the advancement of any science, but if energy was concentrated in a particular direction it

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[1] THE LANCET, August 25th, 1900, p. 601.

[illegible] there. It was desirable, [illegible] rain his tendency towards [illegible] to curb his ardent desire to cut or scrape the throat of every child who was brought to him. The last bias which Dr. Bury described was the bias of physical signs. A patient was not an automatic machine into which a penny could be dropped to pull out a particular disease ready for treatment. On the contrary, the organs by which he moved and lived were composed of living tissues which had a past history and a future development, both of which required consideration before the case could be properly grappled with. The thoughtful qualified man [illegible] The man who got into a habit of regarding every patient as merely a "case" and who ignored the look of feebleness or of distress, or the expression of anguish, and thought only of physical examination, was not well equipped for the diagnosis of obscure disease—he became a machine which was totally unable to unravel the complicated problem of human pathology. Three things were essential for the preventive treatment of the disorder known as bias—namely, care, doubt, and truth, and if one thing helped more than another to avoid the pitfalls of bias and of hurried unscientific work it was that practitioners should put themselves in sympathy with their patients and that they should care for them in the way that Dr. James Jackson, the hero of Oliver Wendell Holmes, cared for his patients. Jackson would have it that to cure a patient was simply to care for him. Such devotion was only to be looked for in the man who gave himself wholly to medicine, the noblest of arts which the gods of ancient religions did not disdain to practise and to teach.

ASYLUM REPORTS.

Warneford Asylum, Oxford (*Annual Report for 1899*).—This institution, intended for the care and treatment of patients of both sexes belonging to the upper and middle classes of society, does not receive patients suffering from idiocy, epilepsy, or paralysis. The regular terms of admission are £2 2*s.* a week, but the committee of management have power to alter these terms at their discretion. The average number of patients resident during the year was 91, and comprised 42 males and 49 females. 15 cases were admitted in the year, nine being males and six females. Dr. James Neil, the medical superintendent, states in his report that one of the patients admitted had been a patient in the asylum on a previous occasion. 12 patients were discharged during the year, and of these eight—viz., four men and four women—were regarded as recovered, a proportion equivalent to 13·1 per cent. of the average number resident. The patients who recovered were in nearly every instance recent cases and none of them were admitted farther back than 1898. Two voluntary boarders were admitted suffering from a narcotic drug habit but have been restored to health. It is said to be doubtful, however, whether they may not relapse to their vice on exposure to temptation, "and the difficulty in treatment is to persuade them to submit to restraint long enough for the power of resistance to be established." There were five deaths during the year, a total of 5·5 per cent. of the average number resident, the respective causes being general paralysis, pachy-meningitis, pneumonia, organic brain disease, and senile decay. A large clerical element is present in the population of the asylum. Thus of a total of 108 patients under treatment during the year 30 were clergymen or the wives, widows, or children of clergymen. Regarding the tendency to overdo amusements, theatricals, &c., for patients Dr. Neil observes that while amusement is certainly an important means of brightening asylum life in some quarters at the present day it is overdone. "As a measure of treatment suitable and regulated work is more useful than amusement. For patients of the male sex there is no work equal to that afforded by a farm or garden....... Female occupation, such as needlework, has the disadvantage of being indoor employment and of requiring a sedentary and stooping attitude," but it is possible occasionally to persuade lady patients to do a little light work in the laundry. The committee of management state in their report that the financial position of the asylum is satisfactory and that improvements and alterations are made for rendering more agreeable the accommodation of patients. A reconstruction of the lava- [illegible] staircase for use in case of fire has been provided for the ladies' upper ward in the new building at the instance of [illegible]. The committee has been in [illegible] the purchase of about [illegible] Asylum. The increasing [illegible] has suggested to the committee the propriety of encouraging a special link between them and an asylum [illegible] with the Medical Sch [illegible] Commissioners in th [illegible] work is done in keeping private patients at the low rates current in this institution. "Many patients live here who, but for the advantages given by this hospital, would have to be cared for in a pauper asylum." The case-books are said to be [illegible] the care and [illegible]

W[illegible] (*Annual Report for 1899*).—The average number of patients resident during the year was 125 and comprised 52 males and 73 females. 28 cases were admitted during the year, 16 being males and 12 females. 25 of the 28 cases were first admissions. Dr. P. Maury Deas, the medical superintendent, states in his report that as regards the character of the cases admitted 18 could be regarded as affording more or less hope of recovery, while the remainder were hopeless from the first—five from the long duration of the malady, three from organic brain disease, and two from old age. In seven cases the bodily health and condition on admission were decidedly bad, while in 11 there was impaired health of various kinds. In 15 cases the chief cause of the mental trouble was considered to be conditions affecting the bodily health. Among other factors of causation three were due to overwork in young students, in nine the malady was due to anxiety, worry, and other emotional causes, and two were directly traceable to intemperance. In 11 cases heredity was traceable and in nine the contributing influence of former attacks existed. As regards the results of treatment, the number of patients discharged as recovered during the year amounted to seven (three males and four females), or 5·6 per cent. of the average number resident. The deaths numbered six (five being males and one female), or 4·8 per cent. of the average number resident, four resulting from melancholia, dementia, general paralysis, and epilepsy respectively and two from senile decay. About 12 patients have usually enjoyed the privilege of walking out unattended beyond the grounds "on parole." This privilege, which is a great help to treatment and a powerful encouragement to self-control, has seldom been abused by the recipients. A branch establishment in the form of a home at Dawlish forms a valuable adjunct to the means of treatment. "Some permanent cases find a quiet and comfortable home there, and many patients who go there for change or in convalescence appreciate greatly the more domestic and home-like life." The committee of management state in their report that £904 has been spent under the head of alterations and repairs of the institution. The weekly rate of payment per patient is £2 7*s.* and upwards, according to the nature and requirements of the case, and patients paying higher rates are allowed private rooms and special attendants.

Belfast District Asylum (*Annual Report for 1899*).—The average daily number of patients resident during the year was 922 and comprised 494 males and 428 females. The admissions during the year amounted to 334, the highest number since the opening of the asylum, the corresponding figures for the previous year being 281. Part of this increase is explained in the report by Dr. William Graham, the medical superintendent, as due to the growth in population of Belfast during the year, the facility of admission, and the transfer of a number of chronic mental cases from the union workhouse to the asylum. "These cases of chronic insanity," says Dr. Graham, "while giving perhaps but little hope of eventual recovery, show a steady improvement, a growing amelioration of their unhappy condition which, from a humanitarian standpoint, well repays the financial outlay....... They experience a greater amount of personal liberty, are engaged in healthful agricultural pursuits ..... and manifest a cheerfulness and interest in life previously unknown." Regarding the increase of the insane in the population of

Belfast, this is considered as slight and not sufficient to afford grounds for pessimism. Of the causes of insanity among the admissions the three to be most emphasised were hereditary influences, intemperance in drink, and bodily diseases. Dr. Graham says: "Here there seems to be room, without yielding to Utopian dreams, for the legislator to minimise the temptation to drunkenness. As to the third cause, so far as insanity is complicated by pure bodily disease, there is ground for hope. A considerable proportion of physical maladies contributing to the production of insanity are themselves the fruits of disobedience to physiological laws. ...... Much might be done by our educational systems to familiarise the minds of the young with the laws which regulate and preserve health. Even in the causes commonly described as moral, such as domestic troubles, to which 10 cases have been attributed, and religious excitement, which accounts for nine, there was evidence that behind these causes there was a reduced physical condition which made resistance to those emotional disturbances less possible." The number of cases discharged as recovered during the year amounted to 100, or 10·8 per cent of the average number resident. This slightly diminished recovery-rate is attributed to the increased influx of the chronic insane from the union already referred to. The deaths during the year amounted to 79—viz., 39 males and 40 females—or 8·6 per cent. of the average number resident. 20 post-mortem examinations were held. 16 patients died within one month of admission. The causes of death were as follows. One was due to suicide by strangulation, 13 were due to general paralysis of the insane, six to senile and general debility, 14 to mania and melancholia, 12 to phthisis, 14 to inflammation of the lungs and membranes, and three to epilepsy. Zymotic disease prevailed to a slight extent. In the beginning of the year one female patient succumbed to enteric fever. There were 11 cases of erysipelas, one of which proved fatal. Owing to legislative changes the old board of governors has been succeeded by a committee of management consisting of members of the local authority who have already displayed skill and public spirit and a grasp of administrative detail which, says Dr. Graham, augurs well for the future working of the institution.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Islington.—As usual, the annual report of Mr. Alfred Harris, the medical officer of health of this district, is a very complete one and deals in detail with the statistics relative to the parish. We can, however, touch upon a few points only. The density of population in Islington is no less than 112 persons per acre, as compared with 68·8 persons per acre for Bolton, the most densely populated of the great towns. Huddersfield has a density of population of but 8 7 persons per acre and Liverpool 47·9. Mr. Harris is fully alive to the fallacies which underlie these comparisons of density, but he thinks that even when all allowances were made Islington would still retain the lead as regards density. Moreover, the fact that the rate of increase of population in Islington is now very small lends additional support to the position taken up by Mr. Harris. The approaching census is matter for consideration by the author of the report before us, and he makes some good suggestions as regards the appointment and control of the enumerators which may well be noted by the Registrar-General. Under the heading of "Adulteration of Food" some useful information is supplied, and the control of the milk traffic in Islington is clearly an energetic one, the Sunday trade being by no means overlooked. Out of 532 samples of milk examined 181 were procured on Sundays and 231 on other days; the remaining 120 were procured in transit at the railway stations. Of the Sunday samples 14·9 per cent. were sophisticated. Of the week-day milks 11·6 per cent. were sophisticated. With these results it is useful to compare the samples which were taken at the railway stations, for out of the 120 samples examined only 0·8 per cent. were adulterated, a revelation which indicates that the dairyman is far more successful in controlling the farmer than the sanitary authority and the public are in controlling the milk-vendors. All the samples of milk taken in Islington were examined for boric acid, which was found in 26·7 per cent. Of the boracised milks 10·6 per cent. were adulterated, while of those not containing this preservative only 7·7 per cent. were adulterated. Boric acid was apparently the only preservative looked for. Of the 181 Sunday milks, 55 were preserved by boric acid, while of the 231 week-day samples 58 were thus preserved. Of 120 samples of railway milk 29 contained boric acid. The Islington vestry is to be congratulated on having set the example in London of examining milk for the tubercle bacillus. It was found that 14·4 per cent. of the milks examined were infected with tubercle and there was considerable suspicion in regard to another 14·4 per cent. Curiously enough, the samples of milk obtained from farms in the country were more infected with tubercle than those obtained from the urban cow-houses. Perhaps this means that the sanitary control of cow-sheds, &c., in towns is better than it is in the country.

Manchester.—In his last quarterly report on the health of Manchester Dr. J. Niven records the result of the administrative work relative to phthisis. He states that during the quarter ended June 30th 226 cases of phthisis were notified (voluntarily) by medical men in connexion with public institutions and 152 cases by medical practitioners in their private capacity. Out of this total of 378 cases the two medical men appointed by the corporation for the work visited 366, but in several instances repeated visits had to be made before the patients were found at home. Notification of advanced phthisis is not yet complete in Manchester, as there were during the period in question 147 deaths from this disease concerning which the sanitary authority were unaware. But in these cases disinfection was duly carried out. The notifications referred to have resulted in much good work in the direction of disinfection, no less than 181 houses having been thus dealt with. In addition to this 178 houses have been cleansed by the occupiers themselves. Under the provisions of the Manchester General Powers Act, 1899, 75 samples of milk taken at the Manchester railway stations have been subjected to bacteriological examination, and four of these were found to be infected with tubercle.

Warwickshire County District.—We welcome the advent of another genuine county report, this time that for Warwickshire, for although Dr. Bostock Hill has for the last 11 years summarised the local annual reports for this county the present is his first annual report as county medical officer of health. Slowly, but surely, the several counties are falling into line, and soon we shall hope to be able to think of a complete county health service. From the standpoint of population Warwickshire is not of great importance, its total of 352,935 being considerably less than those of several of the large towns. The birth-rate for 1899 was 27·98, there being but little difference between the urban and rural rates, while the general death-rate amounted to 15·93 per 1000. As regards the prevalence of zymotic disease there is nothing of general interest to record, but enteric fever was unduly prevalent in certain districts, and Dr. Hill used the occasion to insist upon better scavenging and the paving of courts and yards in thickly populated districts. The death-rate for diarrhœa was 1·14 per 1000, a rate which is in excess of those of all the other six principal zymotic diseases taken together. Dr. Hill points out the necessity for cleanliness of soil and air in the prevention of diarrhœa, and to this recommendation we should be inclined to add a better control of the milk-supply. The infantile mortality of the county was 142 per 1000 births, the rate for Aston Manor being no less than 194, and that for Nuneaton 166. The importance of popular education in the control of this terrible tax on infant life is dwelt upon by the county medical officer of health. Notification of infectious disease is now, of course, general throughout the county, and the great educational centre of Rugby has the honour of having held out against voluntary notification to the end. So, too, in the matter of isolation accommodation Rugby possesses no general infectious diseases hospital, but in connexion with the subject of isolation for the county Dr. Hill promises a further report. Vaccination is not going well in Warwickshire and the report before us advocates that pressure should be put upon the guardians by the sanitary authorities. Unfortunately, in the rural districts these two bodies are largely composed of the same individuals.

Cornwall County District.—The sanitary committee of this county, which had a population of 322,316 in 1891, has not much to say in its annual summary for 1899 as to the sanitary requirements of the districts under its care. The general death-rate was 16 08 per 1000 and the zymotic death-rate was 1·132 per 1000. The infantile mortality was 135 27 per 1000 births, as compared with a rate of 163 per 1000 births for England and Wales for the same period. As regards measles "the mortality-rate worked to two places of decimals is represented by zero." The diarrhœal death-rate was 0·48 per 1000, as against 0 98 for England and Wales. The enteric fever death-rate amounted to 0 14 per 1000. We should have been glad of some information relative to water-supply, sewage disposal, isolation accommodation, &c., in the county.

The Island of Guernsey.—Dr. John Brownlee, the newly- health of Guernsey, in his first annual tem of the registration of the causes of death by qualified practitioners in Guernsey and hence the records of the island in this sense are very defective. Dr. Brownlee has, however, been able to extract (*a*) the number of births and deaths for the last 20 years, (*b*) the ages of all who died between 1887 and 1898, and (*c*) the causes of death in so far as they relate to infectious diseases. It seems that this sanitary quickening in the case of Guernsey may be traced to the prevalence of diphtheria in recent years, an occurrence which led to the appointment of a special committee of inquiry which in turn recommended the appointment of a medical officer of health. Moreover, public lectures were arranged for, isolation accommodation of a sort was provided, and a laboratory was fitted up, and finally it was determined to form a board of health for the island Diphtheria has, therefore, not been without its uses in Guernsey. The total population of the island (including some 500 soldiers) is estimated at 37,905, and the general death-rate, corrected for age distribution, was for 1899 16·5 per 1000. The infantile mortality was 135 per 1000 births, as against a rate for the Isle of Wight (1881–1891) of 89 and for the Scilly Isles of 117. "Convulsions" figure altogether too prominently in the causes of infantile deaths, and there is obviously much room for improved certification. Infectious disease has in the past been but little under any control, but the medical officer of health will, we think, soon modify this condition of affairs. An improved water-supply seems to us one of the most pressing needs of the population We congratulate Guernsey upon its sanitary awakening

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6416 births and 3815 deaths were registered during the week ending Oct. 20th. The annual rate of mortality in these towns, which had declined from 18 4 to 17 1 per 1000 in the three preceding weeks, was again 17 1 last week. In London the rate was 15·8 per 1000, while it averaged 18 0 in the 32 provincial towns. The lowest death-rates in these towns were 10 4 in Halifax, 10 7 in Cardiff, 11·3 in Norwich, and 11·9 in Croydon; the highest rates were 22 3 in Manchester, 22·7 in Sheffield, 23 6 in Salford, and 28 6 in Gateshead. The 3815 deaths in these towns included 468 which were referred to the principal zymotic diseases, against numbers decreasing from 776 to 563 in the three preceding weeks; of these, 197 resulted from diarrhœa, 85 from diphtheria, 71 from "fever" (principally enteric), 43 from whooping-cough, 37 from measles, and 35 from scarlet fever. The lowest death-rates last week from these diseases occurred in Plymouth, Birkenhead, Bolton, and Halifax; and the highest rates in Swansea, Leicester, Salford, and Blackburn. The greatest mortality from measles occurred in Swansea; from scarlet fever in Sunderland; from whooping-cough in Gateshead; from "fever" in Portsmouth, Wolverhampton, Nottingham, and Preston; and from diarrhœa in Cardiff, Norwich, Blackburn, and Gateshead. The 85 deaths from diphtheria included 36 in London, nine in Leicester, eight in Leeds, and eight in Sheffield. No fatal case of small-pox was registered last week in any of the 33 towns; and only one small-pox patient was under treatment on Saturday last, Oct. 20th, in the Metropolitan Asylums hospitals. The number of scarlet fever patients in those hospitals and in the London Fever Hospital at the end of the week was 2342, against numbers increasing from 1703 to 2187 on the seven preceding Saturdays; 328 new cases were admitted during the week, against 318, 313, and 322 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 164 and 173 in the two preceding weeks, further rose last week to 182, but were 106 below the corrected average. The causes of 52, or 1 4 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Bradford, Leeds, Hull, Newcastle, and 12 other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Preston, Sheffield, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19 3 and 18·0 per 1000 in the two preceding weeks, further declined last week to 17·5, but showed an excess of 0 4 per 1000 over the mean death-rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 11·9 in Leith and 12 0 in Greenock to 18 9 in Glasgow and 23 0 in Aberdeen. The 542 deaths in these towns included 30 which were referred to diarrhœa, 14 to whooping cough, eight to diphtheria, six to "fever," five to scarlet fever, two to small-pox, and two to measles. In all, 67 deaths resulted from these principal zymotic diseases, against 107 and 74 in the two preceding weeks. These 67 deaths were equal to an annual rate of 2·2 per 1000, being 0·1 per 1000 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had been 53 and 36 in the two preceding weeks, further declined last week to 30, of which 12 occurred in Glasgow, eight in Dundee, five in Edinburgh, and four in Aberdeen. The deaths from whooping-cough, which had been 18 and 13 in the two preceding weeks, rose again to 14 last week, and included seven in Glasgow and four in Greenock The fatal cases of diphtheria, which had been five and seven in the two preceding weeks, further rose last week to eight, of which five were registered in Glasgow and two in Edinburgh. The deaths referred to different forms of "fever," which had been 13 and five in the two preceding weeks, rose again to six last week, and included five in Glasgow. The fatal cases of scarlet fever, which had been seven in each of the two preceding weeks, declined last week to five, of which three occurred in Glasgow, where the two deaths from small-pox were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 98 and 104 in the two preceding weeks, further rose last week to 117, and showed an excess of 33 over the number in the corresponding period of last year. The causes of 18, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·0 and 26·4 per 1000 in the two preceding weeks, declined again to 24·9 during the week ending Oct. 20th. During the past four weeks the death-rate in the city has averaged 25 5 per 1000, the rate during the same period being 15 8 in London and 16 8 in Edinburgh. The 167 deaths belonging to Dublin registered during the week under notice showed a decline of 10 from the number in the preceding week, and included 19 which were referred t 36 and 21 in the two from diarrhœa, five and two from whooping cough. These 19 deaths were equal to an annual rate of 2 8 per 1000, the zymotic death-rate during the same period being 1·7 in London and 1·5 in Edinburgh. The fatal cases of diarrhœa, which had been 36 and 21 in the two preceding weeks, further declined last week to 19. The deaths referred to different forms of "fever," which had been three and four in the two preceding weeks, further rose to five last week. The three deaths from diphtheria showed a marked increase over the numbers in recent weeks The 167 deaths in Dublin last week included 36 of infants under one year of age and 32 of persons aged upwards of 60 years; the deaths both of to Mr. Owen's opinion my own experience has proved to me that in certain favourable cases when the surgeon has sufficient knowledge of mechanical therapeutic measures the patient need not be wholly confined to bed for any long period at all, but in every case when the symptoms point to activity on the part of the disease the patient should at once be put to bed or on a prone couch. For this reason it seems to me hardly proper to speak of "the modern ambulatory treatment of caries of the spine." I have notes of many cases of caries of the spine in which I have employed Chance's splint as an element in treatment. My own opinion is that the results thus obtained compare most favourably with those I have seen in cases treated by the instruments and methods that Mr. Owen advocates.

I am, Sirs, yours faithfully,
J. JACKSON CLARKE.

Old Cavendish-street, W., Oct. 13th, 1900

"THE VALUE OF ANTI-STREPTOCOCCIC SERUM."

To the Editors of THE LANCET.

SIRS,—Anti-streptococcic serum is only supposed to be of use in streptococcic infection—that is, in cases where the streptococci have actually got into the circulation. The two cases recorded by Dr. G. S. Walton in THE LANCET of Oct. 20th, p. 1132, are undoubtedly cases of sapræmia, or septic intoxication. With reference to the first case there is no mention of local treatment for the "putrid" lochia, which were apparently the cause of the trouble. I certainly consider that proper and efficient douching would have been more efficacious in this case, and would probably have saved the patient the trouble of a relapse. I am at a loss to understand why Dr. Walton attributes the cure of this case to the anti-streptococcic serum, as large numbers of similar cases recover without any treatment whatsoever.

I am, Sirs, yours faithfully,
Newcastle-on-Tyne. R. P. RANKEN LYLE.

THE BATTLE OF THE CLUBS: A SUCCESSFUL PRECEDENT.

To the Editors of THE LANCET.

SIRS,—The fifth annual meeting of the Eastbourne Provident Medical Association was recently held, and the report read showed that the association was in a healthy and well-established condition. There are 10 medical men on our acting staff and we have a membership of nearly 4000 persons. The gross income for the year ending August 31st, 1900, was £1071 9*s*. 9*d*. Our working expenses have been reduced to 15 per cent. and the remainder goes directly to the members of the acting staff. During the year we have adopted the plan of employing only one collector instead of two; and this has proved successful, as the work is now done not only more cheaply but also more efficiently.

I am, Sirs, yours faithfully,
A. HARPER,
Honorary Secretary, Eastbourne Provident Medical Association.
Eastbourne, Oct 23rd, 1900

"THE NOTIFICATION OF PLAGUE."

To the Editors of THE LANCET.

SIRS,—I should like to be allowed to make a few remarks upon the annotation in THE LANCET of Oct. 20th (p 1148), commenting upon the letters of Dr. Thomas Colvin and Sir William T. Gairdner, in which they deal with an apparent weakness in the Notification Acts. This weakness is not, I think, so great as might at first sight appear, and hardly calls for modification of the Acts as suggested by Sir William Gairdner. The certificate which is usually given by practitioners states, "I hereby certify that in my opinion such a person is suffering from a certain disease." But in actual practice a medical officer of health treats with the greatest respect a certificate upon which a query is placed after the name of the disease, and if given in good faith would certainly pass such a certificate through for payment by his authority, even though the subsequent history of the case proved the suspicion of the nature of the ailment to have been unfounded. Most assuredly would this be so with such grave diseases as plague or small-pox. Indeed, we always say that we would rather have half a dozen cases of chicken-pox notified as small-pox than miss the very earliest information of the occurrence of a single case of small-pox. It is well known that in most of our large towns an opportunity is afforded to medical men of verifying suspicious cases of diphtheria. Material is submitted for bacterioscopic examination and if no bacilli are found the practitioner in attendance is asked if he is still of opinion that he is dealing with a case of diphtheria If he replies in the affirmative the usual steps as to isolation, &c., are taken and the case is recorded as one of diphtheria; if he replies in the negative no action is taken with regard to the notification; but in either instance he receives payment for the certificate, and it would be manifestly unfair to adopt any other course. I cannot recall ever having received a certificate not given in good faith, and I can hardly think that my experience is unusual It is not by any means limited, for nearly 3000 certificates were addressed to me last year, and I fear this year I shall receive almost as many.

I am, Sirs, yours faithfully,
HERBERT JONES,
Oct. 22nd, 1900. Medical Officer of Health, Rhondda, South Wales.

"THE SMOKE NUISANCE."

To the Editors of THE LANCET.

SIRS,—The letter under the above heading in THE LANCET of Oct. 13th (p. 1098) does not refer to Section 21 of the Public Health (London) Act, according to which the vestry is compelled, on receipt of a memorial signed by 10 inhabitants, to take proceedings against the factory creating the nuisance. According to my experience, however, I find that the clerk of the vestry does not always take notice of such memorials, even when his own medical officer of health sympathises with the memorialists. Of course you can take out a mandamus, but is it not rather a remarkable thing that the inhabitants of a parish should be put to great expense through litigation in order to compel their own vestry clerk to do his duty?

I am, Sirs, yours faithfully,
Oct. 22nd, 1900. L. R.

⁂ The preventable damage to life and property from foul smoke is now recognised by the press and the public alike as being enormous. In the case of any vestry clerk acting in this way a statement of the circumstances properly vouched for should at once be sent to the press, when reform will follow.—ED. L.

THE ROYAL ARMY MEDICAL CORPS: "THE REASON WHY."

To the Editors of THE LANCET.

SIRS,—May I ask "the reason why" in the following queries with reference to the Royal Army Medical Corps?

1. Why is the "Passing-out" Examination at the Army Medical School, Netley, carried out solely by the professors of that school who are themselves the teachers of the school and not by independent examiners?

2. Why do Lieutenants R.A.M.C. become Captains R.A.M.C. without any test whatever of their knowledge of the special duties of their corps, while all other army lieutenants have to pass special tests for their captaincies? A "deadly seniority" alone ensures promotion to the captain's grade in the R.A.M.C.

3. Why is the technical examination for promotion to Majors of Captains R.A.M.C. in purely Royal Army Medical Corps military and administrative duties so unthorough, so narrow in its scope that it forms, so far as knowledge of the military and administrative duties of the Royal Army Medical Corps are concerned, a perfectly valueless test from its shallowness and superficialness? It generally consists simply of five or six written questions of babylike simplicity such as any Staff Sergeant R A.M.C. could assuredly pass.

4. What is a Lieutenant-Colonel R.A.M.C.? He passes no examination test, writes no thesis, and produces no plan of medical field duties whatever, although his combatant brother has to undergo a special examination for tactical fitness for command before promotion. Surely an officer of the medical service should not by mere monotonous and deadly seniority, without any efficiency test whatever, reach this essentially important post? Here, again, the merest seniority ensures promotion.

5. I also desire to ask, Why is there no "*staff examination*" which officers should pass for administrative appointments, such as secretaries, and for the higher posts of the brigade-surgeon's class of lieutenant-colonels and colonels? Such a test the late Sir Thomas Crawford instituted in 1884, but being apparently without clear convictions of its high importance he bartered away this essential and valuable check for a mess of pottage by allowing officers to pass for third-rate Fellowships of third-rate and impecunious colleges and so broke down a fence, or protection, or check against unfit persons rising into those important posts. A staff examination should be at once established.

6. Last, but perhaps of more importance than any other point, why is there not a well-paid Professor of Military Medical History and Administration at the Army Medical School at Netley to teach the young medical officers the important history of the work of the medical service in all our past wars, to tell them of the experiences of the old wars in Spain and on the continent, but more than anything else to explain the most instructive history of the Crimean War, from which terrible experiences date all our efforts to develop an efficient English medical service. Campaign after campaign comes round with its wretched story of medical undermanning and shortcomings, and yet each identical difficulty arose during the Crimean War, and its bitter story is told in the volumes of history and of blue-books published on that war. These reports in our blue-books need to be summarised and published, and the officers of the Royal Army Medical Corps who aim at administrative and staff employ should surely know what these sad records say. How few of the officers of the Royal Army Medical Corps have read or really know these deplorably sad histories. It is by thus studying the past that we can guard against breakdown in the future and by efficient examinations we can guard against the "deadly seniority" which in several of the R A M.C ranks absolutely ensures promotion. The State, which provides courses of instruction without number for engineer, artillery, and other military officers, does literally nothing in the way of post-graduate classes for the medical officers. Not only are these officers almost continually on foreign service, but when in England the advantages of special instruction, garrison classes on technical subjects, and post-graduate courses are denied them. How can a highly technical corps keep abreast of its work under such wretched conditions? A far more sympathetic treatment of the military medical service is needed, and we seem to look in vain for a war minister like the really great Sydney Herbert to grasp the needs of the corps and remove its many grievances. If only such a man would again appear in England what a blessing it would be!

I am, Sirs, yours faithfully,

Oct. 13th, 1900. "DEADLY SENIORITY."

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Extraordinary Rainfall in [illegible] —Further Increase of P[illegible] and Poona.—Decline [illegible] Bengal.

THE rainfall in Calcutta on Sept. 19th, 20th, and 21st was unprecedented. It flooded the city, caused great destruction of property, and rendered thousands temporarily homeless. It has since been followed by a great rise in the general mortality. The record registered is as follows:—Sept 19th, 14 35 inches; Sept 20th, 10 3 inches; Sept 21st, 8 58 inches. It will thus be seen that over 24 inches of rain fell during the first 48 hours. The rainfall during the week was nearly 45 inches. 12 people were killed, 17 were injured, and 182 brick houses and 409 huts fell to pieces. During the three days succeeding the floods the mortality has more than doubled itself. This has occurred almost entirely in the eastern and southern portions of the municipal area, especially in the latter. The chief causes of death have been cholera and diarrhœa. The filtered water-supply of the city has been rendered slightly turbid, but chemical and biological examination reports that it has not become contaminated. Every pond and surface well (from both of which sources of water the native prefers to draw) has had washed into it all the surrounding accumulations of filth. There is little wonder at the increase of mortality, more especially when so many thousands have suffered from exposure.

With this disaster in Calcutta there has during the past week been a further considerable increase in plague mortality throughout India and a continuance of the cholera outbreaks in the Punjaub and in Kashmir. Up to Sept. 23rd there have been in various districts of Kashmir 3416 cases and 1578 deaths, while in the Punjaub there have been 23,158 deaths and 42,805 cases of cholera. The plague mortality throughout India has risen from 1136 to 1442, the increase being chiefly in the Bombay province, especially in the Bombay districts and in Poona city. In Calcutta deaths from plague continue about the same, but in Bombay city the mortality from plague seems distinctly to be on the increase (95 deaths and a death-rate of 67 4 per 1000). The disease has rapidly advanced in Poona, where about 50 deaths from plague are occurring daily. In Mysore it is raging severely and the mortality continues to rise. There are apprehensions that a recrudescence of plague has occurred in Patna. Several deaths have occurred and rats are reported to be dying in considerable numbers. The popularity of inoculation for plague fluctuates enormously. While it has sunk almost to nothing in Bombay city it has been performed in nearly 5000 cases in Poona during the present month. There has been nothing done in this way in Calcutta for a long time, but in the Punjaub inoculation has met with favour.

The latest famine returns continue satisfactory, as the numbers under relief are now only a little over 3,000,000. 1,000,000 are still employed on relief works, and the remainder are receiving gratuitous relief. The famine in the Native States, according to official returns, has almost subsided. The Central Provinces are still severely affected.

The returns of vaccination in Bengal for the past year have recently been issued. In the towns the Compulsory Act is in force and an estimated number of 443 per 1000 children born have been successfully vaccinated. In the rural districts the number vaccinated is much less, reducing the proportion for the whole province to probably not more than one in five. This is calculating the birth rate at 50 per 1000. As it is, no less than 2,252 521 vaccinations were performed during the year.

Referring once more to the floods in Calcutta it will be interesting to note what effect, if any, these inundations will have on the course of another outbreak of plague. A very large proportion of the *busties* of Calcutta have during the past few months been disinfected, and the floors of the huts have been soaked with solution of perchloride of mercury. The recent floods have extended throughout many of these *busties* and have swamped the floors in thousands of the dwellings. Cattle and poultry have been drowned, and it is probable that the continuous immersion for three or four days of these hut floors may have affected the rat population. It will be remembered that the first epidemic in Bombay, which commenced (officially) in September, 1896, was preceded by an excessive fall of rain during the monsoon of that year. In the opinion of many dampness of site favours the spread of plague. If this be correct Calcutta may anticipate a still more severe outbreak than it has hitherto experienced. On the other hand, at least three dry months are in hand before the period returns when a recrudescence may be expected. The monsoon rains have probably ceased.

Sept. 27th.

SUCCESSFUL APPEAL.—We heartily congratulate Dr. F. E Paton, J P on the result of his appeal at the Monmouthshire Quarter Sessions on Oct 17th against a conviction registered against him at the Abergavenny Petty Sessions. The offence charged was being disorderly in a public place at Abergavenny in September. The appeal was allowed with costs.

SUPERANNUATION ALLOWANCE.—At the meeting of the Plymouth (Devon) Board of Guardians held on Oct. 19th it was mentioned that the superannuation allowance due to Mr. R Ellery, who had been medical officer of No 1 District for 30 years, was £48 10*s*. per annum, but as the board had power to add five or 10 years to this it was stated that at the next meeting it would be proposed that Mr. Ellery should be granted £50 per annum.

THE UNIVERSAL EXHIBITION OF PARIS.

(From our Special Correspondent.)

The Foreign and British Sanitary Sections.

At the western extremity of the great gallery of machines, which contains no machines but is devoted to the food products of the world, a majestic flight of stairs leads to an upper gallery where the sanitary exhibits of several nations stand side by side. Below, on the ground floor, in the Swiss food section, hedged round by Swiss condensed milk, and such objects, there are two large exhibits of Swiss sanitary school furniture. Why these were not placed with similar furniture in the Swiss education section instead of being in the food department, it is difficult to say. However, when found they are worth noting. The school desks are fixed to a moveable iron frame-work. Each desk may be used as a flat table or be either slightly raised on one side for writing or placed at a higher inclination for reading. It may also be lifted like the lid of a box. It then stands vertically in front of the pupil who faces the underneath part of the table or desk, and this serves as a "black board" which, however, is painted a dark brown as this colour is thought to be more restful for the eyes. Each pupil is thus provided with a large surface on which he can write or draw with a piece of chalk. It is pointed out that when anything is drawn or written on a large scale its shape and meaning are more readily understood by little children, and, further, that drawing or writing with chalk helps to develop skill of hand. Nor is this all, for the entire desk may be raised so high that the child must stand up to write upon it. Therefore the pupil may alternately stand or sit, and rest himself by this change of posture. Underneath there is a shelf for his books. A desk of this description with a seat for two in bench form and a rest for the back, all included, costs £2. This, then, would amount to £1 per child which does not seem dear considering the variety of advantages provided. This is the desk officially adopted for the Canton of Geneva and is manufactured by M. A. Maughain.

The German Empire Sanitary Exhibits.

Ascending the steps to the gallery immediately on the left of the landing is the German sanitary section organised by Dr. Koehler, President of the Kaiserliches Gesundheitsamt, and it purports to give some idea of the sanitary works accomplished in the German Empire. This sanitary authority, the Gesundheitsamt, assists the Chancellorship of the Empire in all that relates to the medical and veterinary police, in the application of sanitary laws, and in the elaboration of new measures. It not only seeks to protect the health of human beings and of animals, however, but it also endeavours to save vegteable life. This administration occupies 5558 hectares of land to the north-west of Berlin and near to the Thiergarten, where there are a large library, laboratories of all descriptions, offices and botanical gardens for experiments with plants, a disinfecting establishment, and stables for horses and other animals. The voluminous reports of the work done here are exhibited and they contain a vast store of learning and records of important experiments and investigations. For the last 24 years the drawing up of medical statistics has been studiously pursued. Statistics from 300 towns with an aggregate of 15,000 000 inhabitants are now regularly received and compiled. Little statuettes representing the Eiffel Tower show by their increase in size the growth of the population. Thus in the two great towns of the Empire in 1816 there lived 344,000 persons, in the six great towns in 1855 there lived 1,122,209 persons, and in the 28 great towns of the Empire in 1895 there were 7,276,987 inhabitants. Then whereas 84 years ago only 14 out of 1000 Germans lived in large towns, five years ago the proportion was 139 per 1000. But such statistics are for the most part to be found with the Pasteur exhibits on the Quai d'Orsay. Here, in the Machine Gallery, is shown some of the public works bearing on public health, such as the construction of hospitals and asylums, the new model slaughter-house of Cologne, drainage-works, &c. Then there are large models of the sanatorium of Hohenhonnel on the Rhine. The mountains, the woods, the beautiful surrounding scenery of the Rhineland are shown, so that the excellence of the site occupied may be fully appreciated. The sanatorium of Oderberg, in the Harz, is less attractive, for it dominates bare common-land but is sheltered to the north-west by a thick pine-wood forest, represented very prettily by little toy trees. The vast lunatic asylum of Zschadruss, in Saxony, seems more like a wealthy suburb consisting of mansions and villas surrounded by large pleasure gardens. A small model of the operating-room of the Nuremberg Model Hospital shows the double glass roof and the distribution in all directions of water and of heat. Similar toy-like models indicate the construction of the wards, &c. As this hospital was built so recently as in 1897 it may well possess many modern improvements, and the warming, the orientation, &c., seem to have been very carefully devised.

In another compartment there is a working model of an apparatus for cleaning large filtering beds employed at Hamburg. This consists of a floater under which is suspended a concave scoop. A pivot and wire ropes placed on each side of the filter-bed enable the floater to be drawn slowly across the water and the scoop below lifts off the slimy deposit from the surface of the filtering sand. The scoop is about four feet long. The pivots are then moved four feet further on and the next portion of the filter is cleaned. Thus, the clogging of the filtering beds is easily prevented and the sand is not disturbed by men walking over it to clean it. The operation, also, is more promptly accomplished and with much less labour. Of course, the town of Hamburg exhibits plans of its new water-supply and of its various sanitary institutions. The same can be said with regard to most of the other important towns of Germany. Indeed, we have here a collective and national exhibit of sanitation in the German empire. Nothing could be more important and more interesting, but, on the other hand, it is altogether beyond the scope of a brief description. To relate what each town exhibits would mean giving the sanitary history of all these great centres, and this would fill several volumes. The only thing that can be said in a brief notice is that this section is a museum of information. If, for instance, a person is especially interested in the treatment of sewage, in the construction of public slaughter-houses, or in sanatoria for tuberculous patients, or any other special subject of this description, he will see in the German section which are the towns in Germany where something special has been attempted in regard to one or more of these problems. He will also be able to ascertain what official and other reports have been published regarding the same, and he will then be in a position to know whether it is worth while going to those towns to investigate the question on the spot.

British Sanitation by State and Municipal Authority not Represented.

Undoubtedly in regard to sanitation it is the municipal and state sanitary authorities who should be the principal exhibitors. From this point of view the position of Great Britain by the side of Germany cannot be described otherwise than as most humiliating. There are some English manufacturers who are anxious to sell closet-pans and drain-pipes and they have very good exhibits, but of the great public works that have been accomplished throughout the country, and of which we have good reason to be proud, there is not the slightest trace. Well may it be said that we are but a nation of shopkeepers, for it is only the shopkeeping phase of sanitation that is to be seen at the Exhibition. Other nations strive to show what as nations they have been able to accomplish, and municipalities seek in a similar manner to distinguish themselves. But to judge from the British exhibits it would seem as if the British Parliament had never legislated for the preservation of public health, as if the municipalities had never provided public sewers or a public water-supply, and as if, in regard to sanitation, we could only boast of a few manufacturers who seek to sell closet apparatus, flush tanks, and drain-pipes on the continent, for there is no evidence that these things are required for use in England itself. There seems to have been no public enterprise. Those tradesmen who thought they might do some business by exhibiting their products sent specimens, but anyone visiting the Paris Exhibition to ascertain what progress had been made in sanitation in Great Britain would come away as ignorant as before. If any sort of indication is obtained leading to the belief that something has been done in England this will be found in a foreign, not in any English, section. Thus, for instance, in the German section there are mortality tables giving the average annual *death-rate per 100,000 inhabitants from small-pox* first for the years 1862 to 1876 then for the years 1882 to 1896. From this it will be seen that the mortality from small-pox has decreased in Prussia and Bavaria from 51·6 to 0·7, in Austria from 75·2 to 38·6, in Belgium from 79·5 to 18·2, in England from 25·6 to 2·9, and in Sweden from 26·9 to 0·5. Therefore in the German section and with the aid of German statistics an investigator would see that something must have been done in England at least in regard to small-pox, but he would find nothing in the British section to confirm this hopeful impression. Yet no nation could have made a more instructive and a more magnificent sanitary section than Great Britain if only someone in authority had taken the matter in hand. Messrs. Doulton and Co. and Mr. George Jennings have very fine exhibits, and, in their line these firms are pre-eminent throughout the world, but however excellent the sanitary apparatus which they manufacture they only represent the details of application. Millions of money have been spent in rendering both town and country more healthy, vast schemes have been carried out, the mortality has been reduced on all sides, and yet there is not at the Paris exhibition any record of this most creditable and beneficent work. It is easier to know what has been done in some pretty Italian town than what such centres as London, Birmingham, and Manchester have achieved. In such novel and important questions as the bacteriological treatment of sewage we have the careful record and maps and drawings of the experiments made in Germany, but there is no mention of the Exeter septic tank, of the Dibdin system, and of other similar trials made in England. This is undoubtedly a great omission and places British sanitary reformers in the shade by the side of their colleagues of the continent.

The United States.

The United States of America have managed matters a little better. With them, as with us, it is private enterprise that has shown the most activity and most of their exhibits are those of tradesmen anxious to sell or of private charities that are seeking to add to their list of subscribers and sympathisers. But still there are a few American exhibits that are of general interest. Thus, in the American section there is some account given of the isolation hospitals provided by various towns in the United States, accompanied with the modest assertion that not many towns have made this necessary provision for dealing with infectious diseases, but that their number is increasing. The Massachusetts Board of Health exhibits its documents, its official forms for the notification of disease, &c., and it is possible to get some idea of the sanitary laws and their application in that State. There are also some interesting charts that apply to the whole of the States. One of these is a map of the States in four colours. The darkest colour shows the States where no one [illegible] he has passed examina- [illegible] next colour gives the [illegible]e accepted and others rejected. [illegible] and comprise [illegible]ours, covering [illegible] first the States where any sort of diploma is accepted, and secondly, those states where no diploma at all is required. Another map shows the number of medical practitioners in the different States. A third map gives the expenditure per head during the year 1898 of the Board of Health. Very few States exceed two cents, many more vary from one to two cents, and for far the greatest number the taxation for sanitary purposes does not equal one cent. per head per annum, and there are actually some States where there is no tax, no public expenditure whatsoever for health purposes. Two more maps give the percentage of population supplied with public water in 1860 and again in 1897. In the former period public waterworks seem to have existed only in the north eastern States, but now there has been a great increase of waterworks throughout the country, though evidently much remains to be done. Finally there is yet another map which shows the percentage of persons who in the various States live in sewered towns. It is not necessary to point out that it would have redounded to the credit of Great Britain if similar maps, giving similar details, had been exhibited in the British Sanitary Section. By the side of the few public exhibits in the American section there is quite an army of private charities, hospitals, asylums, and homes, of societies for improving the condition of the poor, and of societies for the prevention of cruelty to children and to animals, &c. Some of these are strictly denominational. Thus we find a model of the Presbyterian Hospital of New York City and another of a children's hospital. There does not seem to be anything of any particular interest, technically speaking, in these exhibits; their object is rather that of exciting the charitable feelings and the generosity of visitors.

To the technician the large and varied exhibits of American stoves and warm[illegible] interest. In any case the [illegible] the gold medal. The air [illegible] this stove and can be delivered at a temperature of about 100° F., so that it is not burnt or super-heated. Then there is the New York Blower Co. which shows a fan for propelling warmed air into buildings. It is maintained that if revolving fans fit tightly in the drum in which they are placed they only churn up the air and do not send it forward and therefore a much shorter blade for the fans is employed. With regard to radiators and water and steam coils the Webster system professes to regulate the temperature so that the radiators shall not be too hot. In a word, there are many stoves and processes for warming and ventilation which profess to possess many virtues, and it should be possible to learn a good deal from the United States, for with the very lofty houses in America and the severity of the winter there the problem must present many difficulties. Still it would be somewhat hazardous to pronounce an opinion without making practical experiments. In regard to drainage there are but two firms exhibiting and one of these, the Standard Manufacturing Company, has its exhibits in the midst of the furniture on the Esplanade des Invalide, more than a mile away from the sanitary section. Though I went all this distance to see this exhibit all the attendant could tell me was that he had nothing new to show. Nor did I find anything particular that was new with a rival firm, the J. L. Mott Iron Works of New York, that exhibits a very beautiful bath-room in the sanitary section. The white enamel, the pale blue curtains, and the plentiful supply of electric light produced a charming effect and as a luxurious display it attracts the gaze of many visitors, and it has been awarded the gold medal.

Paris, Oct. 22nd.

LIVERPOOL.

(From our own Correspondent.)

Formal Opening of the Queen Victoria District Nurses' Central Home.

On Oct. 19th the Central Home of the Liverpool Queen Victoria District Nurses' Association, the munificent gift of the David Lewis Fund, in commemoration of the Queen's Diamond Jubilee, was opened by Mrs. William Rathbone in the regretted absence of her husband, Mr. William Rathbone the well-known Liverpool philanthropist. The nucleus of the buildings consisted of a large detached house which, partly by re arrangement and partly by the building of an additional wing, has bee[illegible] trative building. Mr. Ben[illegible] Fund, presided over a[illegible] the Lord Mayor and L[illegible] (the master of St. Katherine's), and others. No public charity has ever been administered with less ostentation than the David Lewis Fund, which has provided so many comforts for the benefit of the working-classes of Liverpool [illegible] At present there are at work on behalf of [illegible] of each, together [illegible] the cost of extra [illegible] would cost about [illegible]ubscribed by the [illegible] the association, [illegible] available for the extension of the work owing to various causes. The annual subscriptions so far have been about £300, the greater part of which had been contributed by a few individuals, so that if the work is to be successfully carried on a more extensive subscription list is absolutely necessary.

Generous Gift to the Royal Infirmary.

Mr. George H. Melly, a member of the committee of the

Royal Infirmary, has generously provided for the wards of the infirmary an electric installation at a cost of about £800.

Biennial Dinner of the Medical Faculty of University College, Liverpool.

The biennial dinner of the medical faculty of University College took place on Oct. 13th at the Exchange Station Hotel. The chair was occupied by Sir William Mitchell Banks. The guests included the Lord Bishop of Liverpool the Lord Mayor of Liverpool, Dr. Oliver Lodge, principal of Birmingham University, and 150 other gentlemen. The dinner was highly successful.

Proposed Isolation Hospital for Hoylake and West Kirby.

The Hoylake and West Kirby District Council have approved of a recommendation of the Health Committee to appoint a sub-committee to consider the proposed increased accommodation at the Wirral Joint Isolation Hospital and to report as to the advisability of the Council providing and maintaining an infectious diseases hospital for the district.

Thompson-Yates Laboratories' Reports, October, 1900.

The first part of the third volume of the Thompson-Yates Laboratories' Reports contains articles from Professor Rubert Boyce, Dr. Balfour Stewart, Dr. A. S. F. Grünbaum, Dr. J. H. Elliott, Dr E. W. Hope, and Miss Chick. Dr. Balfour Stewart, assistant bacteriologist to the Liverpool Corporation, contributes a most interesting article on "The Distribution of Bacillus Enteritidis Sporogenes." Miss Harriette Chick, 1851 Exhibition Scholar, treats of the "Distribution of Bacterium Coli Commune" in a very able manner. Professor Boyce's article upon the "Two Species of 'Fungus' commonly found in Sewage Contaminated Water" is well worthy of perusal. Dr. Hope's article exposes the inadequacy of the existing Food and Drugs Act. The volume is apparently a public health number and shows the amount of work which is being carried on in the pathological department of University College in the cause of public health under the able tutelage of Professor Boyce. It is pleasing to find the type increased in size, whilst the illustrations are exceptionally good. Volume III., like its predecessors, was issued from the University Press of Liverpool, and is edited as usual by Professor Boyce and Professor C. S. Sherrington, with the coöperation of the assistants in the departments of pathology and physiology.

Oct. 23rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

In Memory of Professor Rutherford.

A BEAUTIFUL stained-glass window has been placed in Ancrum parish church in memory of the late Professor Rutherford, professor of physiology for five years in King's College, London, and for 25 years in the University of Edinburgh.

Arthur Andrew Jamison, M.D. Glasg., M.R.C.P. Lond.

Dr. Arthur Andrew Jamison, who died on Oct. 17th at his residence, 18, Lowndes-street, Belgrave-square, S.W., at the age of 56 years, was educated at the University of Glasgow, where he graduated in medicine with honours and prizes in 1865. He was for a time assistant physician to the Dispensary for Skin Diseases, Glasgow. He was admitted a Member of the Royal College of Physicians of London in 1889.

Saturday, Oct. 27th, is fixed for the laying of the foundation stone of the Ochil Hills Sanatorium by Sir Thomas Glen Coats.

Oct. 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

THERE is a change in the representation of the Royal College of Surgeons in Ireland on the General Medical Council. Sir Philip Crampton Smyly has retired and Dr. Charles Bent Ball has been appointed in his place. Mr. J. S. McArdle has been elected a member of the Council of the College in the room of Sir William Stokes, deceased.

Royal College of Physicians of Ireland.

Sir Christopher J. Nixon has been elected to the position of President of the Royal College of Physicians of Ireland.

Housing of the Dublin Poor.

A meeting of the committee of the whole house of the Dublin Corporation took place on Oct. 22nd for the special purpose of dealing with the problems in connexion with the tenement houses and the dwellings of the very poor. A report, which was furnished by the town clerk after consultation with Sir Charles A. Cameron, expressed the opinion that the corporation could do very little more in the matter than they had already done unless they obtained by legislation power to borrow £500,000 for the purpose of clearing unhealthy areas and building dwellings for the working classes. Alderman Farrell, who filled the chair in the absence of the Lord Mayor, proposed that the corporation should proceed immediately to take steps to borrow £500,000 for the purpose of providing the required accommodation. A majority of the 40 members present were, however, of a different opinion in reference to hasty action in connexion with such an important financial matter and after discussion an amendment was carried to the effect that "the Public Health Committee be requested to prepare a return showing the area, population, and rateable valuation of the slums with a view to the preparation of a formal scheme and that the committee adjourn for a month."

Medical Men and Cricket.

On Oct. 16th, in Ye Olde Castle Restaurant, Belfast, Dr. J. W. Taylor, the captain and honorary secretary of the North of Ireland Cricket Club, was entertained by the members to a complimentary dinner to celebrate the great success of the club during the past season. About four years ago Dr. Taylor was appointed secretary of the North of Ireland Cricket Club, and by great efforts he has completely rescued it from its unsatisfactory condition, so that now it holds the premier position among cricket clubs in Ulster.

The Union Fever Hospital, Belfast.

The appointment of medical officer to the Belfast Union Fever Hospital, at a salary of £120 per annum, is to be made on Oct. 30th. It is generally thought that Dr. A. G. Robb will be appointed. The salary of the late occupant of the office was £165 per annum, but the guardians have reduced it, although the work remains exactly the same.

Health in Belfast Gaol.

At an inquest in the Belfast Gaol on Oct. 17th in reference to the death of a man from pulmonary hæmorrhage some very interesting facts came out in evidence as to the state of health of the prisoners there. The present coroner was appointed in 1893 and in that year there were no inquests, in 1894 there were two, in 1895 none, in 1896 one, in 1897 three, and in 1898 and 1899 none. It is, therefore, three and a half years since there was an inquest in the Belfast Gaol (March, 1897, was the latest occasion), and this notwithstanding the fact that the coroner by law must hold an inquest on every person who dies in prison. It speaks well that, while from 6000 to 7000 prisoners pass through the Belfast Gaol each year, there have been only six deaths in seven years. The medical officer of the gaol said that among the prisoners there was a considerable amount of bronchitis and pneumonia, but that they were entirely free from zymotic disease, notwithstanding that typhoid fever was very prevalent in the city and that the ordinary town water was used. He added that they had a good milk-supply, and that in summer, if there was any suspicion, they sterilised it. The food was good and wholesome and the prisoners were made to bathe every week. At present there was only one case of phthisis among the inmates. The coroner said that he hoped the Belfast Water Commissioners would take a note about the water. The jury found a verdict in accordance with the medical evidence, adding that every due and proper care of the deceased had been taken by the medical and other officials of the prison. The condition of the gaol and of the asylum in Belfast would certainly go to prove that in the causation of typhoid fever in that city the water cannot be a strong factor.

North of Ireland Branch of the British Medical Association.

On Oct 18th, at the opening of session 1900–1901 of the North of Ireland Branch of the British Medical Association

Association in Ireland, Professor Byers spoke of the great progress which the science of medicine had made in this century, instancing especially the new line of clinical and laboratory investigation of the new hæmopathology. Having given instances of the value of this method of specialised examination he then discussed very fully "the Present Position and Future Work of the British Medical Association." At the conclusion of the address a hearty vote of thanks was accorded to Professor Byers by the large meeting of members of the medical profession of Belfast and Ulster who were assembled in the museum. Papers on medical subjects by Dr. J. M. MacCormac and Mr. A. G. McKenna followed.

The Public Health Committee of Belfast.

At a meeting of the Public Health Committee held on Oct. 18th a deputation representing the Belfast and District Trades and Labour Council attended and urged upon the [illegible] for the adoption of a system of [illegible] of milk. They advocated the [illegible] mmended by Dr. Henry O'Neill [illegible] his report on this question but [illegible] at the corporation had not any [illegible] money out of the rates for providing or working an establishment for the sterilisation of milk or the sale of sterilised milk, and that no matter how useful such a department might be, it would be [illegible] obtain the sanction of Parliament [illegible] enditure upon it. Dr. O'Neill [illegible] the objection and he handed the chairman a bank deposit for £300 from two "grateful parents," whose child had been successfully treated by sterilised milk as recommended by Dr. O'Neill, and who wished the scheme recommended by him to be tested for 12 months. A sub-committee was appointed to consider the matter with the view of carrying into effect the wishes of the anonymous contributors.

The Health of Belfast in 1899.

Dr. Whitaker, medical superintendent officer of health of Belfast, has just issued his report for the year 1899. The deaths during this period were 7933; of these 1005 were from zymotic disease and 2865 from phthisis (1112) and diseases of the respiratory organs (1753). These together make a total of 3870, or nearly one half of those registered as having died from all causes. Of the eight principal zymotic diseases diarrhœa has occasioned the heaviest mortality (285) The number of deaths from enteric fever was 263, a material decrease from the preceding year; while the number of cases reported was 1598. The deaths from whooping-cough were 215 and from measles 146, neither of which are notifiable There were only 24 deaths due to scarlet fever, although 917 cases—a number largely in excess of the previous year—were notified. In fact, a mild epidemic of this fever has been prevalent throughout the year in Belfast. 61 deaths were due to diphtheria, 10 from simple fever, and only one from typhus fever. Turning to the mortality from phthisis it is really appalling to think, in spite of the recent crusade against tuberculosis, that there were 1112 deaths from this so called preventable disease during the past year, and, what makes matters worse, the mortality from this fell malady in Belfast seems to be increasing. Climatic influences, Dr. Whitaker tells us, have little effect on the death-rate from phthisis in Belfast, the deaths being as numerous in the warm as in the cold months. There is a branch of the Society for the Prevention of Consumption in Belfast. Surely with such a ghastly death-rate as exists in Belfast from this disease it has an abundant field to work in. Belfast has a population of 350,000 and when we read that of 7933 deaths which occurred during 1899, 1112 were due to phthisis alone, surely there must be some causes at [illegible] progress of sanitary reform and [illegible] years, demand the most careful [illegible] to infant mortality Belfast contrasts favourably with English manufacturing cities and towns, there being 160 deaths per 1000 births, as contrasted with 174 in Brighton, 191 in Birmingham, 206 in Manchester, and 255 in Preston The general death-rate in Belfast for 1899 was from all causes 22·7 per 1000 and 2·9 from zymotic diseases, as contrasted with 26 4 from all causes and 3 7 from zymotic [illegible] Belfast the birth rate for the year generally keeps pretty uniform. The death-rate from phthisis in Belfast in 1899 was 3 2, while it was 4·1 in Dublin City, 4·2 in Cork, 3 0 in Limerick, and 3 6 in Londonderry. The death-rate from diseases of the respiratory organs was 5 0 in Belfast, 6 9 in Dublin City, 4·5 in Cork, 3 7 in Limerick, and 5 0 in Londonderry. With reference to the mortality from enteric fever, while it is pleasing to note that it is less (263) than in 1898 (640), it is still greater than we have generally had in former years, and while in almost every other town or city in the kingdom the deaths from this cause have been steadily declining it is, unfortunately, not the case in Belfast. The disease seems not to be confined to any district of the city or to any particular kind of soil, and it is curious that "the dock district, as also Millfield and its neighbourhood, are the freest from this disease, although the former is low-lying, the houses are old, and sanitation is imperfect, and the latter district is one in which the houses are the oldest, the people generally of the poorer class, and lanes and alleys more frequent therein than in any other part of the city." Dr. Whitaker had 1370 houses in which the disease occurred carefully examined as regards their sanitary arrangements, and of these 898 had water-closets, while 472 had privies. As the houses with water-closets are four times as numerous as those with privies the proportion of houses in which typhoid fever occurred was: water-closets 1 in 63 as compared to 1 in 43 in privy houses. Dr. Whitaker again calls attention to the importance of an infectious diseases hospital and hopes that in his next report he may be able to indicate an advance towards the building of it. During the past year steady progress has been made in improving the sanitation of Belfast; it is to be hoped with Dr. Whitaker that the work of remedying the sanitary defects inherited from our predecessors will be pushed on by the Public Health Committee as rapidly as possible. Dr. Whitaker's most interesting report brings into prominence two very serious blots in the health of Belfast.. These are the terrible mortality from phthisis and the continued existence of enteric fever apparently as an endemic disease. Both of these maladies being now regarded as so largely preventable their very marked existence in Belfast is clear evidence that that city is in an unsatisfactory condition from a sanitary point of view. I use the term "sanitary" in a very wide sense as indicating that the Public Health Committee of that city must make renewed and really energetic efforts to remove all the causes which in any way predispose to the existence of two diseases—phthisis and enteric fever. In all great cities now these are the maladies in the stamping out of which sanitary science is gaining its greatest triumphs. We must not lag behind in this crusade in Belfast which though so large is such a modern city.

The North Charitable Infirmary, Cork.

At a meeting of the committee of the Cork North Charitable Infirmary Dr. Nathaniel J. Hobart tendered his resignation as senior surgeon. Dr. Hobart spoke with much emotion and referred to his long connexion with the hospital, extending over a period of about 40 years. During that time he was happy to say that his relations with his colleagues, with the board of management, and with all connected with the administration of the institution, had been most cordial. His only reason for resigning was because the advance of years was telling its tale and he thought it prudent to husband his strength. He thanked the governors for the very great courtesy which they had always extended to him, and he assured them that he would never cease to take a deep interest in the infirmary with which he had been so long identified. There is no doubt that Dr. Hobart's resignation marks an era in the life-history of the North Infirmary. An able diagnostician and a brilliant operator Dr. Hobart did much to maintain and improve the status of the infirmary as a clinical school His genial disposition and his *bonhomie* endeared him to more than one generation of students who are now scattered all over the globe as practitioners of medicine and who look back to the many happy days when he was their guide, philosopher, and friend He took a keen interest in the battle of the clubs at Cork and his matured experience and prudent counsel were always at the disposal of his colleagues. The public of Cork will join with the committee of the

the hospital, but also many severe and hopeless cases have to be admitted. The cases are thus on an average rather severer than those treated in private practice. Tracheotomy was performed in 96 cases, which corresponds to a percentage of 28·4. The mortality only reached 10·5 per cent of all the cases and 18·75 per cent. of the cases for which tracheotomy was performed. Albuminuria was present in 57 8 per cent. of the cases and could not be attributed to the serum injections as it was observed before the injections were given. Only in very rare cases of severe nephritis could diphtheria bacilli be demonstrated in the kidney after the post-mortem examination. The albuminuria proved to be in direct connexion with the extension and persistence of the diphtheritic membranes. Cases with gangrenous membranes proved especially severe, and all these cases, 24 in number, had albuminuria. Six of these cases (20 per cent.) succumbed to the disease. Four cases complicated by otitis media, three by severe sepsis, and 24 by paralysis of the pharynx all had albuminuria and all had been injected two or more days after the commencement of the illness. Of the tracheotomy cases 82 per cent. had albuminuria. Albuminuria is thus of the greatest value as a prognostic in determining the severity of the disease.

Zurich, Oct. 22nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Observations by Professor Grassi on the Habits of the Anopheles.

ANYTHING from the pen of Professor Grassi relating to malaria will be read with interest. He has just published another note in the *Rendiconti della R. Accademia dei Lincei*, describing some observations made by him in September of last year and during the past summer at Grosseto with the object of controlling the results obtained last year in July and August by Koch's expedition. The latter, it may be remembered, found very few anopheletes but a very great number of culices in this city, although malaria was very prevalent, and from this fact he considered it likely that culex pipiens is also an agent in the propagation of malaria. Professor Grassi, on the contrary, has found anopheletes very abundant in the same houses where Koch had noted malaria the previous year, and he concludes from this that Koch's party were inexpert at the work of looking for mosquitoes and that their search was not made in the proper places, which are the entrances of houses and outhouses and not in the bedrooms. He found that the favourite time for the anopheles to feed at Grosseto was the 30 or 40 minutes immediately after sunset and, to a much less extent, the same time before sunrise. They take long flights in search of food and like to go away shortly after feeding, for which reason they may be said to change every 24 hours, at least during the warm weather, only very few (about 1 per cent.) being consequently found infected in the height of summer. As the weather becomes colder they remain longer and a larger proportion (about 8 per cent) are found infected. The infected insects are apt to be conveyed passively over long distances and so spread infection to fresh localities hitherto exempt. Anopheletes are found in some places where no malaria exists as, e g., along the Lake of Como. Their larvæ live freely in salt water, and seaside places, though usually exempt, are not invariably so. Professor Grassi, in conclusion, confirms the observations of Christophers and Stephens on the occasional presence in the salivary glands of the culex of bodies which resemble, but which he does not believe to be, sporozoites. He calls them pseudo-sporozoites.

The Protective Experiments against Malaria in the Agro Romano.

In a former letter[1] some account was given of the measures that were being taken to protect from mosquitoes the employés along certain sections of railway, as well as those in the service of the Acqua Marcia and of the electric traction companies in the Agro Romano. The houses and huts of Cervelletta and Castella were also protected, the means used being similar to those adopted by Professor Grassi in his remarkable Albanella experiment.[2] Professor Celli, who has had the supervision of the experiments, informs me that the results have exceeded expectation, all the inhabitants of the houses and huts having remained quite immune from fever while those in neighbouring houses, purposely left unprotected for the sake of comparison, were all attacked by malaria. Of the 183 railway employés who were subjected to the test only five contracted the fever, and in all of these the attacks were traceable to neglect of the simple precautions recommended. The results thus obtained have proved so encouraging to the railway companies and other employers of labour in the Agro Romano that it is proposed greatly to extend the field of operations next malaria season, employing the same system of protection by means of wire gauze. The Society for the Study of Malaria intend to bring the matter before Parliament with the object of obtaining State assistance for dealing with the disease by the methods which these recent researches have shown to be so efficacious.

Pellagra in the Province of Rome.

The occurrence of this *mal de misère*, the "Mailändische Rose" of the Germans, though known in Central Italy, has never become so prevalent there as in the northern portion of the kingdom. In the province of Rome its very existence has been unknown to people in general until the publication of the recent report of Dr. Zampa, the medical officer of health for the province, from which it appears that when the sanitary inspection was made in 1899 some 150 cases were discovered distributed throughout the district, but occurring chiefly at Onano, Piglio, Proceno, Palestrina, Cave, and Valmontone. More than one-half of these (80 cases) were found at Onano, where indeed the disease has assumed an endemo-epidemic character. The date of its first appearance in the province is uncertain, but in 1869 it was known to have already existed for some time. In 1881 there were only about 30 "pellagrosi," but in 1897 the number had risen to over 100, located principally at Onano and Piglio. No connexion has been traced between the disease and topographical conditions, the affected communes lying indifferently sometimes in the malarial, sometimes in the non-malarial, zone. The malady attacks by preference the agricultural classes, but in the rural communes does not altogether spare artisans, even those better off, the explanation being partly that less difference exists here than elsewhere in the conditions under which the agricultural and artisan classes respectively live, partly because of the widespread misery caused by the deficiency or absence of crops in some localities during the last two or three years owing to which their means of subsistence were reduced to maize alone. Onano, where the disease is most prevalent, lies amongst the hills at an elevation of close upon 1800 feet above sea-level, in a situation naturally salubrious, but its houses are so constructed for the most part as to be nothing better than damp grottoes, dirty and dark, with no ventilation whatever. The drinking-water is very scarce and after rain it is often muddy, and the only food for the poor people during the greater part of the year is "polenta," a kind of porridge made of maize meal seasoned with a little salt. The remedies proposed by Dr. Zampa consist in limiting the consumption and improving the supply of maize by exercising care in selecting and storing the grain, so that the people may get it sound, dry, and of good quality; at the same time ameliorating the insanitary conditions of the houses and their surroundings which conduce to the production of the disease; and, finally, by the appointment of a provincial commission with communal committees, such as exist in other districts where the disease is of old standing, for the purpose of collecting information as to its spread, of advising or adopting measures for its prevention, and of organising the distribution of subscriptions from public or private sources amongst its victims.

Hæmorrhagic Small-pox near Salerno.

Seven cases of "black" small-pox, one of which has already proved fatal, are reported from Nocera Inferiore on the Naples and Salerno line of railway. Much apprehension is felt lest the disease should spread and precautionary measures have been taken by the prefect in regard to the isolation of those attacked and the vaccination of the population of Nocera and its neighbourhood.

The Ostia Experiment.

The period assigned to the experiment in the Roman Campagna planned by Dr. Patrick Manson is now so near its close that the successful result of this also may be regarded as assured. Dr. Sambon and Dr. Low, as well as the artist Signor Terzi and the two servants who have passed the last three months with them in this highly malarious part of Italy, have not only succeeded in escaping infection thanks to the protection afforded them by their mosquito-proof house, but by [illegible] strong testimony to [illegible] air of Ostia. After [illegible] of a pestiferous swamp through the hottest and most unhealthy time they are now leaving the dreaded Campagna looking as "fit" and bronzed as if their summer had been spent in the Swiss Alps or the Scottish Highlands. In sad contrast to this pleasing picture is the condition of the inmates of the nearest peasant's house little more than 100 yards distant [illegible] teristic [illegible] ad the spleen greatly enlarged. A [illegible] of their dwelling sufficed to reveal [illegible] for in the cobwebs on the walls, [illegible] y dark corner of the house, lurked numerous specimens of the fe[illegible] a contrast as is here presented [illegible] lection, that the evil repute of [illegible] as pestilential depends upon no real insalubrity of the place itself, inherent in its soil or in its air, but upon fortuitous, non-essential, and perhaps easily removeable, conditions. Besides attaining the immediate object of the expedition, [illegible] obser- [illegible] upon [illegible] sition which they assume when at rest, their mode of flying, and their respective prevalence in the different months. The full report of the expedition, to the attractiveness of which the beautiful drawings by Signor Terzi will greatly add, is looked forward to with much interest.

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[1] THE LANCET, July 14th, 1900, p. 140.

[2] THE LANCET, Sept. 29th, 1900, p. 977.

Oct. 21st.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Accident to Professor Rieder.

A GOOD while ago the Government of Turkey, having resolved to put medical education in that country on a better footing, requested the German Government to select a competent teacher who would be able also to organise a satisfactory system of medical education in Turkey. Dr. Rieder, extraordinary professor of surgery in the University of Bonn, was chosen for the new appointment and came to Constantinople two years ago. He proved himself admirably fitted for the post and the manner in which he performed the work intrusted to him has been beyond all praise. He taught in a newly-constructed hospital at Gulhaneh in a corner of the place where the Byzantine Imperial palaces used to be; the beds are 200 in number, 40 of them being for women. He succeeded in introducing two innovations to which the social conditions prevailing in Turkey presented serious obstacles and which had baffled all previous efforts in the same direction, for he brought about the withdrawal of distinctions between patients belonging to different races and religious beliefs and he obtained the permission, so necessary to medical education, to perform necropsies on all patients dying in the above hospital. In addition to his duties as a teacher Professor Rieder was extraordinary surgeon to the Imperial palace and had general control of the building operations going on at the new medical school which is in course of erection at Haidar-Pasha near the English cemetery. The original estimate of the cost of this building was £T200,000, but Professor Rieder made such modifications in the plans as raised the estimate to £T600,000. The building is now roofed in, and he used to visit it three times a week. On Oct. 2nd, while on the third storey, the part on which he was standing gave way and he fell to the ground from a height of 49 feet, sustaining fractures of both legs and thighs, some ribs, and the dorsal spine, followed by paralysis of the lower limbs, rectum, and bladder. When the sad news became known all who were acquainted with Professor Rieder were painfully affected. Dr. Hambouroglou of the German Hospital, together with the surgeon of the German despatch vessel *Loreley*, were promptly in attendance. Dr. Zick of Hamburg and Professor Schede of the University of Bonn were telegraphed for, and Dr. Zick has already arrived. Professor Rieder has been removed from Haidar-Pasha to the Gulhaneh Hospital, where he is now lying.

The Shah of Persia.

When in Constantinople the Shah presented £T500 to the Persian Hospital there.

Archæology in the Island of Cos.

Two years ago Dr. Rudolf Herzog of Tübingen undertook excavations in the island of Cos with the view of finding the temple of Æsculapius. At a depth of 80 centimetres [illegible] bring which represented [illegible] At a depth of two [illegible]) in the neighbourhood [illegible] l two columns and not far from them the remains of an aqueduct and a small statue of a young man. Great importance is attached to Dr. Herzog's discovery of the supposed temple of Æsculapius. The excavations are still in progress and it is hoped that many antiquities will be found.

Oct. 11th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Census in the United States.

ALTHOUGH the exact population of the United States has not yet been made public, yet sufficient has been published to make a reasonable conjecture as to an approximate estimate. It is likely that the total number of inhabitants of the United States will be found not to reach 80,000,000. The improvement in the sanitary conditions of large towns, [illegible] this point says: "It is perhaps true that there are now some localities of considerable extent in the United States where, if it were not for the [illegible] tion, and also that there is [illegible] among the immigrants, the [illegible] means hold its own on accoun[illegible] the native American element [illegible] facts that the new census [illegible] light upon interesting questions touching the present tendencies of population in the United States. If the statistics are to be relied upon the increase in population which was due to the excess of births over deaths was about 14 per cent. for the 10 years 1880–90; but, further, assuming the correctness of the immigration statistics for the past decade, if we accept the estimates which call for a population of 80,000,000 this year, we shall have to look to an excess of births over deaths for a gain of almost 22 per cent. To anyone familiar with vital statistics it is evident without further discussion that such a radical change in the conditions of population increase in the United States could not possibly have taken place. Even if one were to be content with estimating that we should have gained population at the same rate in the current decade as in the one preceding it would still be necessary on account of the falling off in immigration to rely upon a considerably higher rate of gain in the excess of births over deaths in order to bring up the total and there is not sufficient reason to believe that the actual census work will show any such gain. There is no doubt whatever that the birth-rate among native-born Americans has been decreasing not only steadily but even with some rapidity. The native-born population of the United States resemble in this respect the people of Great Britain and to a lesser extent those of France, in which countries although improved sanitary conditions and methods of treating disease are diminishing the death-rate, yet at the same time, and especially in the latter country, there has been a great falling-off in the birth-rate. Of course, when Great Britain is referred to, it is understood that the falling-off in the birth-rate has as yet been inconsiderable, but that there is a tendency in that direction cannot be denied.

Yellow Fever in Cuba.

This disease has been prevalent to a somewhat alarming extent in Havana for the past two months, and especially among American residents. At the present time, although perhaps the epidemic shows signs of waning, yet the situation is still sufficiently alarming. The reports of the United States Marine Hospital Service show that there were 73 deaths from yellow fever in the week ending Sept. 1st, more than double the number of deaths from the same cause in the preceding week. During the month of September 267 cases were officially reported, with a mortality of 25 per cent.; 84 cases, according to the latest accounts, are under treatment, and 25 fresh cases have been reported within the last 48 hours. It is also rumoured that many cases are not reported as yellow fever at all, because of the non-development of albumin symptoms, although all the other symptoms are unmistakeable. The physicians are unwilling to diagnose as yellow fever the non-albuminous cases in order not to swell the yellow fever statistics. However, this statement is not authenticated. While the infection is well scattered over the entire city, the larger number of cases have occurred on the Prado and in sections of the city occupied by the wealthier classes. During the month of August work on the Havana electric car line has been under way, and extensive excavation and street grading have been performed. Whether the work necessitating the tearing up of the streets along the street car line at this time of the year is altogether reponsible for the increased amount of sickness in Havana is hard to determine. It is certain that neither yellow fever nor malaria is confined to those parts of the city in which the work is being done, and yet there has been considerable sickness among labourers, most of them Spanish and American, engaged in the construction of the car line. In the public health reports of the Marine Hospital Service for Sept. 21st is included the following extract from *La Habana Medicina*, an influential scientific review published in Havana: "The gravity of the present epidemic of yellow fever is truly alarming. A greater number of invasions probably occurred in 1895, but the general character of the disease was rather benign. In the present year, on the contrary, it assumes the utmost gravity, the mortality exceeding 30 per cent. The following are the data from the principal sanitariums of Havana for the eight months from Jan. 1st to August 21st: Quinta de Dependientes 136 cases, with 38 deaths, the percentage of mortality being 27·94; Quinta la Covadonga, 51 cases, with 20 deaths, the percentage of mortality being 39 91; Quinta del Centro Gallego, 38 cases, with 12 deaths, the percentage of mortality being 31 57; and Quinta del Rey, four cases, with three deaths, the percentage of mortality being 75. Analysing these figures, those of the Quinta de Dependientes attract the most attention; more patients have been treated there than in the other three sanitariums put together, with the fortunate result that the relative mortality has been less than in any other. As we see, yellow fever still dominates our local pathology, while other diseases sensibly diminish and with them the general mortality. It does not suffice to combat this infection with the greatest hygiene. As the principal factor against it a therapeutic agent of sure action is needed and unfortunately we do not posses it. Sero-therapy is the only source to furnish it." While possibly right in saying that a serum may be discovered which will act as an efficient antidote against yellow fever, *La Habana Medicina* is wrong in asserting that the disease cannot be controlled and even entirely extirpated by good sanitation and by methods of hygiene generally. This fact has been proved in so many instances that it is unnecessary to touch upon it further. Nothing but a thorough new sewage system which might cost any sum from £2,000,000 to £3,000 000 will effectually solve the problem of cleansing Havana and of abolishing yellow fever. If the late Colonel Waring's plans had been carried out in their entirety Havana would probably by this time be in a fairly healthy condition. It must be understood that the money for these radical remedial measures will have to be mainly forthcoming from Americans, as the Cubans themselves, being immune, care not whether the city is filthy or clean. In some of the American lay journals there is a tendency to reflect unfavourably on General Wood, but undoubtedly he has done his best with the means at his disposal.

Oct. 6th.

Obituary.

LEWIS ALBERT SAYRE, M.D., LL.D.

ONE of the best-known American surgeons, Dr. Lewis Albert Sayre, passed away at his home in New York on Sept. 21st at the ripe age of 80 years. He was born on Feb. 29th, 1820, and he graduated in medicine in 1842. He was one of the founders of the Bellevue Hospital Medical College and was its first professor of orthopædic surgery and continued to hold that chair until 1898 when the college was united with the New York University. He was then appointed emeritus professor of orthopædic surgery to the allied institutions. He was also one of the founders of the New York Academy of Medicine and of the American Medical Association, of the latter of which he became president in 1880. Dr. Sayre interested himself greatly in the sanitary affairs of New York and had much to do with the improvement of that city in this respect. But his chief reputation was acquired by his skill as a surgeon. He was the first American to perform successfully a resection of the hip for morbus coxarius in 1854, while his treatment of lateral curvature by extension and a plaster jacket is known by his name throughout the world. In 1877 he visited England for the second time as a delegate of the American Medical Association to the meeting of the British Medical Association in Manchester. He contributed largely to medical literature and was made an honorary member of the British Medical Association, the Medico-Chirurgical Society of Edinburgh, the Surgical Society of St. Petersburg and the Medical Society of Norway. Charles IV. of Sweden gave him the decoration of the Order of Wasa for his attendance on a member of the Royal Family. The *New York Medical Record*, in its obituary notice of Dr. Sayre, says: "Dr. Sayre was a typical American in every sense. Ingenious, original, and resourceful, he was ever ready to do and dare in any surgical emergency. Few in his time commanded wider and more extended appreciation of their work and no American surgeon enjoyed a better reputation than did he, whose name and fame belonged to the entire civilised world of progressive science."

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Siegenbeek van Henkelom, Professor of Pathological Anatomy in the University of Leyden. A large collection of his own and his students' original researches are published under the title of "Recueil de Travaux Anatomo-Pathologiques du Laboratoire Boerhave." He was only 50 years of age.—Dr. Eugen Kotlyar of St. Petersburg, where he was *privat-docent* of Pharmacology. He also acted as editor of a journal of Practical Medicine.—Dr. Heinrich Abegg of Dantzig, at the age of 74 years. He published a number of papers, mainly on gynæcological topics, and interested himself greatly in the establishment of seaside children's homes.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—In October the following candidates passed in the subjects indicated:—

Surgery.—F. G Aldrich (Section II.), Charing Cross Hospital; A. C. Clarke (Sections I. and II.), Manchester; C. J. E. Edmonds (Section II.), St Thomas's Hospital; H. Jessop (Section I.) and J. R. Pooler (Sections I. and II.); [illegible] th, St Thomas's Hospital; A. H. Wade [illegible] spital; J. Waters (Sections I. and II.) [illegible] H. F. Willington, Manchester; and T. [illegible] II.), Birmingham.

Medicine.—A. G. H. Anthonisz (Section II.), University College Hospital; J. Black and A. C. Clarke (Sections I. and II.), Manchester; J. R. Clemens, St. Thomas's and London Hospitals; F. A. Hort, Middlesex Hospital; C. Johns[illegible] London Hospital and Durham; R. A. Pitter, [illegible] Pooler (Section II.), Birmingham; F. [illegible] H. V. Swindale (Sections I. and II.), Middlesex Hospital; A. J. Watson (Section II.), St. Mary's Hospital; and T. R. Wilshaw (Section II.), Birmingham.

Forensic Medicine.—J. Black and A. C. Clarke, Manchester; J. R. [illegible]

OXFORD UNIVERSITY.—In a congregation held on Oct. 18th the following degree was conferred:—

M.D.—R. R. Wade, Exeter.

A CENTENARIAN.—The medical officer of health of Plymouth reports the death of Mrs. Preston who died on Oct. 6th, aged 102 years.

PRESENTATION TO A MEDICAL MAN.—At a smoking concert held on Sept. 28th by the members of the Wellington Lodge of Oddfellows at the Druid's Head, Oxford, Mr. W. Allin Thompson, M.R.C.S. Eng., was presented with a testimonial on the occasion of his recent retirement from the position of medical officer, after nearly 40 years' service. The testimonial consisted of a Tantalus liquor stand on which was the monogram, "W. A. T.," and an illuminated address in an oak frame, which expressed the appreciation and gratitude of the lodge for his long and skilful services.

UNIVERSITY OF CAMBRIDGE.—The following have been appointed demonstrators. Human Anatomy: Dr. F. C. Kempson and Dr. G. F. Rogers. Experimental Physics: Mr. C. T. R. Wilson, F.R.S., and Mr. J. S. E. Townsend.—The Gedge Prize for Physiology is awarded to J. Barcroft of King's and H. H. Dale of Trinity (equal).—An order has been obtained from the High Court varying the conditions for the Gedge Prize in such manner that advanced students of a certain standing are alone eligible.—The following have passed the examinations for the Public Health Diploma: J. E. Adams, J. Allan, W. S. Badger, W., R. Bhat, W. A Densham, W. H. de Wytt, J. R Garrood, H. W. G. Macleod, S. Mallannah, W. F. Moore, T Telford-Smith, G. A. Troup, J. J. Weaver, J. H. G. Whiteford, R S Williams, and R P. Wilson.—The number of students matriculating this term is 841, including 15 "advanced students." Last year the number was 888—The following examiners for medical degrees have been appointed. Physics: Mr. Fitzpatrick. Chemistry: Mr Sell, F.R S., and Mr. Adie. Biology: Mr. Bateson, F.R.S., and Mr Blackman. Pharmaceutical Chemistry: Mr. Ivatt and Mr. Purvis. Human Anatomy: Dr. Barclay Smith and Professor Wardrop Griffith. Physiology: Mr. Tuckett and Professor Starling, F.R S For the Natural Science Tripos Dr. Anderson and Professor Gotch, F.R.S., Oxford, have been appointed examiners in physiology, and Mr. Duckworth and Mr. F. G Parsons examiners in human anatomy.—The number of freshmen who have entered this term at Cambridge with the intention of pursuing a course of study for a medical degree is 115. This number may be slightly increased during the term, but it is at present somewhat smaller than last year.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—[illegible] he President and Fellows of [illegible] Ireland, held on Oct. 18th [illegible] licers were elected for the [illegible] hristopher J. Nixon, M D. R.U.I. Vice-President: Dr Joseph Redmond. Censors: Dr. Joseph Redmond, Dr. J. O'Carroll, Mr. E. H. Tweedy, and Mr. A. N. Montgomery. Additional examiners to take the place of an absent Censor—Medicine: Dr. H. C. Tweedy. Medical Jurisprudence and Hygiene: Dr. F. C. Martley. Midwifery: Dr. H. Jellett. Examiners for the [illegible] H R. Glenn and Mr. H. T. [illegible] under the Conjoint Examina- [illegible] E. MacDowel Cosgrave. Chemistry and Physics: Dr H T. Bewley and Mr. E. Lapper. Materia Medica and Pharmacy: Dr. F. J. B. Quinlan and Dr. N. Falkiner. Physiology: Dr. J. Mallet Purser. Pathology: Dr. A. C. O'Sullivan. Medicine: Dr. J. Byrnie Coleman and Dr. G. J. Peacocke. Hygiene and Forensic Medicine: Mr. W. Langford Symes. College Examiners for the Conjoint Diploma in Public Health—Hygiene: Dr. F. J. B. Quinlan. Chemistry: Professor Edwin Lapper. Meteorology: Dr. Ninian Falkiner. Examiners in Preliminary Education—Science: Mr. W. E. Thrift, F.T.C.D. Languages: Mr. William Kennedy, F.T.C.D. Representative on the General Medical Council: Dr. Lombe Atthill. Representatives on the Committee of Management under the Conjoint Examination Scheme: Dr. J. M. Finny, Sir John Moore, M.D. Dub., and Dr. James Craig. Treasurer: Dr. Lombe Atthill. Registrar: Dr. James Craig. Librarian: Mr. B. G. J. Phelps Agents to the Trust Estate: Mr. C. U. Townshend. Law Agents: Messrs. S. Gordon and Son. Architect: Mr. A. E. Murray. Dr. Martin Dempsey was admitted a Fellow of the College. In the evening the annual banquet of the President and Fellows was held in the College Hall.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ADAM, T. B., L.R.C.P. & S., has been appointed House Surgeon to the Glasgow Royal Infirmary.

AINSLIE, W., M B., Ch B. Aberd., has been appointed District and Workhouse Medical Officer, Kington Union, vice R. A. Billiald, resigned.

BARNES, R., W., has been appointed Medical Officer for the No. 6 District of the Bridgwater Union, vice J. H. Jolley, resigned.

BERGIN, WM. M., M.B. Lond., M R.C S. Eng., has been appointed House Surgeon to the Royal Eye Hospital, Southwark.

BYTHELL, W. J. S., B A., M B., Ch B., has been appointed Anæsthetist to the Manchester Children's Hospital, Pendlebury.

CARTER, A. H., M.B Lond., L.R.C.P., M.R.C S., has been appointed Assistant Medical Officer to the Infirmary, Lewisham Union, vice J. Dunston, resigned.

COSENS, F. R. S., L.R C P. Lond., M.R.C.S., has been appointed District Medical Officer, Honiton Union, vice W. V. Sinclair, resigned.

CRAWFORD, G. M., M.B., Ch B., has been appointed House Surgeon to the Glasgow Royal Infirmary.

DOUGLAS, JOHN C., L.R.C P. & S., has been appointed House Physician to the Glasgow Royal Infirmary.

FERGUSSON, H. C., M B., Ch B., has been appointed House Surgeon to the Glasgow Royal Infirmary.

FINDLAY, LEONARD, M.B., Ch.B., has been appointed House Physician to the Glasgow Royal Infirmary.

FORMAN, BERNARD GILPIN, M.B., Ch.B Edin., has been appointed Assistant House Surgeon to the Dumfries and Galloway Royal Infirmary.

GARROW, A., M.B., Ch B., has been appointed House Surgeon (Ophthalmic) to the Glasgow Royal Infirmary.

GUNSON, CHARLES HERBERT, M.B., Ch.B. Glasg., has been appointed Resident Surgeon to the North Cambs. Hospital, Wisbech.

HARRINGTON, A. W., M B., Ch.B., has been appointed House Physician to the Glasgow Royal Infirmary.

HIGHMOOR, R. N., C M. Edin., has been appointed Medical Officer for the Fransham Sanitary District of the Mitford and Launditch Union, vice R. E. Newton, resigned.

HOBART, N. H., M.B., B S Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer, Cork North Infirmary, vice N. J. Hobart, resigned.

LEITCH, J. W., M B., Ch.B., has been appointed House Surgeon to the Glasgow Royal Infirmary.

LEYS, NORMAN M., M.B., Ch B., has been appointed House Physician to the Glasgow Royal Infirmary.

McDONALD, ELLEN S., L.R C P. & S., has been appointed House Surgeon (Gynæcological) to the Glasgow Royal Infirmary.

MONTGOMERY, W. P., M.A Oxon., B S., M.B. Lond., F.R.C.S. Eng., has been appointed an Honorary Assistant Surgeon to the Royal Infirmary, Manchester

NAISMITH, J. H., M.B., M S Glasg., has been appointed Medical Officer of Health for the Tow Law Urban Sanitary District, vice W. Tiplady, resigned.

[illegible] M S. Irel., has been appointed Assistant [illegible] orkhouse of the Parish of Nottingham, [illegible] ied

RAINFIRD, P. H., [illegible], has been appointed House Surgeon to the Glasgow Royal Infirmary.

ROBERTS, EDWARD W., M R.C S., has been appointed House Physician to the Glasgow Royal Infirmary.

Russell, Matilda H. G., L.R.C.P., L R C S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer to the Infirmary of the Parish of St. Giles, Camberwell, vice Miss L. G. Anderson, resigned.

Scott, J. H, M.R C.P., L.R.C.S. Irel, has been appointed District Medical Officer, Eton Union, vice T. Miller, resigned.

Simmons, S. S., L R.C.P. Lond, M.R.C.S., has been appointed District Medical Officer, Croydon Union, vice T. R. B. Parker, deceased.

Smith, H. Oswald, M B., Ch B, has been appointed House Surgeon to the Glasgow Royal Infirmary.

Thomson, R. S., B Sc. Glasg., M D., has been appointed Professor of Practice of Medicine, Anderson's College Medical School, Glasgow.

Watson, A. L, M.B, Ch B, has been appointed House Surgeon to the Glasgow Royal Infirmary.

Wild, R. B., M.Sc. Vict., B.Sc., M.D. Lond., has been appointed an Honorary Physician to the Cancer Pavilion and Home connected with Owens College, Manchester, vice D. J. Leech, deceased.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Birkenhead and Wirral Children's Hospital, Woodchurch-road, Birkenhead.—House Surgeon for twelve months. Salary £100 per annum, with board, residence, and laundry.

Chelsea Hospital for Women, Fulham-road, S.W.—Assistant Anæsthetist. Medical women eligible for the post.

Cornwall County Asylum, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £120, rising to £150 by £10 annually, with board, furnished apartments, &c.

County Asylum, Chester.—Junior Assistant Medical Officer, unmarried. Salary £160 per annum, with board (no liquors), lodging, and washing.

Down District Asylum Downpatrick.—Assistant Medical Officer, unmarried. Salary £150, rising £10 annually to £200, with furnished apartments, board, washing, and attendance. Apply to the Resident Medical Superintendent.

Dundee Royal Lunatic Asylum.—Medical Assistant.

French Hospital and Dispensary, 172, Shaftesbury-avenue, London.—Resident Medical Officer (not a female), registered, speaking French, and unmarried. Salary £80 a year, with full board.

Guest Hospital, Dudley.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, residence, board, and washing.

Herefordshire Rural District Councils.—Medical Officer of Health for the Combined Districts for three years. Salary £530 per annum including expenses and disbursements. Apply to the Clerk, Hereford.

Hospital for Diseases of the Throat, Golden-square, London.—Four vacancies for the office of Senior Clinical.

Hospital for Sick Children, Great Ormond-street, London.—Ophthalmic Surgeon.

Jarvis' Charity, Staunton-on-Wye, Hereford.—Medical Officer, to reside in house provided by the Trustees, with garden and good stabling rent free. Salary £150 per annum and certain allowances.

Jenner Institute of Preventive Medicine, Chelsea Gardens, London.—Assistant in the Department of Pathological Chemistry. Salary £300.

Kent County Asylum, Chartham, near Canterbury.—Second Assistant Medical Officer, unmarried Salary begins at £175 per annum, with board, quarters, washing, and attendance. Also Third Assistant Medical Officer required in January next. Salary begins at £125, with emoluments as above.

London Temperance Hospital, Hampstead-road, N.W.—Resident Medical Officer for one year. Salary £200 per annum, with board, lodging, and washing.

Leeds General Infirmary.—Resident Obstetric Officer. Board, lodging, and washing provided. Also two House Physicians for six months Board, lodging, and washing provided.

Northumberland County Asylum, Morpeth.—Assistant Medical Officer, unmarried Salary £125 per annum, rising £10 yearly to £155, with board, lodging, and washing.

North London Hospital for Consumption, Hampstead.—Senior and Junior Resident Medical Officers for twelve months. Honorariums £100 and £60. Apply to the Secretary, Offices, 41, Fitzroy-square, W.

Parish Council of Tingwall Whiteness, and Weisdale.—Medical Officer Salary £40 per annum, which includes the cost of medicine for paupers belonging to the parish. Apply to the Inspector of Poor, Scalloway, Shetland.

Parish of St. Matthew, Bethnal Green, London.—Clinical Assistant at the Infirmary, Cambridge-road, N.E, for six months, unmarried. Salary at the rate of £40 for the six months, with board, lodging, and washing. Apply to the Medical Superintendent of the Infirmary, Cambridge-road.

Royal Albert Hospital, Devonport.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, with board, lodging, and washing.

Royal College of Surgeons, Edinburgh.—Conservator to the Museum. Salary £105. Apply to the Clerk of the College, 54, George square, Edinburgh.

Royal Infirmary, Sheffield.—House Physician. Salary £100 per annum, with board, lodging, and washing.

Royal National Hospital for Consumption and Diseases of the Chest, Ventnor, Isle of Wight.—Assistant Resident Medical Officer, unmarried. Salary £100 per annum, with board and lodging in the hospital. Apply to the Secretary, London Office, 34, Craven-street, Charing-cross, W.C.

Royal Sea Bathing Hospital, Margate.—Resident Surgeon. Salary £100, with board and residence. Apply to the Secretary, Royal Sea Bathing Hospital, Offices, 30, Charing-cross, London.

South Devon and East Cornwall Hospital, Plymouth.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

Southport Convalescent Hospital and Sea Bathing Infirmary.—Resident Medical Officer, unmarried. Salary to commence at £150 per annum.

The Chief Inspector of Factories gives notice of vacancies as Certifying Surgeons under the Factory Acts at Diss, in the county of Norfolk; at Broughton Astley, in the county of Leicester; and at Rahan, in King's County.

Wolverhampton Eye Infirmary.—House Surgeon for twelve months. Salary £70 per annum, with rooms, board, and washing.

York Dispensary.—Resident Medical Officer, unmarried. Salary £110 a year, with board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

Blumer.—On Oct. 19th, at St. Mary's-grove, Stafford, the wife of F. Milnes Blumer, M.B., of a son.

Brock.—On Oct. 14th, at Via Veneto, B, Rome, Italy, the wife of G. Sandison Brock, M.D., of a daughter.

Drury.—On Oct. 21st, at Grahamstown, South Africa, the wife of Edward Guy Dru Drury, M.D., B.S. Lond., of a son. (By cable.)

Kent.—On Oct. 19th, at Dorset Cottage, Bexhill, the wife of Sydney Kent, M.B., B.C. Cantab., M.R.C.S., L R.C.P., of a son.

Newnham.—On Oct. 21st, at Chandos Villa, Queen's-road, Clifton, Bristol, the wife of W. H. C. Newnham, M.A., M.B. Cantab, of a daughter.

Turner.—On Oct. 16th, at Plympton House, Plympton, South Devon, the wife of Alfred Turner, M.D. Edin., of a son.

Williams.—On Oct. 17th, the wife of Watson Williams, M.D., Victoria-square, Clifton, Bristol, of a daughter.

Withers.—On Oct 17th, at Ashford, Peel-causeway, Cheshire, the wife of Percy Withers, M.B., B.S., of a daughter.

MARRIAGES.

Gervis—Stirling.—On Oct. 24th, at the Parish Church of St. Alfege Greenwich, Charles Berkeley Gervis, M.D., of Seaford, to Grace, youngest daughter of Thomas Stirling, of 13, Gloucester-place, Greenwich.

Scott Wilkinson—Bell.—On Oct. 20th, at St. Mark's Church, Kennington, by the Rev. Mr. Bankart, Charles Scott Wilkinson, son of Adam Wilkinson, M.D., J.P., of Avishayes, Shaftesbury, Dorset, to Frances Dorothy, eldest daughter of John Bell, Esq, of Newcastle-on-Tyne.

Tyrrell—Livesey.—On Oct. 17th, at St. Peter's, Eaton-square, Charles Robert Tyrrell Major Royal Army Medical Corps, to Agnes Laura, youngest daughter of James Livesey, Esq., of Grosvenor-gardens, S.W., and Rotherfield, Sussex.

Wood—Harris.—On Oct. 17th, at Littleham Church, Exmouth, Thomas Wood, J.P. for Midlothian, M.B., C.M. Edin, youngest son of the late William Inglis Wood, Lindores, Newburgh, Fife, to Alice Elizabeth Esther, daughter of John Harris, St. Mary's Lodge, Exmouth.

DEATHS.

Brown.—On Oct. 17th, at Holly Lodge, Brockley-road, S.E, Alexander Stewart Brown, F.R.C.S., aged 45 years.

Eccles.—On the 22nd Oct, suddenly, at 23, Hertford-street, Mayfair, W. Arthur Symons Eccles, M.B., C.M., in his forty-sixth year.

Reynolds.—On the 20th inst., at Southend-on-Sea, Edward Robert Bradley Reynolds, M R C.S. Eng., of Highcroft, Shepherd's Hill, Highgate, and late of Highbury New Park, N., aged 65.

Wood.—On Oct. 16th, at St. John-street, Oxford, William Dyson Wood, L.R C.P., L.R.C.S. Edin, Medical Officer of Health for the County of Oxford.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE STUDENTS AND THE FAITH-HEALER.

THE disturbances created by medical students and other young men at certain lectures given by a crack-brained adventurer calling himself "Overseer of the Church in Zion" were what might have been expected. Becky Sharpe, it may be remembered, remarked *apropos* of her throwing back the "Dixonary," "Revenge may be wicked but it's natural." The same may be said of the proceedings of the students. Dowie, judging from the papers which he edits, "for the extension of the kingdom of God," is a person who combines a nauseous profession of religion with the practice of quack medicine as a faith-healer. He has been called by at least one newspaper neither more nor less than a swindler. It is only natural that medical students hearing their profession abused and their teachers insulted should mark their disapprobation of Dowie, though it is to be regretted that they should do so by acts which are illegal. It would of course have been much better policy to leave Dowie alone. Pretenders of all kinds are far more hurt by being ignored than by anything else and if Dowie has paid for the use [illegible] certain of the culprit and the [illegible] examples were required we think that under the circumstances the students have had hard lines.

A CURIOUS TRANSACTION.

To the Editors of THE LANCET.

SIRS,—I shall esteem it a favour if you will kindly state your opinion upon the following transaction. A purchased a practice (a country branch) from B, a certain sum of money being paid down, the remainder to be paid in a manner mutually agreed upon. In the [illegible] A understood was to be trans- [illegible] made between A [illegible] informed by *one of the members* of the club in question that he, A, was not to be the medical attendant, another practitioner, C, having been appointed, as B had tendered his resignation. This statement led A to make inquiries into the matter, when he found that B had resigned the appointment, and was merely working out the stipulated term of notice between himself and the club. As this notice was given *prior* to the actual purchase of the practice by A, he naturally feels that he has been very unfairly dealt with by B, who gave him no information whatever about the matter. A called upon B in order to talk matters over and, if possible, to come to a friendly arrangement, but the latter acted in a most high-handed manner and refused to discuss the subject. I may here mention that C is a practitioner residing in the same town as B, with whom he is on intimate terms. Under the circumstances ought not B to allow A a certain sum, to be agreed upon, in consideration of transferring an appointment which he had resigned prior [illegible] to have cited in [illegible] information upon t[illegible]

Oct. 22nd, 1900. ALPHA.

*** If B has purported to sell to A a club practice which it was no longer in his power to sell—the practice having been transferred to C—A is clearly aggrieved, and will be right to take such steps as his solicitor may recommend to obtain justice. We have only "Alpha's" statement before us, which seems to be written from A's point of view. We cannot speak more definitely without hearing B's account of the transaction.—ED. L.

WANTED—A HOME

To the Editors of THE LANCET.

SIRS,—I would be much obliged if any of your readers could tell me of a home where I could send a poor woman suffering from complete paralysis with some cerebral symptoms. We would be willing to pay about from 15*s* to £1 per week for her. I should be very grateful for the information.

I am, Sirs, yours faithfully,

Oct. 21st, 1900. PHYSICIAN.

COAL SMOKE ABATEMENT.

THE New London Brewery Company, Limited, of Vauxhall, were summoned by the Lambeth Vestry last week for "sending forth black smoke from the chimney shaft of their premises in such quantities as to be a nuisance." Inspector Perrin, for the vestry, testified that on August 2nd he watched the chimney shaft at the defendant company's premises for several hours. Dense black smoke issued at intervals for a period of 33 minutes. The officer added that in April last the defendants were similarly summoned and fined by Mr. Hopkins. It was urged, in mitigation of penalty, that every effort had been made to subdue the smoke, and an apparatus had been just introduced which it was thought would prove effective. Mr. Shell said he should inflict the full penalty of £10, adding that in his opinion the law was not strong enough on this matter. His worship, we think, does not do himself or the law justice. The law is all right but it wants setting in action and magistrates like himself to see it carried out.

"DIFFICULTIES UNDER THE INFECTIOUS DISEASE NOTIFICATION ACT."

To the Editors of THE LANCET

SIRS,—I have been reading the little book, "Difficulties Under the Infectious Disease (Notification) Act" and on p. 22 I find that there has been some question raised as to whether medical officers of health should be paid for notifying cases where they are the medical attendant. If you refer to Section 11 of the Act you will there find that there is no doubt on the matter whatever, as it is distinctly stated that they are to be paid the fee "to which he would be entitled as if he were not such medical officer."

I am, Sirs, yours faithfully,
R. E. BURGES, M.D. R.U.I.,
Medical Officer of Health, Hoole Urban District, Cheshire.
Chester, Oct. 11th, 1900.

A MIDWIFE FINED FOR GIVING A FALSE BIRTH CERTIFICATE.

AT the South-Western Police Court, Sarah May Bellinger, a certificated midwife, of 38, Carpenter-street, Battersea, was fined £2 15*s*., including costs, on Monday last, for giving a false certificate relating to the birth of a child. Mr. Lewis prosecu[illegible] ceedings being instituted at the insti[illegible] the coroner for the South-Western division of London. Mr. Braxton Hicks is to be congratulated upon the stand he has taken in this matter. If a certificate concerning a birth or a death is to be any safeguard to the public it must be given with all proper circumspection and in accordance with proper legal restrictions. It is gratifying to know that the coroner has been much assisted in his work against irregular certificates by the burial authorities and undertakers, for these officials have in other times and places been far too easy-going.

ADHESIVE PLASTER FOR PUNCTURED TYRES.

To the Editors of THE LANCET.

SIRS,—I should be glad to hear if any of your readers who happen to be cyclists have tried any adhesive plaster for mending punctured bicycle tyres and what success has attended them.

I am, Sirs, yours faithfully,

Oct. 23rd, 1900. CYCLIST.

A POINT IN LUNACY POOR-LAW.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if you will tell me through your columns whether a magistrate may give a detention order for any person of unsound mind to be detained "not more than 14 days" in a workhouse *without a medical opinion or certificate.* The relieving officer here considers that my certificate is not necessary if the magistrate forms his own opinion as to the lunacy. Besides seeming to me a relaxation of the safeguards for lunatics against wrong detention I do not mind admitting that it is also a question of fees, the responsibility in any case practically resting upon me. I have to thank you very much for your opinion given in other cases and shall be much obliged if you can answer this case.

I am, Sirs, yours faithfully,

Workhouse, Hampstead, Oct. 22nd, 1900. B. CLAUDE TAYLOR.

*** The action of a lunacy justice in signing a 14 days' detention order without first summoning a duly qualified medical practitioner to examine and report upon the alleged lunatic is distinctly *contra legem.* The Act expressly directs that the justice shall summon a medical practitioner to his aid and shall then proceed to examine the lunatic. The first thing which the justice has to do is to summon a medical man to examine the case. In strict law the justice cannot even visit the alleged lunatic without the medical man, though it is not usual to raise any objection to his doing so if he wishes, but to sign any order for detention is contrary both to the spirit and to the letter of the law. It is a common error for a justice new to the work, to think that he is only obliged to summon a medical man in cases which he, the justice, deems to be of unsound mind, but this is not so. His first step is to summon a medical man to his aid who reports to the justice his opinion on the case and upon that opinion only can he take any action. The medical man receives his fee for reporting upon the case whether [illegible] for removal or whether [illegible] discharged or, thirdly, [illegible] under a 14 days' detention order. In any case, he receives his fee for the report and not for certifying the alleged lunatic to be either of sound or of unsound mind. Our correspondent, therefore, is correct in the first part of his letter, but he is not correct in presuming that he has any responsibility unless he is summoned by the justice. He is not responsible for the justice's ignorance of the law. This is a question for the Lunacy Commissioners or for the medical superintendent of the asylum to which a certified lunatic is removed. —ED. L.

Communications, Letters, &c., have been received from—

A.—Mr. S. Armitage, Lond.; Mr. W. F. Abbott, Addlestone; Messrs. Armour and Co., Lond.; Messrs. Allen and Hanburys, Lond.; Mr. E. Arnold, Lond.; Automatic Bed-rest Co, Leamington; Accuracy.

B.—Mr. W. H. Boyd, Manchester; T. B Browne, Ltd, Lond.; Mr. J. B. Bate, Isleworth; Birkenhead, &c., Children's Hospital, Hon. Secretary of; Mr. T. Bryant, Lond.; Mr. S H. Benson, Lond.; Professor Baginsky, Berlin; Mr. D. Beaton, Tingwall; Mr. E. K. Brown, Andover.

C.—Mr. W. F. Clay, Edinburgh; Dr. L. Cerf, Angers, France; Cumberland Infirmary, Carlisle, Secretary of; Mr. J. J. Clarke, *Lond*, *Mr. R. I. Carey*, *Lond.*; Cortland Wagon Co, Lond.; Messrs. Cuxson, Gerrard, and Co, Oldbury; Dr. J. L. Campbell, Atlanta, U.S.A.; Sir Francis Cruise, Dublin.

D.—Dr. E W. Diver, Shotley Bridge; Dr. Durran, Thurso; Dundee Royal Infirmary, Medical Superintendent of; Devonshire Hospital, Buxton, Secretary of.

E.—Mr. C. Estcourt, Manchester; Mr. A. R. Elliott, New York.

F.—Dr. A. Foxwell, Birmingham; Messrs. Ferris and Co., Bristol;

H.—Dr. S. Habershon, Lond; Dr. D. F. Harris, St. Andrews; Mr. A. Hill, Retford; Dr. G. H. Hume, Newcastle-on-Tyne; Mr. R. Henderson, Lond.; Staff-Surgeon Home, Singapore; Dr. Hossack, Calcutta; Mr. H. E. Hooper, Lond.; Dr. S. Hallows, Birmingham; Dr. J. Holmes, Whitefield.

J.—Messrs. W. H. Jackson and Co., Great Grimsby; Dr. G. Jefferson, Cornholme; Jarvis' Charity, Staunton on-Wye, Clerk of.

K.—Mr. W. Kirwan, Oranmore, Ireland; Herr S. Karger, Berlin.

L.—Mr. H. K. Lewis, Lond.; Mr. H. H. Lyde, Lond.; Messrs. Longmans, Green, and Co., Lond.; Dr. Laws, Lond.; Lancaster County Asylum, Clerk of; Leeds General Infirmary, Manager of.

M.—Herr L. Marcus, Berlin; Mr. E. Merck, Lond.; Manchester Clerical, &c., Association, Secretary of; Mr. T. McLean, Lond.; Maltine Manufacturing Co, Lond.; Mr. W. Mitson, Lond.; Hedley - Marsh, Macclesfield; Messrs. C. Mitchell & Co., Lond.; Medical Society of Victoria, Melbourne, Secretary of; Messrs. Z. P. Maruya and Co., Tokyo, Japan; Dr. J. Murphy, Lond.

O.—Messrs. Oppenheimer, Son, and Co., Lond.; Ochil Hills Sanatorium, Director of.

P.—Mr. Y. J. Pentland, Edinburgh; Prudential Assurance Co, Lond.; Messrs. Perreaux and Co., Lond.; Mr. H. Peet, Bideford.

R.—Mr. B. T. Read, Winchfield; Messrs. Roger and Chernoviz, Paris; Mr. E. J. Reid, Lond.; Royal College of Physicians, Lond.; Royal Albert Hospital, Devonport, House Steward of; Messrs Robertson & Scott, Edin.

S.—Dr. E. Schloesser, Nice, Messrs. Street and Co., Lond.; Messrs Street and Co., Piccadilly; Stretton House Asylum, Church Stretton, South Devon and East Cornwall Hospital, Plymouth, *Hon. Secretary of*; Mr. Howard Spicer, Lond.

T.—Mr. E. Tidman, Lond.; Mr. A. H. Tubby, Lond.; Herr George Thiene, Leipsic.

U.—University College, Bristol, Secretary of.

V.—Mr. J. W. Vickers, Lond.; Messrs G. Van Abbott and Sons, Lond.; Victoria Hospital for Children, Chelsea Secretary of; Vendor, Canterbury.

W.—Dr. J. Wilkinson, Droitwich; Dr. Jason Wood, Bradford; Dr. R. T. Williamson, Manchester; Dr. A. Wauchope, Glasgow; West London Nurses' Association, Lond., Secretary of; Messrs. Wright, Layman, and Umney, Lond.; Dr. C. J. Whitly, Wells; Dr. E. Waggett, Lond.; Mr. S. C. Wadmore, Barrow-Gurney.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. R. R. Anderson, Fern Hill; A. B, Brockenhurst, A. W. H. L.; Dr. Aikman, Glasgow; A. L. S.; Dr. J Adam, West Malling; A. C.

B.—Mr. H. R. H. Bigg, Lond.; Messrs. Benson and Co., Lond.; Rev. L. W. Bevan, Stratton; Messrs. Blows and Maltby, *Lond.*; Bodowen, Holywell; Mrs. B., Lond.; Mr. R. Baker, Lond.; Dr. M. Beverley, Norwich; Dr. B. W. Bond, Godalming; Messrs. Boulton and Paul, Norwich; Mrs. B.

C.—Messrs. Curry and Paxton, Lond.; Cumberland and Westmorland Asylum, *Carlisle*, *Secretary of*; C. F. S.; Messrs. S. Clark and Co., Lond.; *College of Preceptors*, *Lond.*; Mr. W. B. Croskery, Eckington; Messrs. E. Cook and Co., Lond.; Mr. J. M. Carvell, Catford; Mr. A. J. Campbell, Hastings; Messrs. W. P. and W. *Cox*, Leicester.

D.—Mr. G. T. De Fraine, Aylesbury; Derbyshire Royal Infirmary, Derby, Secretary of; *Dr. J. E P. Davies*, Llanelly; Messrs. H. Dawson and Co., Lond.

E.—Mr. T. F. Elmes, Sunday's Well; Mr. E. D. Evans, Wrexham; *Messrs. Elliott, Son, and Boyton*, Lond.

F.—Forsaith's Advertising Agency, Lond.; F. L., F. R., F. L. P.

G.—Mr. J. Greenway, Southport; Dr. M. C. Grabham, Lond.; Mr. J. J. Graham, Lond.; Dr. F. Gahne, Belize, British Honduras; Mr. F. E. Gibbens, Barking; Messrs. *Gale* and *Co.*, Lond.; Surgeon C. B. Gittings, R.N., Channel Squadron; G. N.; G., Lond.; G. R. Y.; Mr. T. Gray, Pontypridd.

H.—Mr. R. Harrison, Lond.; Messrs. Hastings Bros., Lond.; Mr. J. Heywood, Manchester; Dr. W. K. Hunter, Glasgow; Mr. C. Holding, Southsea; Dr. G. Herschell, Lond.; Dr. J. Hawkes, Shanklin, Dr. A. Holt, Lond.; Dr. V. Harley, Lond.; Dr. J. Holmes Whitefield, Dr. J. W. Hunt, Hendon, Herefordshire Rural District Councils, Hereford, Clerk of.

J.—J. B T.; J. A. U., J. B.; J. M.; J. W. D.; J. G. B.; Mr. R. O. Jones, Kingsbridge; J. D. R.

K.—Messrs. Kilner Bros, Lond.; Dr. J. H. Kellogg, Battle Creek, U.S.A.; Messrs. Keith and Co., Edinburgh.

L.—Mr. R. H. Lucas, Bury St. Edmunds; London Association of Nurses, Secretary of; Messrs. Lee and Martin, Birmingham; Messrs. E and S. Livingstone, Edinburgh; L. J. M., L. B.; Dr. R. A. E. Lowry, Londonderry; Messrs. Lee and Nightingale, *Liverpool.*

M.—Mr. W. Martindale, Lond.; Mr. E. D. Marriott, Nottingham; Manchester Royal Infirmary, Secretary of; M. V. M.; Surgeon C. C. Macmillan, R.N., H.M.S, *Terrible*; M.A., M.D.; Mental Nurses' Coöperation, Lond.; Messrs. J. Maythorn and Son, *Biggleswade*; *M.B.*, Upton Park; Manchester Medical Agency; Surgeon A. D. Macleod, Samastipur, India; Dr. McC.

N.—Mr. W. L. Norwood, Pensnett; Dr. H. R. C. Newman, Clifton; Northern Medical Association, Glasgow.

O.—*Dr. G. Oliver*, Sevenoaks; Mr. *C. A. P. Osburne*, *Old Catton.*

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An Address

ON

THE SURGERY OF THE STOMACH.

WITH ILLUSTRATIVF CASES

Delivered at the Victoria Infirmary Glasgow, on Feb 22nd, 1900, before the Glasgow Southern Medical Society,

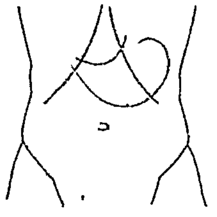
By A ERNEST MAYLARD, B S , M B Lond ,
SURGEON TO THE VICTORIA INFIRMARY GLASGOW EXTERNAL EXAMINER IN SURGERY TO THE VICTORIA UNIVERSITY, MANCHESTER

Gentlemen —Of all the invasions which practical surgery has made into the domain of medicine, certainly one of the most important, if not the last encroachment within recent years, has been that upon the stomach Great, too, as has been the advance in this direction, it must be still owned that we are but on the threshold of a field of labour replete with prospects both hopeful and encouraging I do not propose to occupy the brief time at my disposal in tracing the origin and development of this comparatively new and interesting departure in surgery, however instructive such an investigation would prove, sufficient will it be if I can give you some concise idea of what at present we are able to accomplish and what we still further hope to do in the not distant future

Before, however, dealing with the essentially practical side of my subject let me ask your attention for a few minutes while I strive to disperse some of those erroneous impressions which are still illustrated in our anatomical text-books, and, indeed, still linger in the minds of many surgeons, of the true position of the stomach in the abdomen You will observe by looking at the diagram (see Fig 1) taken from one of our most popular text books on anatomy that the stomach is made to assume a transverse position—in other words, the cardiac orifice is only slightly above the pyloric and the long axis of the viscus is almost transverse to the trunk of the body Now look at this diagram (see Fig 2) which may be taken as approximately representing the normal disposition of the organ The lesser curvature, instead of, as in the last diagram, looking upwards is here seen to be directed mostly towards the right, while about four fifths or even seven eighths of the viscus is to the left of the middle line That this must be the normal position of the stomach in health is sufficiently attested by these facts first that the cardiac orifice is situated about opposite to the junction of the seventh costal cartilage with the sternum, and that the pylorus—as I have frequently demonstrated—lies from two to three inches below the ensiform cartilage and from an inch to an inch and a half to the right of the middle line Hence if you draw a line, curved somewhat to the left from an inch to the left of the middle line above opposite the junction of the seventh costal cartilage with the sternum to a point about three inches below the ensiform cartilage and an inch to the right of the middle line, you will get a line that is much more vertical than transverse, and, further, if you allow that the stomach rises for about an inch or so above

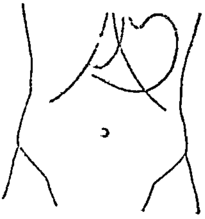
[illegible]
you will see how very much of
n occupies the left side of the
at the erroneous transverse dis
so long dominated our minds
has doubtless arisen from the position of the organ as found
in the dissecting room and
The relaxation of the diaphr
loss of all those supporting
life are quite sufficient to
and situation of the stomacl
has come to be an *in situ* object of observation and investigation during life we have learnt to regard it from a new aspect and a more correct one I should not have deemed it worth while directing your attention so forcibly to this
little piece of norm
that in two sets (
A E J Barker¹ ,
diagrams given to
erroneous type The stomach in each set of illustrations is made to appear as if it lay transversely across the right hypochondriac, epigastric, and left hypochondriac regions

FIG 1



Erroneously assumed position of the stomach.

FIG 2



True position of the stomach

If, then the normal position of the stomach be such as I
have described to you it has to
tion is very materially affecte
or indirectly connected with it
may drag it downwards adhesions contracted to other parts may displace it in almost any direction, while obstruction seated at one or other orifice may cause it to become either enormously increased in size and capacity or greatly diminished Notwithstanding, however, all these changes, the result of disease, there is a value, and that of increasing importance, in a correct knowledge of the normal position of the stomach For if there is one line more than another in which our desires lie, it is in early exploratory operations where we may hope to treat certain diseased conditions long before they have reached those hopelessly advanced stages with which we are at present only too familiar, and before therefore, the stomach has been altered in shape or position

I now pass from these few remarks upon the anatomy of the stomach to consider the various operations which we are prepared to perform upon it I shall simplify this consideration in the first instance by placing before you a detailed list of these operations so far as they are at present carried out by the operating surgeon You may take the following list of operations as a fairly comprehensive and complete
one (1) gastrotomy , (2) gastrc
gastroplication , (4) gastrectomy
gastrolysis ; (6) gastroplasty ,
gastropexy , (9) pylorectomy , (
method and by the submucous
sion from within (Loreta) and
gastro duodenostomy , a
(Woelfler) and posterior
(14) gastro jejunostomy
(15) pylorectomy with gastro jejunostomy , and (16) division of the jejunum with implantation of the distal end into the stomach and the proximal end into the jejunum It would carry me far beyond the time at my disposal to enter at any descriptive length into the performance of these various operations, not to speak of the many variations in method of execution which several of them admit I shall sufficiently reach the ends I have in view by casting comparatively rapidly on to the screen a series of outline sketches which will indicate the essential features of each operation The principal object for which I strive this evening is to show for what practical ends we propose to employ each operation, or in other words, what diseases of the stomach we may hope in some instances to alleviate in others to cure And, further, I particularly wish to show the results of some of the operations as seen in such patients as I can introduce to you, and in the records of such others as for various good reasons I cannot personally exhibit I may say in passing that the cases which I bring before you to night are the result of the last 15 months' personal work in this particular department of surgery, and I include every case upon which I have operated, but time forbids my alluding to many other interesting cases which I have seen I now take up the first operation, that of

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[1] The Clinical Journal vo xi, No 26.
[2] Brit. Med Jour, 1900, vol. i. p 241

GASTRECTOMY.

I now ask your attention to the operation of gastrectomy. I do not intend to enter at any length into the steps of the operation either in its partial or complete form. A few words, however, on the "complete" operation and its results in view of the comparative novelty of the procedure will not be out of place. The entire stomach has now been successfully removed some half-a-dozen times and with the remarkable result that not only have the patients been relieved of much suffering but they have really been none the worse through the loss of an organ which, it has been assumed, fulfils such an important rôle in the function of digestion. Schlatter's remarkable case, which was so elaborately investigated for a lengthened period after the operation by expert physiologists and chemists, tended to show that the nutritive and metabolic processes of the system were but very slightly interfered with; indeed, all that was required for necessary digestion and absorption seemed to be efficiently carried out by the intestines. It may, therefore, be that we shall have to re-construct our theories on the hitherto supposed principal functions of the stomach and attach more importance to its rôle as a storage receptacle for the gradual and continuous discharge of nutrient material into the intestine, while at the same time it allows of the convenient intermittent ingestion of food.

As regards the practical part of the operation it will only be in exceptional cases that it will be found possible to unite the divided duodenum to the cut end of the œsophagus, as was successfully accomplished by Childs-Macdonald of San Francisco with Murphy's button. In most instances the œsophagus must be implanted into a loop of the jejunum, as in Schlatter's case. I have tried several times on the cadaver to approximate the duodenum to the gullet, and in the healthy state of the parts it is certainly rarely possible. The perpetual dragging effect, however, of a stomach weighty from its involvement in tumour growth tends to give a laxity and mobility to the first part of the duodenum which otherwise does not always exist in the normal healthy state. I shall say nothing upon the merits or demerits of the operation for extensive disease of the stomach. It is a very severe one, and the extreme gravity connected with its performance, together with the very doubtful nature of the result which may follow, must be well weighed with other considerations affecting the present sufferings of the patient and his future prospects of life if nothing is attempted.

GASTROLYSIS.

Upon the operation of gastrolysis and the condition for which it is practised I have not much to say. From various causes, but more particularly from gastric ulcer and gall-stones, adhesions form between the stomach and neighbouring parts. These adhesions may either so restrict and drag upon the viscus as to interfere with its normal contraction, or they may fix it in such a position as to cause obstruction. This latter derangement usually happens when the pylorus is involved It may be either kinked or contracted. The symptoms associated with adhesions naturally vary according to the organic effect which they produce. Those which result from obstruction are of a nature similar to what follows upon obstruction arising from other better recognised sources and are often quite indistinguishable from them. On the other hand, symptoms arising from some impediment to normal contractile functions of the organ are often of a very obscure and obstinate character. It is only from the past history of the case—that is to say, some antecedent symptoms of ulcer or gall-stone—that the probable cause can be arrived at. This, indeed, is a class of cases where an exploratory laporatory has frequently effected the very best results, for the discovery of adhesions and their division with consequent liberation of the stomach have afforded complete and permanent relief. I have only one case in my present list which illustrates this condition. I shall refer to it more fully under the operation of gastro-jejunostomy; but I may briefly remark here that the adhesions, which were partially liberated, existed mostly between the pylorus and the under surface of the liver. They were the result, as we discovered after an exploratory gastrotomy, of an old healed ulcer Surgery, then, has done much in recent years by the operation of gastrolysis to relieve and to cure various cases which were hitherto vague in their symptoms and absolutely intractable to all forms of medical treatment

I must here break away from the order in my list of operations, as time forbids my referring to all contained in it, and more especially also as I wish to direct some particular attention to the operation of

GASTRO-JEJUNOSTOMY.

This operation may now be regarded in practical hands as a comparatively simple and safe one, and its employment is becoming widened to the extent of replacing such operations as divulsion of the pylorus, pyloroplasty, and pylorectomy for cicatrical contraction of the pylorus. Its service in malignant disease of the stomach, whether of the body or the pylorus, is well recognised, and its value in the treatment of gastric ulcer and gastric erosion associated with hæmorrhage is [illegible] appreciated. There is no reason to [illegible] employment in uncomplicated cases of gastric ulcer—such, for instance, as are intractable to treatment and by their prolonged continuance dangerous to life—is within the field of early recognition. I am able to bring before you this evening the records of six cases which I have operated upon within the last eight months. Five were successful, one was fatal; of the five I can show you two patients. The brief histories of these cases were as follows, and I narrate them before discussing anything further in regard to the operation itself.

CASE 4. *Cicatricial stricture of the pylorus; exploratory gastr[illegible] l gastro jejunostomy; death from* [illegible] 35 years, was sent to me by [illegible] lexandria, Dumbartonshire, and was admitted to the Victoria Infirmary on Sept. 28th, 1899. His symptoms apparently dated from about 15 years previously and at the time of my seeing him were evidently due to obstruction at the pylorus. On Oct. 4th the abdomen was opened by a median incision above the umbilicus. Manipulation of the pylorus externally revealed a resistant induration extending along the lesser curvature. On opening the stomach and inserting the index finger a contracted, somewhat irregular orifice was felt, admitting the passage of a No. 12 catheter but not capable of distension by moderate pressure of the finger. The exploratory incision was then closed and a posterior gastro-jejunostomy was performed, the union between the bowel and the stomach being effected by Murphy's button. The dilated stomach was lessened by first doubling in and securing one pleat of the anterior wall and over this inserting a second series of Lembert sutures so as to fold more deeply in the wall and approximate the lesser and greater curvatures. The patient rallied well from the operation and subsequently took milk-and-soda and passed flatus. He, however, soon began to show signs of failing strength and he died on the fourth day apparently from exhaustion. At the post-mortem examination the most marked feature found was the want of union between the opposing halves of the button and also the lack of union between the stitched walls of the stomach and other lines of suture. There was no general peritonitis but some suspicious appearance of recent inflammation in the region of the button. The pylorus was found to be contracted by a cicatrix, the result apparently of an old healed ulcer. I attribute the fatal result in this case largely to the very low recuperative powers possessed by the patient. He had been a chronic invalid for so many years that his tissues were in a poverty-stricken condition and incapable of exercising the necessary reparative powers for recovery after such an operation. It was, however, disappointing to lose the patient, because the operation was just the one to have given him permanent relief.

CASE 5. *Exploratory gastrotomy: gastro jejunostomy for inseparable adhesions of the stomach to the liver, the sequel to chronic ulcer; recovery.*—A patient of Dr. W. Grant of High Blantyre, aged 45 years, was sent to me at the Victoria Infirmary on May 24th, 1899. About three years ago he commenced to complain of gastric symptoms which on admission were those of obstruction at the pylorus. On May 31st the abdomen was opened by a median incision above the umbilicus. Fibrous adhesions were at once encountered uniting the stomach to the under surface of the liver on the right side. These were ligatured and divided, when an exceptionally dense and intimate band of union was reached forbidding any attempt at separation. The stomach was opened to ascertain if possible the nature of this indurated mass. It was then found that an irregular-shaped ulcer with elevated but smooth edges existed in the lesser curvature about an inch from the pylorus. Its floor was deeply indented and it extended well up into the liver substance. Any attempt at liberation of the stomach being deemed inadvisable, the exploratory gastrotomy wound was closed and a posterior gastro-jejunostomy was performed, union between the stomach and bowel being effected by Murphy's button. The patient made a comparatively uninterrupted recovery. The button was passed on the eleventh day. One month afterwards he had put on nine pounds in weight, and was in good health and able to take food well. As you see him at the present—that is, nine months after the operation—he is in perfect health, taking his food well, and is at his work.

CASE 6.—*Carcinoma of the pylorus; gastro-jejunostomy; recovery.*—The patient, a woman, aged 63 years, was admitted to the Victoria Infirmary on July 13th, 1899. For some months she had been failing in health, but it was only four months ago that she commenced to be troubled with symptoms of pyloric obstruction. On July 21st the abdomen was opened in the middle line above the umbilicus. A tumour was detected well under the liver to the right involving the pylorus and intimately adherent to the fundus of the gall-bladder. It was of about the size of an orange and somewhat nodular in outline As the liver showed no signs of infection an attempt was made to perform pylorectomy. It was soon discovered, however, that numerous infected glands existed, passing upwards to the transverse fissure of the liver. Any further attempt at extirpation was therefore abandoned. A posterior gastro-jejunostomy was performed, union between the stomach and the bowel being effected by means of Murphy's button. With the exception of a little temporary bronchitis the patient made an uninterrupted recovery. She left the infirmary on August 16th, three and a half weeks after the operation, with the wound soundly healed. The button had not been passed. On Oct. 20th, three months after the operation, the patient presented herself. She stated that for some weeks after the operation she had improved greatly in strength and that she took her food well. Whatever she took kept down and she had never been troubled with vomiting As far as she knew the button had not passed. On Jan 8th, 1900, her daughter visited the infirmary and reported that her mother was in a very low state of health with swollen legs and failing, she thought, rapidly. The button had never been seen. She died from exhaustion on Jan. 18th

CASE 7.—*Gastro jejunostomy for extensive malignant disease of the pylorus and the pyloric region; recovery.*—In this case the man who was operated upon was 57 years of age and was a patient of Dr Ross Carmichael of Cathcart, with whom I saw him in consultation on Oct. 11th, 1899. For two years the patient had suffered from some obscure gastric symptoms manifested mostly by distaste for food. For the last 18 months he had vomited and had manifested other symptoms of pyloric obstruction. On Oct. 19th the abdomen was opened. A tumour of considerable size occupied the pylorus and the right portion of the stomach. It was very smooth in outline but the margins of it, as felt along the anterior wall of the stomach, were lobulated. The growth was found to be adherent to the under surface of the liver Excision not appearing feasible a posterior gastro-jejunostomy was performed with some difficulty owing to the extent to which the disease had reached along the fundus towards the left. Union was effected by Murphy's button. The patient made an uninterrupted recovery, taking his food without pain and putting on 10 lb. in weight in the course of three weeks The button was passed on the twelfth day. I heard recently that this patient had commenced vomiting again. I fear that the explanation is due to the invasion of the artificial orifice by the growth.

CASE 8 *Carcinoma of the body of the stomach; gastro-jejunostomy; recovery.*—A man, aged 54 years, was admitted to the Victoria Infirmary on Jan 4th, 1900. Nine months ago he commenced to feel a lack of energy which he had never experienced previously. He lost relish for his food and began to lose flesh. About this time or a little later he felt a burning sensation in the stomach which was often slightly relieved after the ingestion of food. On Jan 13th the abdomen was opened by a median incision, exposing at once the tumour, which appeared like a large crescentic mass occupying the left portion of the body of the stomach, involving mostly the posterior wall and approximating at its centre the two curvatures. The liver appeared to be free from infection but enlarged glands existed in the lesser omentum. Excision of the tumour was abandoned owing to the infection of the lymphatic glands and a posterior gastro-jejunostomy was with some difficulty performed. Union between the stomach and the bowel was effected by means of Murphy's button. The operation lasted an hour. There were no subsequent untoward symptoms, but recovery was greatly retarded by some stitch abscesses. At this date he is still an inmate of the infirmary but is well enough to get about and although it is about six weeks since the operation the button has not been passed. He now takes his food well and is feeling much relieved of some of his original symptoms.

CASE 9. *Carcinoma of the pylorus; gastro-jejunostomy; recovery.*[5]—The patient a man, aged 60 years, who had been under the care of Dr. Fraser Orr, with whom I saw him in consultation, was admitted to the Victoria Infirmary on Feb. 17th, 1900, suffering from gastric symptoms of obstruction at the pylorus. On Feb. 27th the abdomen was opened. Extensive disease of the pylorus was discovered with small nodules of tumour in the matted tissue around. The growth extended for about two and a half inches along the lesser curvature No attempt was made to perform pylorectomy. A posterior gastro jejunostomy was executed with the aid of a Murphy's button. As only a week has elapsed since the operation it is not possible to say much except that from the absence of all symptoms the patient seems to be in a fair way towards perfect recovery.

In reviewing briefly some of the special points of interest in these cases you will observe, in the first place, that I performed in all of them a posterior gastro-jejunostomy, effecting the union between the stomach and the bowel by means of a medium-sized Murphy's button. The more I practise this particular method of performing gastro-jejunostomy with the button the more I like it, and I can quite appreciate Czerny's recent opinion regarding it, that he prefers it to all others. Although the chief object of gastro jejunostomy, by whatever method performed, is to admit a free exit of the gastric contents into the intestine, I am convinced that the operation subserves, in many cases, a not less important part in giving rest to the organ This is the explanation of its great good in gastric ulcer, associated or not with hæmorrhage. Instead of the food being churned up and constantly moved about by the normal contractions of the stomach it passes rapidly into the bowel and so the organ is at rest again and in the best possible condition for repairing internal lesions. I believe the very material relief afforded in the last case just shown you (Case 8)—in which, as you will remember, the patient had no signs of obstruction but in which a large malignant tumour occupied the body of the stomach—was due to the rest afforded the organ by the operation removing sources of constant irritation.

I must not, gentlemen, be tempted to discuss other points, many and interesting as they are, in connexion with this operation I fear that I have already overtaxed your indulgence The subject which I have selected this evening is an extensive one and is becoming increasingly so, and I have found not a little difficulty in condensing within a reasonable space and still more within a limited time such material as that which I wished to present to you. The following table will briefly indicate the operations which I have performed since January, 1899:—

*Table of Operations upon the Stomach.**

Operation.	Disease	Recovery	Died.	Total
Exploratory gastrotomy.	Extensive adhesions, &c.	3	—	3
Gastrostomy.	Carcinoma of the gullet.	5	1†	6
Gastrorrhaphy.	Perforated gastric ulcer.	2	—	2
"	Dilated stomach.	2	—	2
Gastro-jejunostomy.	Cicatricial stricture of the pylorus.	2	1	3
"	Malignant stricture of the pylorus	6	—	6
"	Carcinoma of the body of the stomach.	1	—	1
Pylorectomy.	Carcinoma of the pylorus.	1	—	1
—	—	22	2	24

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* This table originally contained only the operations performed within the period of 15 months from which the cases were taken for the address I have, however, now added those executed since that date, so that the table at present represents the total number of operations performed upon the stomach within the last year and ten months—i e., down to Oct. 31st, 1900.

† The death on the fifth day in this case was unconnected with the

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[5] This case occurred a few days after the delivery of the address, but as the opportunity is afforded it seems worth while to record it.

operation and due to increasing exhaustion from the very extensive disease present.

I must not conclude without acknowledging the valuable help which I have received in most of the above operations from my assistant colleague Dr. Grant Andrew, and from Dr. D. Lamb, the anæsthetist to the infirmary. To have a complete sense of reliance on one's right hand coöperator and to be relieved of all feeling of anxiety regarding the administration of the anæsthetic are, indeed, means in the performance of any grave operation which contribute in no small way to successful results.

Inaugural Address

ON

BACTERIOLOGICAL DIAGNOSIS OF DISEASE.[1]

BY SHERIDAN DELÉPINE,
PROCTER PROFESSOR OF PATHOLOGY, OWENS COLLEGE, MANCHESTER.

GENTLEMEN,—Fifty years ago the notion of a "contagium vivum" as the cause of an infectious disease was considered by a great number of well-informed people to be a wild and almost absurd hypothesis. There had been, and there were still, strong advocates of the theory, but their following was small. Pasteur's work in connexion with fermentations and the features which infectious diseases and fermentations had in common revived the belief in the existence of infectious germs. In 1863 Davaine showed that splenic fever was due to the presence of a bacillus which he and Pollender had observed 13 years previously in the blood of animals which were affected with that disease. This discovery was completed in 1877 by Koch and almost at the same time by Pasteur. Koch was able to trace the whole life-history of the organism by adopting simple and accurate methods of culture. He demonstrated the production of spores, in which form the bacillus is capable of resisting unfavourable external circumstances and thus to infect certain localities more or less permanently. On his side Pasteur established with scientific rigour some of the principles upon which vaccination with attenuated cultures of the bacillus could be carried out In 1865 Villemin proved the infectiousness of tuberculosis by systematic inoculation, the results of which led him to infer the presence of a micro-organism of the same character as that found in anthrax. This inference was at length proved to have been correct by Koch, who in 1882 announced his epoch-making discovery of the tubercle bacillus which he was able to isolate and cultivate outside of the body. Meanwhile the bacterial cause of many diseases was more or less fully established in a number of cases. Obermeier in 1873 demonstrated the presence of a spirillum in relapsing fever. About 1877 Hansen announced his discovery of the bacillus lepræ and Bollinger of the actinomyces bovis. In 1879 Neisser found the gonococcus. In 1880 Eberth saw the bacillus of typhoid fever which was afterwards more fully investigated by Gaffky (1884). In 1881 Pasteur and Ogston showed the relation between various micrococci and certain septic infections or suppurations. About the same time Laveran discovered the organism of malaria in the blood. In 1883 Klebs saw the bacillus of diphtheria, which was more fully investigated by Löffler in 1884. In 1884 Koch described the cholera vibrio under the name of "comma bacillus." About the same time Nicolaier found the bacillus of tetanus. I cannot attempt to allude to all the work which has been done in recent years, but I may add to the previous list the bacillus of influenza discovered by Pfeiffer in 1890, and that of plague found simultaneously by Yersin and Kitasato in 1894.

The value of all these discoveries was not recognised very rapidly except in a few cases. This was partly the fault of methods which were not always perfect enough to make the application of the newly-acquired knowledge practical, and partly to the antagonism of very able medical men belonging to an older school. Yet, considering the very great difficulties attending the diagnosis of many obscure cases of infectious disease, one would have thought that the very precise indications given by bacteria and their products in a large proportion of those cases would have been early taken advantage of whenever possible. There are, however, several reasons why several bacteriological methods should not have found their place in ordinary work: 1. The study of practical bacteriology was not early, and is not yet generally, recognised as an *essential part of medical education*, and many medical men have not had an opportunity to convince themselves by their own observation of the accuracy of statements made by bacteriologists. 2. Although many bacteriological methods are so simple that they can be carried out with the aid of a good microscope and a few reagents, test-tubes, and flasks, there are others which are difficult to carry out elsewhere than in a laboratory where typical cultures of living organisms are stocked and animals can be inoculated, carefully isolated, and studied. 3 Bacteriological work, except in the case of simple microscopical examination, requires patient attention to details, cannot be hurried, and must be attended to at the right time; it can seldom be carried out successfully in the short and irregular intervals of a busy practice.

The extraordinary advances which surgery owes to Lister's methods, and medicine to the work of Pasteur, Koch, and their pupils, are sufficient proofs of the utility of bacteriology, and they suggest the desirability of making bacteriological methods generally available. It is not only of interest to the patient personally that the shortest methods of diagnosis should be available, but it is also a matter of public concern, for it is only by early diagnosis that effective methods of prevention and sometimes of treatment can be utilised before a disease has spread through a community or caused irreparable damage in the individual. The mastery which the sanitary authority of Glasgow has obtained over the epidemic of plague that was recently threatening that town is a good example of this.

Having since 1882 devoted much attention to the diagnosis of disease by laboratory methods, I have for many years felt convinced that such methods deserve to have a more generally recognised place by the side of ordinary clinical methods, which must of course always remain the basis of practical medicine and surgery. In addition to this, rapid, accurate diagnosis of infectious diseases is a matter of such public importance that public authorities should take an active interest in the question. When given the charge of the important laboratories at Owens College in 1891 I decided to do all in my power to bring this about. At first I met with much indifference on all sides, except in times of dramatic urgency, as when Manchester was threatened by an epidemic of Asiatic cholera in 1893. But since then matters have considerably altered, and in 1895 several public authorities had recognised the need of establishing regular connexions between their public health department and bacteriological laboratories. Some sanitary authorities in England had some time previously recognised the need of bacteriological investigation in connexion with their work; among these I may mention Bristol and St. Helens, where Dr. D. S. Davies and Dr. J. Robertson respectively had taken the matter in hand. But putting aside, as being beyond the scope of daily work, the arrangements made by the Local Government Board with Dr. Klein and other bacteriologists for special investigations, I believe that the bacteriological laboratory in Manchester was the first in this country where the bacteriological diagnosis of disease was placed freely at the disposal of all medical men in a number of districts by the combined action of sanitary and college authorities. Since that time some 60 sanitary authorities have become regularly connected with the Owens College Bacteriological Department. Our example has been followed in many other parts of the country, where, judging by the correspondence which I have had on the subject, our experiment has created much interest and has been of some use to other authorities. I do not intend here to discuss whether it is advisable for each sanitary authority to have a bacteriologist or whether, as I believe, it is better not to attempt such work except in thoroughly well-fitted bacteriological institutes having a well-paid and efficient staff, connected whenever possible with a medical school: that the work can be carried out with some success under the last conditions is, I think, proved by the growth of this work in the bacteriological laboratory at Owens College, a growth which has not been

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[1] Delivered at the opening of the winter session of the Derby Medical Society, on Oct. 19th, 1900, by request of Dr. Laurie, the President for the coming session.

stimulated by any kind of sensational announcement In 1896 only 300 reports were issued to sanitary authorities, in 1897 over 1500 were issued in 1898 over 2500, and in 1899 over 3000 In 1900, over 4000 reports[1] will have been issued by the end of the year This rapid progress does not only indicate a certain measure
shows that bacteriological
place which they should in

[These introductory rem
stration of the most important methods employed for diagnostic purposes, plague, tuberculosis, diphtheria, and typhoid fever being selected to show how each one of these methods was applied]

ABSTRACT OF

An Inaugural Address

ON

SURGERY AS A SCIENCE AND AN ART.

Delivered at the Opening of the Winter Session at Queen's College, Cork, on Oct 20th, 1900

BY C YELVERTON PEARSON, M D R U I, F R C S ENG,

PROFESSOR OF SURGERY AT THE COLLEGE

[PROFESSOR PEARSON, after a few introductory remarks, proceeded to the main subject of his address—namely, Surgery regarded as a Science and an Art Though surgery could never be looked upon as an exact science such as astronomy, yet it answered the definition of a science as being a correlation of knowledge The good surgeon should be acquainted with biology, natural philosophy, chemistry, anatomy, physiology, histology, pathology, and bacteriology To these must be added at least an elementary knowledge of logic The foundation stone of surgery, however, was anatomy and anatomy learned by careful dissections Professor Pearson then went on to speak of the relative importance of the other sciences Morbid anatomy was of course of special importance Chemistry was necessary for the true understanding of much of physiology, and physiology could not have advanced so far as it has without the help of biology Professor Pearson continued]

PATHOLOGY AND MORBID ANATOMY

Last but by no means least let me refer to the science of pathology or the study of diseased conditions and processes which strictly speaking, bears the same relation to morbid anatomy that physiology does to normal anatomy, but so closely are the two connected that while pathology could never have existed without physiology, the latter, on the other hand, owes very many of its most important advances to the former Now it is evident that in order that we may become scientific surgeons we must closely study the appearances presented by disease both in the living and the dead body, so that we may be able to recognise and to deal with them in practice Further, we must be able to understand the nature of diseased processes and the means designed for resistance to invasion the provisions made for natural recovery, and the phenomena of natural and acquired immunity from certain diseases—in a word, the marvellous *vis medicatrix naturæ*—if we are successfully to guide our patients through the tempest of disease to that blissful haven which is known as health

It is in the possession of such knowledge that the truly skilful and scientific surgeon or physician excels his more empirical brother by frequently watching and guiding the natural processes of recovery rather than—as is so frequently done—interfering with them by the indiscriminate use of drugs Now how is such knowledge as this to be obtained? So far as the study of diseased conditions in the living is concerned you are provided with ample material in our clinical hospitals where, if you only give the amount of time and attention that is desirable in bedside observations, it will be your own faults if you do not gain a very thorough acquaintance with all the ordinary diseases that flesh is heir to On the other hand, it is with deep regret that I feel obliged to admit that our opportunities for the study of morbid anatomy and pathology are not all that is desirable This is in part due to the natural prejudice, amounting almost to a superstition that exists in this country against the performance of post mortem examinations In my opinion it would be much better for the whole community at large if this state of things were
death where the obedie
of "Death from heart
medical evidence—would a carefully conducted post-mortem examination reveal a totally different explanation of the real cause of death Moreover, I have long been fully persuaded in my own mind that the extremely careless way in which burials are permitted in Ireland, previously to registration, and often without proper certification, is a practice strongly to be deprecated and is calculated to prove a direct incitement to crime It is certainly about time that the authorities awoke to their proper sense of duty in this respect Notwithstanding these difficulties the industrious student, by making use of those opportunities presented to him, may do a great deal, such as losing no chance of witnessing a post mortem examination when it occurs, by the careful study of recent and preserved pathological specimens, and more especially by utilising his powers of observation in the dissecting room where he will find a mine of wealth At a time when pathology as a distinct course was not included in the curriculum, by carefully taking advantage of the opportunities presented to me in the dissecting room in the years during which I acted as demonstrator I gained a knowledge of pathology which has proved to me of inestimable advantage in dealing with disease

There is, however, another aspect in which I wish to review this question, and that is the condition in which this and the sister colleges have been obliged to remain with regard to the teaching of pathology It certainly would be an unpardonable evasion of duty on my part if I did not protest in the strongest manner against the neglect to which we have been subjected in this respect And it certainly does not redound to the credit of successive Governments that at a time when pathology has made such enormous strides by leaps and bounds, when its importance in relation to the prevention and treatment of disease has been recognised in all civilised countries throughout the globe when men of the highest scientific attainments are to be found devoting their lives and in many instances their private means, nay, in some cases even their own persons to pathological investigations in the cause of suffering humanity, it should be left to the respective governing bodies of the Queen's Colleges in Ireland to provide a teacher in pathology for their medical schools in order that they may not be behindhand and it speaks volumes for the disinterestedness of the medical profession when men of recognised ability and careful training have been found to come forward to fill a gap that should never have been allowed to exist for a remuneration that is wholly inadequate I need scarcely say that in the natural course of events it is not to be expected that such men will remain with us unless they are at least provided with a salary that will enable them to devote their entire time to the study and teaching of pathology May I express the sincere hope that the Government just returned to power will recognise the justice of our claims and inaugurate the dawn of a new century by a substantial recognition of our grievances As you well know I am no politician, and even if I were it would not be within my province to touch on political matters, but the subject on which I am speaking is not a political one and I feel that I am speaking nothing but the simple truth when I say that I regard the manner in which the subject of pathology has been permitted to remain unendowed in our school at the close of the nineteenth century as nothing less than a national disgrace If any efforts on my part either by words or actions, may prove of some slight assistance in bringing this most important matter under the due notice and recognition of Her Majesty's advisers the knowledge of having done my duty will be ample reward

Apart from its importance in relation to medical and surgical teaching, consider the advantage to the public in general of having at hand a skilled pathologist provided with a fully-equipped laboratory to whom to refer such important questions as the investigation of doubtful cases of rabies and the bacteriological examination of milk and water; and at the present moment, when the possibility of a visitation of the much dreaded plague is not altogether a remote contingency, to whom would the medical officer of health refer the investigation of doubtful cases if not to one who devoted his entire time to pathological research?

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[1] Bearing on typhoid fever diphtheria, tuberculosis botulism, cholera plague, various animal diseases, milk supplies water supplies disinfection &c

Having referred in a very superficial manner to the importance of studying each of the foregoing sciences I may point out that in many instances it is requisite for us to employ most, if not all, of them for the thorough investigation of a single problem in surgical science. We are told that "animated, or rather inspired, by a far more comprehensive spirit of inquiry than that which relates to the human species alone, John Hunter's view of pathology was an extension of a colossal physiology and a corresponding anatomy embracing the whole living creation. It was from this vast range of biological science that Hunter sought to interpret the structural condition and the phenomena of life in any one species; and thus, for example, to enlighten our otherwise isolated knowledge of human anatomy, physiology, and pathology; of man, structurally and functionally, in the states of health and disease. From this elevated point of view we must look to appreciate justly the Hunterian conception and its influence on the British school of surgery. Subsequently, it became apparent how largely and intimately the sciences of physics and chemistry enter into this system of biology; and thence we might trace the grand contributions of the continental schools more especially, and particularly in Germany and France. Here, then, we discern the three primary elements of modern scientific medicine."

Now let us see what is the aim and object of all this scientific knowledge? To you who mean hereafter to be thoroughly practical surgeons and physicians the two important considerations are first to be able to recognise and diagnose disease, and second to be able to treat it with success. Now at one time it was thought that the surgeon's duty in the matter of diagnosis was a very much simpler matter than that of the physician and, consequently the highly skilled and cultivated physician was looked upon as occupying a more elevated position than the surgeon I have not the slightest inclination to institute a comparison between the two—each is worthy of the highest regard. But it is my duty to point out to you that the modern surgeon requires, not alone all the means and knowledge possessed by the physician, but even more in those cases where a diagnosis can only be arrived at by the employment of surgical instruments and appliances, which cases are so numerous that it is unnecessary for me to specify any of them. To be a good diagnostician you require then the fullest development and training of all your senses; while it is important to learn the history and nature of the symptoms from the patient, it is still more important to make your own observations. He who depends chiefly or altogether on the details of symptoms will make more mistakes than one who places most reliance on his own powers of observation and physical examination. Take, for instance, the amount that is conveyed to the mind of the skilled observer by one look at the patient. Then in the application of touch in its highest state of development what an amount of information is conveyed—the sensations of true and false crepitus, of fluctuation, of elasticity, of resistance, of mobility, and so on. We have need of our hearing powers in the application of percussion and auscultation to the diagnosis of abdominal tumours and various other conditions. For the employment of smell and less frequently of taste I could adduce several examples where the use of these senses furnish much assistance. But I pass to the brief consideration of some of those applications of scientific methods which are of more recent growth; amongst which we find the larger number are derived from the science of physics, such as the use of the clinical thermometer, which not alone conveys to us when suitably employed the knowledge of the general bodily temperature, but by a series of consecutive observations the results of which when transferred to a chart will often in itself enable us to arrive at a correct diagnosis and is of such invaluable assistance in conveying at one glance the progress of the case. What a contrast in this respect our surgical wards present to-day with what they did some 25 years ago, when a temperature chart was rarely seen and when the surgeon relied on that most deceptive sensation of temperature derived from contact of his own hand with the patient's body. Of less frequent employment and more restricted use is the surface thermometer, by which local variations of temperature can be determined.

Then by the application of acoustics in the use of the stethoscope or its numerous modifications the surgeon often derives information not otherwise obtainable. As another example of the value of acoustics let me cite the use of the tuning-fork in certain affections of the ear.

From optics we gain still more extended advantages—e.g., the use of the ophthalmoscope, the laryngoscope, the rhinoscope, &c. And when combined with the electric light we have the cystoscope, with which we can illuminate and examine the interior of the bladder, and thus recognise certain diseased conditions in the living in a manner undreamt of by our forefathers. Another optical instrument, the value of which to the diagnostician cannot easily be over-rated, is the microscope. I cannot in this short sketch convey to you the numerous instances in which it has to be employed, but may especially remark on its assistance in diagnosis of affections of the urinary organs, the determination of the character and structure of various tumours, and the examination of the blood in certain obscure conditions where, by counting the corpuscles and determining the presence of leucocytosis, the existence of suppuration, &c., may be inferred. It is scarcely necessary to refer to its association with the discovery and advancement of pathological science, called bacteriology; but I take this opportunity of remarking that owing to the rapidly advancing nature and highly specialised character of the latter science there is a growing tendency amongst medical men to refer most, if not all, of their microscopical examinations to the pathologist. I think this tendency, if allowed to progress too far, will prove most disastrous. For what purpose do you learn the use of the microscope in connexion with practical biology, chemistry, histology, and pathology if, when it comes to be a question of diagnosis, you are going to hand over to another in all cases that portion of the examination which, owing to your education you ought to be fully competent to conduct yourself? There is no doubt that those who have their time completely occupied with the various other duties of the profession are obliged to resort to this assistance, and it is equally important that we should all seek the assistance of an expert in pathology in certain important and difficult instances; but, believe me, he will make the more highly accomplished physician or surgeon who is able to rely on his own powers of observation.

[After a reference to the use of the x rays and to the value of a knowledge of chemistry in surgery Professor Pearson pointed out how essential it was in investigating a case to make use of all the means of search at our disposal. He then passed on to consider the germ theory of disease and gave a short life-history of the theory, concluding with an account of the technique of an operation carried out with all the modern precautions as to asepsis. He then proceeded to the consideration of the second part of his subject:]

SURGERY AS AN ART.

Let me now pass for a few moments to the consideration of surgery as an art. If we seek for a definition of art in its most extended and popular sense we find that it means everything which we distinguish from nature. The term is, however, usually employed in a more restricted manner and various definitions are given according to the particular standpoint from which the subject is viewed. Thus Schiller tells us: "Art is the right hand of Nature; the latter has only given us being, the former has made us men"; while Lavater says: "Art is nothing but the highest sagacity and exertion of human nature, and what nature will he honour if he honours not the human?" We are told that surgery was already an art when medicine proper was but a phase of superstition. The earliest notices of it occur among the Egyptians who, as we find represented on obelisk and in the temple, practised incisions, scarifications, probably even amputations, long before the date of the Ebers papyrus 3500 B.C. An operation for cataract was also known to them. The surgery of the Jews was an importation from the Egyptians. Surgery was held in very high esteem in very remote times among those who practised the Indian healing art, who had a proverb to the effect that "a physician who is no surgeon is like a bird with but one wing." They had a large assortment of steel cutting and cauterising instruments and held that "what drugs and knives cannot cure may be cured with fire" In some of our museums may be seen surgical instruments contemporary with the votive offerings of the remot [illegible]

However interesting it might prove to trace the history and development of the surgical art I have no intention of so occupying your time, but I would refer you to historical records and a modern work by the late Mr. J. F. South, entitled, "Memorials of the Craft of Surgery in England."

We are concerned with the present, and permit me to tell you that in order to become successful surgeons it is quite as necessary for you to study the *art* as well as the *science* of surgery. A truly great surgeon should perform all his work in a really artistic manner; a little experience will soon convince you that the cleanness with which an incision is made and the accuracy with which the margins are subsequently co-apted have an influence on the rapidity of union and on the subsequent appearance of the scar that is quite apart from the details of the most perfect asepsis. This comes to be a matter of the gravest consideration to the patient when we are dealing with operations on the face or neck and the subsequent appearance of the scar is a matter which will make or mar the reputation of the surgeon.

Now it is of some importance that we should consider what steps are taken to secure to the student of surgery the development of this artistic skill. Well, in a somewhat indefinite way they may be considered as amply sufficient, provided that the student avails himself of all the opportunities presented to him, and of these there is, first of all, dissection. It is by the careful and continued use of the scalpel and forceps in the dissecting-room that the hands of those not previously accustomed to such work become trained to some extent. Then the most excellent opportunities are presented in the work carried on in our biological, our histological, and pathological laboratories for acquiring the art of accomplishing the most delicate manipulations. When engaged in these operations take my advice and accustom yourselves at the earliest opportunity in the use of both hands [illegible] d to infer that the art of [illegible] ophthalmic [illegible] is scarcely [illegible] the inter- [illegible] of advantage, whether it [illegible] scissors or in the removal of a pair of forceps. What an awkward appearance is presented by the efforts—often of a fruitless character—of an unskilled assistant in attempting to release a pair of compression forceps with the left hand.

Again, you have a further opportunity of learning the use of cutting and other instruments when taking out the course of operative surgery. I have heard a very eminent surgeon, for whose opinion on most surgical matters I entertain the deepest respect, express the opinion that operative surgery was a branch of the usual surgical examination to which he attached comparatively little importance; with this opinion I desire to join issue. Is it to be expected that anyone will be competent to operate on the living body who is not able to do so on the cadaver? Are his patients hereafter to be the subjects on whom he is to practise to acquire manipulative skill? If the examination in surgery was simply required for the purpose of permitting the candidate to acquire a qualification in medicine I should have no objections to offer, but so long as our universities and colleges grant degrees and diplomas in surgery in my opinion they should be satisfied that their graduates and licentiates are skilled in the use of surgical instruments and appliances.

An additional opportunity is presented in our hospital work for attaining manual skill to those who take advantage of such training in the application of bandages, splints, and dressings, and how easy it is to detect the 'prentice hand in the application of a simple bandage by first giving him a choice of limbs and then asking him to bandage the opposite one. Here the man who has only practised bandaging on one side of the body at once comes to grief. Now from these considerations it may be fairly inferred that if any intelligent student does not become a fair artist as well as a scientist in his profession the fault lies with himself. Notwithstanding this I hold the opinion that the training in the practical, and more particularly the manipulative, portion of our profession leaves much to be desired, and I do not know of any form of training that would prove of so much

[illegible] were considered excellent surgeons make such a display when sawing through a bone in an ordinary amputation that it was evident to any observer that they had never learned to saw a bit of wood, with the inevitable accompaniment of locking of the saw and splintering the bone, and on other occasions the most clumsy attempts made at the introduction of certain forms of suture that were a little bit out of the common.

Now I am not suggesting that a course of carpentry or sewing should be added to the burdens of what appears to be an already overloaded curriculum, but lucky is the man who has been taught the use of the needle in childhood, best of all when it has been done at his mother's knee. Those of you who have not had such advantages, or who having had the opportunities did not profit by them, will do well while you are yet young, and while your fingers are yet pliable, to practise for yourselves the application of all the forms of suture on some simple fabric before you attempt the application of a needle and silk to the intestines of a human being. Learn to use a saw and a chisel on a piece of wood before trying them on a living bone.

What is the present position of surgery as an art? In an edition of his classical work on surgery, written several years ago, Mr Erichsen expresses himself in the following terms: "To my mind it appears as if we had already reached something like finality in the mere manipulative art of surgery; though I hesitate much to use the word 'finality,' for I know well how apt a man is to suppose that art, to the prosecution of which he has devoted his life, to have attained to the fi[illegible] at the question as [illegible] not but come to the conclusion that we can scarcely hope to pass far beyond the line at which we have arrived in the direction of extreme precision and almost absolute certainty in the mechanical performance of the operations of surgery, and that in this direction the progress of modern surgery is nearly barred. At the same time we may reasonably expect that the details of [illegible] from time to time [illegible] skill of individual [illegible] mechanicians, or [illegible] as aids to our art [illegible] indeed, have been the advances, of which I [illegible] to the great improvements that have taken place in dealing with the abdominal viscera, such as the introduction of Senn's plates, of decalcified bone-bobbins and Murphy's buttons, and the more perfect methods of suture for either lateral or end-to-end anastomosis of the intestines; the improved methods of dealing by operative procedure with certain forms of fracture; and the introduction of serum therapeutics, which is, of course, the outcome of pathological and bacteriological research, but which promises much and has already proved of inestimable value in to a large extent minimising the severity of that much-dreaded disease diphtheria.

I must pass on to another matter. The large majority of those who go out into the world as physicians and surgeons become what is known as general practitioners, and it should therefore be your ambition to become acquainted with all the branches of your profession, otherwise you will never be sound advisers. To the few it is permitted to select some particular branch and become what is known as specialists; where the opportunity offers the temptation to do so is very great, as it largely diminishes the responsibility of the individual and makes his work easier and more agreeable, but has an undoubted tendency, on the other hand, to narrow the mind and obscure the discriminating powers. I well know that in treating of specialists and specialism I am treading on delicate ground, but I believe the rapidly growing craze of the public for specialists is fraught with the gravest danger to themselves and to those who pander to it. Not so long ago I was asked to give the name of someone whom I could recommend as a liver specialist. My answer was that the profession did not recognise the existence of such a person and that anyone who posed as such could be little better than a charlatan; that anyone who was competent to treat affections of the liver should be equally competent to deal with affections of the heart and lungs and of the stomach and kidneys &c. Such is the teaching that we must necessarily derive from the study of physiology. Any one student of standing knows that you cannot alter the functions of any one important

Prognosis.—Without complications and in an otherwise healthy individual the prognosis is good.

Treatment.—During the rise, antipyretics and if necessary cold applications and aperients; during the remission, quinine and some saline diaphoretic mixture; and after the attack, tonics. If the temperature is over 104° 10 grains of phenacetin with or without five grains of calomel and a hot lime drink are commonly given. Cold applications are necessary if the temperature refuses to react to drugs; as ice is difficult to obtain on the Gold Coast it is usual to resort to a brine bath—i e., salt, vinegar, lime-juice, and Florida water are mixed with the water and the patient is either sponged with this, packed, or placed in the bath. The latter is at times dangerous owing to the shock which it produces. The saline diaphoretic mixture generally used is liquor ammoniæ acetatis in one-drachm doses, together with spiritus ammoniæ aromaticus, spiritus ætheris nitrosus, and a little syrup of orange. Quinine is often given in 10-grain or 15 grain doses twice a day, in the morning and in the afternoon. This, of course, is only given in the remission of the fever, and as soon as convalescence is established it is cut down to 10 grains once a day; then five grains once a day, next five grains every other day, and lastly, it is stopped after a little time. In the convalescence stage quinine is only given in the morning. In convalescence, in order to treat the anæmia and to improve the general system of the patient some tonic is necessary. A common prescription here is 10 grains of the citrate of iron and quinine with three minims of the liquor of strychnine hydrochlorate and a little syrup of orange for a dose. After repeated attacks of fever and the consequent anæmia a patient is invalided to either (1) the Government Sanatorium at Aburi, situate on the hills 26 miles from Accra at an elevation of 1440 feet and surrounded by beautiful gardens; or (2) a sea trip to Sierra Leone, Canary, or England according to his condition.

Prevention.—This is important and much can be done by using common-sense and obeying the ordinary rules of life and hygiene. Chills must be avoided and clothes should be changed if they get wet (this, however, is often impossible). Constipation and excesses can be avoided. Proper and sufficient food should be taken if it can be procured. Recreation and certain kinds of amusement can easily be obtained on the coast and often help to counteract mental worry. Possibly some alcohol should be taken to counterbalance the deleterious effects of a hot moist climate. If possible, Europeans should live in the good airy bungalows which are common on the coast and which have been built by the Government for officials, and should also be provided with mosquito nets, which I am glad to say are in general use A little quinine in the damp cold weather or when wet or before a long trying march has been found useful In my opinion persons have many times been prevented from having an attack of fever by being given a purgative and a few grains of quinine. As the country gets opened and as the forests are cut down and the swamps are drained by the gold-mining and other industries now beginning, the malarial fevers will, in my opinion, diminish, even as they have in the Fens and in Kent

Accra.

ON THE DIAGNOSIS OF THORACIC ANEURYSM BY THE ROENTGEN RAYS.

By HUGH WALSHAM, M.A., M.D CANTAB., M R C.P. LOND.,

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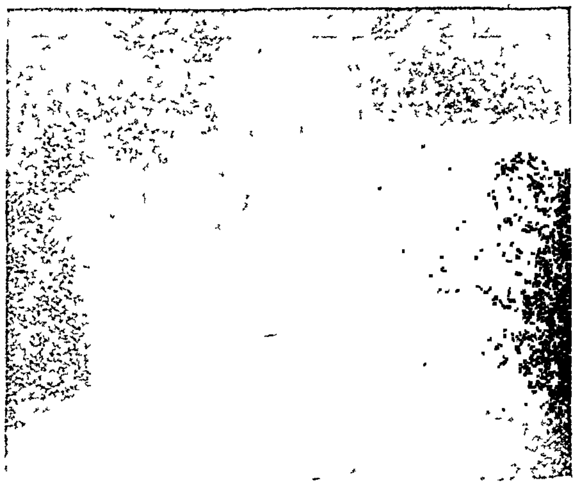
MANY aneurysms of the aortic arch can, of course, be readily diagnosed without any help from skiagraphy, but there are others, and they are not a few, in which the physical signs leave us in doubt between an aneurysm of the aorta and a mediastinal new growth, or the aneurysm may be unsuspected In cases such as these the x rays come to our aid and I would emphasise the importance of examining such a case with the screen, because the pulsation of an aneurysmal sac can only be discovered in this way in an aneurysm buried deeply in the thorax. The following two cases, both of which came under my observation in the out-patient room at the City of London Hospital for Diseases of the Chest, are, I think, worthy of record.

CASE 1.—A man, aged 33 years, came to the out-patient room on April 19th, 1899. He gave the following history. He had had syphilis 16 or 17 years ago. 12 years ago his right elbow-joint was excised by Lord Lister in King's College Hospital. Five or six weeks before coming to the hospital he noticed a "cramp-like feeling" in the region of his heart which extended down his left arm. This sensation only lasted for a few minutes at a time but was severe. This lasted for two or three days and then disappeared. About the same time he noticed that he was getting short of breath on exertion. For a few weeks he had had a slight cough with frothy expectoration. He had never had rheumatism. On examination the heart's impulse was found to be in the fifth interspace in the left nipple line. In the third and fourth interspaces on the left side, three and a half inches from the mid-sternal line, there was a diffuse area of expansile pulsation over which a systolic murmur was audible. The aortic and pulmonary second sounds were clear. At the apex there was a systolic murmur following the first sound. The expansion of the left side of the chest was a little less than the right. The breath sounds all over the left side of the chest were a little weak. There were numerous crepitations to be heard over the left base behind. The pupils were equal and reacted to light. Both vocal cords moved well. The pulse was 72, regular and equal on each side. On May 3rd, 1899, he was admitted to the hospital under the care of Dr. Eustace Smith. The first skiagram (Fig. 1) was taken the day before his admission.

FIG. 1.



Showing the shadow of the aneurysm at the left base of the heart.

The chest is viewed from the back. The first point noticed is the very peculiar shape of the heart. The projecting shadow to the left of the base of the organ corresponded exactly to the pulsation felt on the chest wall. The shadow occupies the position of the left auricle. On a screen examination well-marked pulsation was visible in this projecting shadow. The diagnosis arrived at was that the patient had an aneurysm, and if aneurysms of the left auricle were not so extremely rare, there being, according to Dr. Wickham Legg,[1] only three or four cases on record, it might have been thought from the skiagram that the patient had an aneurysm of this chamber of the heart. The patient left the hospital of his own accord on June 1st, 1899, the physical signs remaining practically the same. A fortnight after, owing to palpitation of the heart, he went to the Middlesex Hospital and was admitted, remaining there for three weeks. After his discharge from the hospital he kept fairly well for five or six weeks. He attended again at the Middlesex Hospital for examination and was again admitted for six weeks. His condition remained much the same until the last week in November, 1899, when he fainted in the street.

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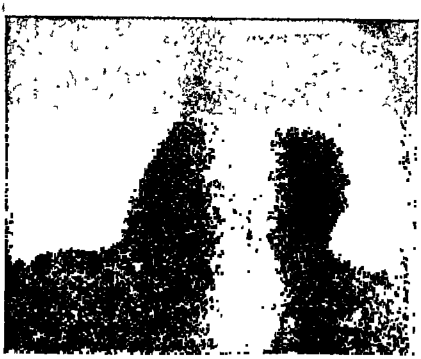
[1] Dr. Wickham Legg: Some Account of Cardiac Aneurysms, Bradshawe Lecture, delivered before the Royal College of Physicians of London, 1883.

After this he came again to the City of London Hospital for Diseases of [illegible] itted to the hosp [illegible] On examination the physical [illegible] same as before but with the additio [illegible] base of the heart. He informed [illegible] of the physician under whose ca [illegible] in the Middlesex Hospital was that he had an adherent pericardium. He was discharged on Jan. 18th, 1900. On April 7th, 1900, he came again to the out-patient room complaining that for the last few weeks his shortness of breath had increased. On April 12th, 1900, the second skiagram (Fig. 2) was taken, the interval between the two skiagrams being almost exactly 12 months. The chest is viewed from the front. It will be at once seen that the shadow of the tumour at the left base of the heart has increased to more than double its original size. It also shows evidence of commencing dilatation of the right side of the heart. On a screen examination the pulsation in the sac was very distinct. I think the second skiagram leaves no doubt about the aneurysmal nature of the tu[illegible] rvation.

FIG. 2.



The second [illegible] from a diagnostic and [illegible]

CASE 2.—A man, aged 42 years, came to the out-patient room on Nov. 29th, 1899. He gave the following history. He had never had any previous illness, being quite well up to 18 months ago when he began to suffer with shortness of breath on exertion which had gradually increased. He had had pain extending down the right arm. He also noticed that the veins on the right side of his neck were swollen. He had had a cough with slight expectoration but no hæmoptysis for 12 months. For the last two months he had been wasting rapidly, having lost nearly two stones in weight. Nine months ago he said that his face and neck were swollen but this swelling had now disappeared. On examination the superficial veins over the upper part of the right side of the chest and in the epigastric region were full and tortuous There was no pulsation anywhere to be discovered. There was dulness to percussion with tracheal breathing all over the right side of the chest in front—the dulness extending a little to the left side at the level of the second costal cartilage. The dulness was also marked at the back of the chest on the right side but not so absolute The breath sounds over the left chest were normal. The heart's impulse was displaced downwards and outwards in the sixth interspace just outside the left nipple line. There was a soft systolic murmur following the first sound. The murmur was conducted towards the axilla. The pulse was weak, soft, and regular, and appeared a little weaker in the right radial artery. I was in doubt between an aneurysm and a new growth The patient was admitted to the hospital on Dec 13th, 1899, under the care of Dr. Eustace Smith The first skiagram (Fig 3) was taken on Dec. 7th, 1899. The chest is viewed from the front. It is at once seen that there is a large tumour occupying the right side of the chest and extending upwards nearly to the right clavicle and downwards to where it meets the shadow of the liver. It also extends a little to the left of the sternum at the level of the second costal cartilage on the left side. It seemed hardly possible that an aneurysmal sac could reach such enormous dimensions. I was therefore—taking into consideration the rapid wasting—in favour of a mediastinal new growth. The patient remained in the hospital until March 15th, 1900, and was discharged decidedly improved. He returned to the hospital the following month saying that although his breath was less short his cough had increased. On examination the physical signs were the same with the addition of rhonchi over both bases. The bronchial catarrh soon cleared up under treatment. Until June, 1900, the patient attended at the hospital once a month to report himself. The second skiagram was taken on April 26th, 1900, the interval between the two being very nearly five months On comparing skiagram 4 (see Fig 4) with skiagram 3 it will be seen that the mass on the right side of the chest has undergone a certain amount of contraction, its shape being quite altered. This contraction of the tumour leaves now, I think, no doubt about its aneurysmal nature.

FIG. 3.

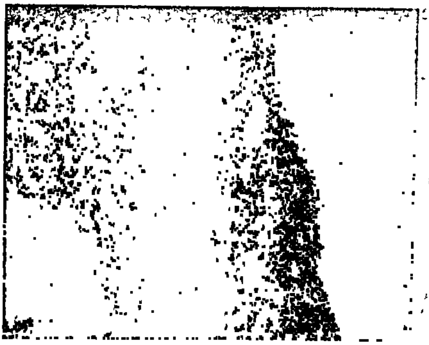
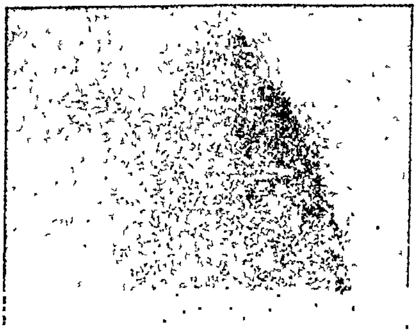


FIG. 4.



The shadow has now much contracted.

Since the above was written I have discovered an aneurysm of the descending thoracic aorta in a patient, by means of the Roentgen rays, which was unsuspected, the patient having been under treatment for intercostal neuralgia.

Harley-street, W.

UNIVERSITY COLLEGE OF NORTH WALES.—The half-yearly meeting of the court of governors of the University College of North Wales was held at Rhyl on Oct. 24th. Lord Kenyon was elected President in succession to Mr W. Rathbone, who retired after 15 years' service. The financial report showed a deficit of £1604.

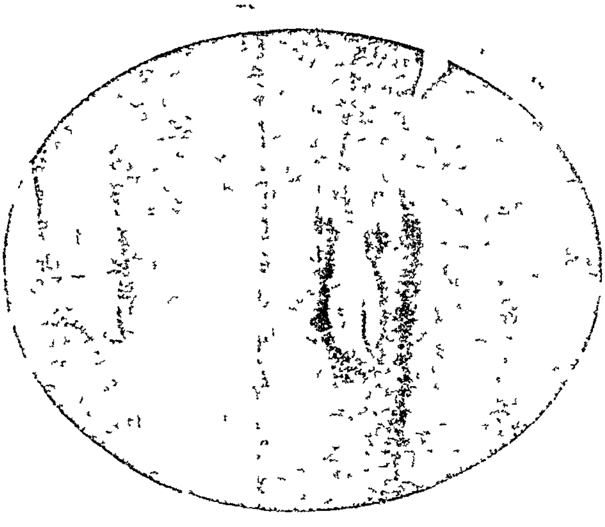
HAVE MATERNAL IMPRESSIONS ANY EFFECT ON THE FŒTUS IN UTERO?

BY WILLIAM DUNCAN, M.D. BRUX., F.R.C.S. ENG.,
OBSTETRIC PHYSICIAN TO THE MIDDLESEX HOSPITAL.

NOWADAYS it is the custom to scoff at the idea that maternal impressions during pregnancy can injuriously affect the unborn fœtus and when cases in support of the theory are recorded they are usually described as mere coincidences. Those who deny the influence of maternal impressions say (1) that deformities are rare but maternal impressions are common; (2) that deformities occur where there is no history of any maternal impression; and (3) that as there is no nerve-tissue in the umbilical cord no impression can be carried from the mother to the child. On the other hand, the belief in the power of maternal impressions to cause deformities in the fœtus in utero was pretty general in the medical profession up to the beginning of the last century; and even at the present day there are not a few medical men—myself amongst the number—who are unable in the face of many well-authenticated cases to refuse to believe that maternal impressions and fœtal deformities do sometimes stand in the relation of "cause and effect," even though it be impossible to say definitely what the *modus operandi* is. The case which I am about to relate is so extraordinary that I feel it due to the profession to publish it.

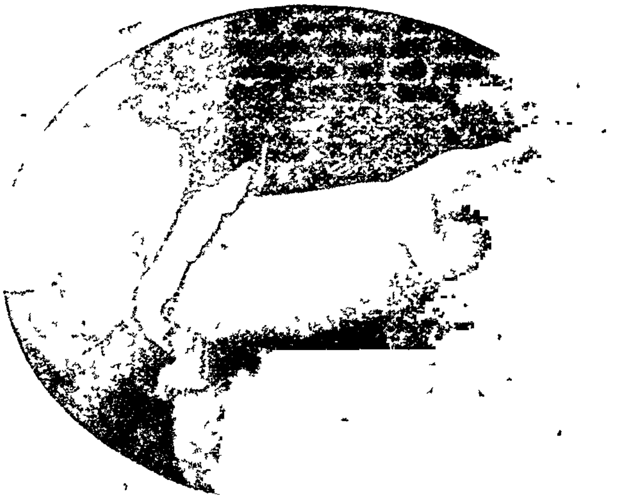
The wife of a medical man consulted me in 1898 for dysmenorrhœa and sterility. Finding an acutely anteflexed uterus I dilated the cervical canal, with the result that soon afterwards she became pregnant. When she was seven weeks pregnant her husband took her to the seaside and whilst there they were photographed together. (See Fig. 1.)

FIG. 1.



When the wife saw the photograph she exclaimed that her husband's "right hand looked deformed as if it had only a thumb and little finger." On frequent subsequent occasions she showed the photograph to friends, always pointing out the deformity to them When the child was born—after a normal labour—the *right* hand was deformed as seen in Fig. 2, and the resemblance to the father's *right* hand, in comparing the two photographs, is sufficiently striking. Now comes a very remarkable occurrence. The nurse in charge of the baby whilst out walking one day showed the deformed limb to a neighbour who happened to be a few weeks pregnant. She was very shocked, but remarked, "What a lucky thing that both arms are not deformed." This woman was duly delivered of her first child at full term, and "*both its hands and feet were deformed.*" The mother was of a very nervous temperament. She often expressed her opinion that it was the shock of seeing the hand of my patient's child that caused her child to be born deformed. She would allow no one to see the child, although my patient's husband tried hard to get permission to have it photographed. She has since been removed to an asylum. Both of the children, apart from the deformity, are well developed and healthy. No previous cases of deformity can be ascertained as having occurred in either family.

FIG. 2.



In his presidential address to the Glasgow Obstetrical Society on Nov. 25th, 1891, Dr. George Halket[1] ably reviewed the whole subject of "infantile deformities and maternal impressions and emotions." He mentioned several recorded cases, three of which, as they are somewhat similar to that which I have just recorded, I may briefly quote.

In the first case an infant was born alive with the index and middle fingers wanting from one of the hands. The mother was a young woman who knew nothing of maternal impressions, but when she was told of the deformity of her infant she stated without hesitation that she had to work for some months after her marriage under a foreman who had lost two fingers through an accident; that the first time she saw his hand she had a shivering fit; and that every time she saw him she could not keep from thinking of his deformed hand. In the second case a patient in her first pregnancy was served daily with milk by a boy who had lost his middle finger, and as he handed her the milk she always noticed the absence of that finger. When her child was born the middle finger of one of the hands was wanting. In the third case a medical man narrated to a female friend who was in the early months of pregnancy, how one day a man was brought into his surgery with the right hand completely cut off by machinery. It made a marked impression on the lady who related the incident several times to friends. When her child was born it had only one hand.

Surely these cases show indisputably that maternal impressions have some effect in producing infantile deformity; and although the action cannot be explained pathologically I may end by saying (as Dr. Halket does): "There are more things in heaven and earth than are dreamt of in our philosophy."

Harley-street, W

TONITE EXPLOSION AS A CAUSE OF DEATH.

BY A S. MORTON, M.D. DURH.

ON August 18th, 1900, at 10.40 A.M., I was requested to go immediately to a man who was said to have been severely injured by some explosive. I went at once and on my reaching the spot I found that the man was already dead. The coroner for Ipswich ordered a preliminary inquiry at 4 45 P.M. on the same day, requesting me to give evidence but not allowing any post-mortem examination on that day.

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[1] Glasgow Medical Journal, January, 1892.

I then gave the following evidence. The body was that of a man, about 37 years of age. He was fully dressed, his clothes were torn in places, and there was a large wound in the left thorax. I then stated that to the best of my belief death was caused by hæmorrhage and shock due to a wound of some internal organ by some explosive or other and that a probe passed into the body for its entire length in the direction of the heart, but whether that organ was wounded or not I could not say without a post-mortem examination. The jury requested a necropsy to be made, and this was done by order of the coroner on Sunday morning, August 19th, at 10 A.M. It was most carefully carried out by myself, together with the able assistance of Dr. A. W. Paterson of Ipswich, and in the presence of Mr. S. O. Eades. The clothes had been previously removed. There were a number of wounds of a more or less severe nature all over the front and side of the left half of the body. The right side had almost entirely escaped, as also had the head and face. There were a number of pieces of metal, varying in size from that of a shot-corn to about an inch in length, extracted from some of the wounds. The chief wounds were one which passed immediately below the seventh rib in a line with the axilla, allowing the insertion of the forefinger, and from which a piece of omentum was protruding; another hole was just above the middle of the left pubes from which gas was issuing, showing peritoneal perforation; there was a wound over the left deltoid at the top of the shoulder of about the size of a shilling; another wound about three inches long over the centre of the left biceps; also a wound about as large as the palm of the hand in front of the left upper forearm and corresponding to the area embraced by the median cephalic and basilic veins; the metacarpo-phalangeal articulation of the left thumb was torn open without fracture; and a piece of metal had perforated the left boot at the outer side and close to the toe-cap. This piece of metal had fractured the middle toe as well as injuring the big toe and the second toe. All the wounds of the outer surface of the body were peculiar in this respect, that the soft tissues were completely blown away—they looked as if eaten away by some animal. There was no blackening or discolouration of the surrounding skin, nor was there any smell of fire or of gunpowder, the skin looking perfectly clean and normal. The heart was normal and uninjured. The brain, the kidneys, and the spleen were all healthy and not damaged. The lower lobe of the left lung was perforated. This wound was a continuation of the wound under the seventh rib; it then passed through the diaphragm, then along the anterior superior surface of the stomach, which it perforated, and it also passed through the left lobe of the liver. The intestines did not appear to be injured. The clothes which the man had worn were full of holes; there was no smell of fire upon them nor was there any discolouration. The buckle of the left brace was broken and the broken portion was found in the body. Some of the blue material of a cloth coat was found, still undiscoloured, partly buried in the horn handle of a pocket knife.

It came out at the adjourned inquest on August 24th, that the Ipswich Regatta had been held on August 17th, when some fireworks and distress signals were exploded in the evening. It is supposed that one of the latter did not explode from some cause or other and that it fell upon the area of a timber-yard, where it was found on the following day and was examined by various workmen. How it exploded is still somewhat mysterious—that is to say, whether by percussion, by friction, by striking upon a cartwheel, by the application of a match, or by the production of a spark by means of a stone—as all of these methods were attested to by various witnesses. Captain M. B. Lloyd, H.M. Inspector of Explosives, who gave his evidence, stated that "the nature of the explosive which caused the deceased's death was what is known as a socket distress signal or a socket-sound signal. It was evidently, however, a defective one. Faulty manufacture, and many other things, would cause a signal not to explode. The inspector then went on to explain by means of a sectional dummy signal the exact nature, composition, and properties of it To all intents and purposes it was a shell and was similar to those that were recently used in the artillery except that its envelope was not of so substantial a character. The flash of the discharge lighted a time fuse which burnt for five or seven seconds and then ignited a charge of tonite, a very powerful explosive, making a report equal to a 15 or 20 pounder gun. The charge was sufficient to blast out rock to the depth of a yard."[1]

Some important questions were propounded at the inquest: "What is a firework?" "Was he a left-handed man?" (This was shown to be the case.) "Was his death due to the explosion or did someone else shoot him?" since shot was discovered by me in the body *before* the post-mortem examination. It came out subsequently that he had been shot some time previously in the same side and several shot-corns were extracted at the time of this injury. He had extensive adhesions of old left pleurisy and this prevented the complete collapse of the lung when perforated by the tonite explosion. "Was he able to walk a few—three or four—yards, and say good-bye to one or two of his old friends after so severe and mortal an injury?" The evidence of two or three of the witnesses proved that he was able to do so. "Could he have so walked and spoken without the old adhesions of his left lung, which prevented instantaneous collapse?"

Putney, S.W.

ARRESTED MENTAL DEVELOPMENT FOLLOWING DEPRESSED FRACTURE OF THE SKULL; TREPHINING; IMPROVEMENT.

By ALFRED CLARK, F.R.C.S. Edin.

ON July 10th, 1900, I was consulted in reference to a girl, aged 11 years, who had been for three years in an asylum because of "idiocy," accompanied by boisterous behaviour, which rendered her quite unmanageable at home. The patient, a tall and well-developed mulatto, who walked with a shambling gait, was brought into my consulting-room and demonstrated her high spirits by repeatedly pushing her mother off her chair, punching her on the chest and back, and pulling her hair, all with perfect good humour. She called me by her father's surname and evinced a strong desire to pull my chair from under me, for which reason my physical examination was limited and expeditious. I found a depression of the skull in the left occipital bone near the parieto-occipital suture and about two fingers' breadth from the middle line. It was about one and a half inches long and three-quarters of an inch wide. I had a fleeting view of the optic discs, which were normal, as were also the pupils.

The history of the case was that the child was bright and intelligent until the age of four years when she fell backward from a high chair and struck her head against the leg of the table. This injury was followed by "concussion of the brain" and on recovery she seemed all right except that about once a week she had a severe fit, which often lasted, according to her mother's account, for 12 hours, leaving her exhausted for a day or so afterwards. These fits were preceded by spasm of the right arm and leg. In time the mother noticed that the child's mental faculties were stationary and that she seemed to receive no new impressions of any kind. She called all strangers by names familiar to her before her accident and would, if asked where she lived, mutter something which her mother translated as being the address at which she had lived when she received the injury, although the family had removed several times since then. She could not be trusted away from her mother as she had a boundless genius for mischievous destruction.

On July 16th I operated. The nurse in attendance had had some very bad quarters of an hour preparing her for operation and was black and blue in her chest and arms from blows and pinches I trephined over the seat of the depression and found the meninges enormously thickened and adherent I opened the dura mater by a crucial incision and passed a trocar and cannula into the brain substance in several directions, but no fluid of any kind was obtained. I then cut away the exposed dura mater and separated the adhesions round the hole made by the trephine as well as I could with my finger. The disc of bone was not replaced and the scalp wound was completely closed by sutures.

Recovery from the operation was uninterrupted and from that time until the time of writing (Sept. 2nd) there has been steady improvement in every way. The fits have never returned nor has there been any spasm of the arm or the leg. Her mental condition has so improved that she can be trusted to go shopping for trifles for her mother. She has been left in the house for hours at a time with only her younger brother—which, in my opinion, is a risky proceeding—and has been "as good as gold." She calls me "the doctor" and addresses other people by their right names. Her gait is no longer shambling. She amuses herself for a long time together by looking at pictures and she is learning the names of animals, &c., with the facility of an average child of four or five years of age.

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[1] East Anglian Daily Times, August 25th.

Bitterne, Hants.

NATURE'S ALKALINE TREATMENT OF GOUT AND RHEUMATISM BY THE USE OF NATURAL ALKALINE THERMAL WATERS.[1]

By CARL N. BRANDT, M.D.,
RESIDENT PHYSICIAN, HOT SPRINGS, VIRGINIA, U.S.A.

MY only excuse for attempting any addition to the already overdone subject of rheumatism and gout is that in an experience of a number of years in the treatment of these conditions solely certain clinical facts have been impressed upon me to so great an extent that I feel that the lessons learned by clinical work may be of some value to those of the profession who are called upon to deal with the subacute and chronic forms of so-called gout and rheumatism. To go into the theories that have been advanced in the past is not my purpose, but merely to try to show why and how results are obtained by the use of natural alkaline thermal waters, internally and externally, in a large number of cases where all other means had failed. That such is the case can, I am sure, be testified to by almost all the leading medical men of the day, and my only surprise is that they fail to understand how such results are obtained. No treatment gives rise to so much disbelief as the use of water as a therapeutic agent, and the idea that after the use of all the drugs, the so-called specifics, the alkalies, and the salines, relief should be given by the use of water is by many considered absurd, and the man who advocates such treatment is dubbed a fanatic. The profession, as a rule, may be said to be satisfied that the most approved treatment for these conditions is the so called alkali treatment, and yet they express surprise that good results should be obtained by the use of alkaline waters. Have they ever stopped to consider that, after all, the so-called water cures or treatment for gout or rheumatism are nothing more or less than the alkaline treatment, differing only in the fact that the alkali is, on the one hand, supplied by the druggist, and on the other by nature? Such is the case. All the water cures for these conditions consist in the use of alkaline waters, not only internally, but also in the form of baths. The use of the alkaline waters is but one factor in the proposition. Another is that when properly used we have the application of the alkaline treatment under the best circumstances and with the best possible surroundings. Quite possibly the patient's physician at home will have laid the fullest stress upon the proper diet, exercise, mental rest, &c., that the patient is to have, in addition to the medication advised, but (and herein lies the kernel of the nut) the patient does not follow these instructions. He will take his pill or teaspoonful of medicine with absolute precision and regularity, but he has no time for exercise and dieting. After finishing his business and following his pleasure he may give these a half-hearted attention for a day or two, but there it, as a rule, ends. These are not conditions to be helped solely by medication. On the other hand, when taking a so-called cure he not only has his medicine—i.e., alkaline water internally and externally—but having no business to attend to, no pleasures to follow, his one occupation is to conscientiously carry out in every detail his *régime* as laid down for him by his adviser, who has him constantly under observation. Given, then, the alkaline treatment—i.e., in this case supplied by use of alkaline waters, good air, a carefully regulated diet, proper exercise, absolute cleanliness, free action of the skin brought about by the use of the alkaline baths, and free action of the kidneys and bowels due to the internal administration of the alkaline water—added to the knowledge which the patient has that he is doing that for his condition which is best, can any patient fail to improve?

The first clinical fact which has been impressed upon me is the absence of any clearly defined line of demarkation between the symptoms of cases which have presented themselves in which a diagnosis of either rheumatism or gout has been made. I have been unable to demonstrate to my own satisfaction any different pathological condition in these so-called diseases, the clinical picture in either case being practically the same. The diagnosis, it would seem, is most often settled by the exciting cause. On the one hand, if the initial attack followed exposure to cold, dampness, &c., we are most frequently told that it is a case of rheumatism. If, on the other hand, the primary attack was apparently induced by excesses at the table or by indigestion we are said to have a case of gout. The absence of difference in the symptomatology and pathology of the many cases which have come under my observation of so-called rheumatism and gout has led me to discard the terms "rheumatism" and "gout" and bring these conditions under the one general head of "uric acid toxæmia." My own belief being that in the absence of any clearly defined pathological condition neither rheumatism nor gout are true diseases, but are groups of symptoms arising from improper metabolism, or in other words, the effects produced by the retention in the system of the products of metabolism, or waste, I am strengthened in this belief by the observance of two clinical facts. First, that in all the cases which have come under my personal observation in which either a diagnosis of gout or rheumatism has been made, the retention of uric acid has always been readily demonstrated. Secondly, that immediately the free excretion of uric acid was brought about the symptoms have disappeared, irrespectively as to whether the diagnosis has been rheumatism or gout. My universal experience has been that on presentation the so-called case of rheumatism or gout is found to be excreting less than the normal amount of uric acid, and after being put under treatment this amount gradually increases, and with its increase a diminution of the symptoms. The amount of uric acid excreted under treatment is frequently found to be twice or three times greater than before treatment was begun, and then gradually diminishes until the normal mark is reached, at which it remains so long as the patient continues so to conduct his life and habits as will insure his maintaining a proper relation between waste and repair. The ground being taken that uric acid retention is the indication at least, if not the prime factor in the causation, of such a condition or conditions, which I name "uric acid toxæmia," it follows that the knowledge of the exact amount of uric acid daily excreted is most essential. The ordinary routine of instructing a patient to bring to his medical man "a bottle of urine," with no instruction as to amount or how and when the same is to be collected being given, is useless.

Neither a qualitative analysis nor a microscopic determination will suffice—the first owing to the fact that that particular portion of the daily amount of urine may contain a greater or lesser percentage or the entire output of uric acid; the second owing to the fact that the drop or drops examined may contain all or none of the crystallised uric acid present, and thus lead to error in judging the amount excreted. Obviously a quantitative analysis is necessary. My procedure is as follows. A thoroughly clean glass vessel large enough to contain the output of urine for 24 hours is given the patient, with instructions to collect all urine passed for the following 24 hours; he is also instructed to first empty the bladder whenever having a bowel movement, so that no urine may be lost. From this a quantitative analysis is made, no change of diet having been ordered up to this time. From the evidence gathered from this first analysis treatment is the following day begun, and the patient is instructed as regards diet, exercise, and the use of the waters. On the day following a second analysis is made, the treatment as regards diet, baths, &c., being changed in accordance with the results of uric acid excretion as shown by said analysis. Analyses are continued every two or three days throughout the treatment which is ended when the excretion of uric acid has reached the normal, the patient then being allowed to return to his home after having been instructed as to his manner of living so as to maintain a proper excretion of uric acid. A record of the amount of uric acid excreted is kept in each case from day to day, and on this record, as I have said, is based any change in diet, baths, &c. It is not claimed that the use *of the alkaline treatment as supplied by nature is a specific*, but that its employment, owing to the conditions by which it is surrounded, gives a larger percentage of good results. In my experience I may say that next to the internal administration of the alkalies and their external application in the form of baths diet plays the most important part, and by which Haig has shown and my own experience has

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[1] A paper read before the International Medical Congress at Paris, August 9th, 1900.

e controlled. A dietary is to

y set rule to be applied to all

new diet to each patient in

as shown by the urinary analysis, remembering the importance of personal individuality.

The utility of the alkaline bath has been a vexed question, many practical men holding that there is no absorption of the mineral contents of the water, and many experiments have been made to prove this. My own experience leads me to believe that the taking of the alkaline baths alone will induce an increased uric acid excretion, my theory being that we here again have applied that old physical law of exosmosis and endosmosis, an acid condition of all the tissues, an alkaline medium—i.e., the bath—and an animal membrane—i e , the skin—intervening. The alkaline treatment, as supplied by alkaline thermal waters, I use in the following manner. A patient is given a daily alkaline bath, varying in temperature from 90° to 105° F., for a period of from 5 to 25 minutes. He is given none but alkaline water to drink, a portion being taken on an empty stomach. He takes from two to four hours' acti

ordered him. No f

factors of the tre

of uric acid as shown by the analyses. The results in an *experience of a number of years*

I would call attention to the

the use of alkaline water for t

toxæmia: (1) frequent quantitative urinary analyses; (2) changing the diet, the amount of exercise, and the amount of water taken until there is a free excretion of uric acid; (3) the taking of sufficient exercise for the thorough oxidation of the foods taken; (4) the putting aside of all mental work; (5) a specific diet ordered, not depending upon the patient's knowledge as to what contains or does not contain the proximate principles which are to be avoided; and (6) to teach the patient what nature's laws are as pertaining to his health and well being and how to follow them.

In conclusion, let me deny the statement that has so often been made that there is a great difficulty in making patients follow stringent rules. Such has not been my experience when I have had ability sufficient to impress them with the importance of these restrictions This treatment, as I have tried to show, is in no way specific It is not claimed that there is any magic in the waters used, but that it is merely an application and use of the recognised utility of the alkalies, augmented by the surroundings and conditions possible when the patient is so placed as to be constantly under the observation of his physician. The treatment is a rational one and a true exponent of the practice of physiology—a step I trust towards brushing away some of the *mysteries* which, unfortunately, have surrounded many medical measures I hope in the near future that it may be said of our profession, "*They practise physiology* and not medicine"

Virginia, U.S.A.

THE WEDGE OPERATION FOR ENTROPION AND TRICHIASIS.

By H. HERBERT, F R C S. Eng ,

MAJOR, I M S.; ACTING OPHTHALMIC SURGEON AND PROFESSOR OF OPHTHALMOLOGY, GRANT MEDICAL COLLEGE, BOMBAY.

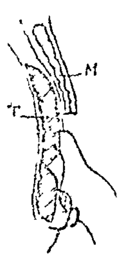
WITHIN the space of one and a half years, some years ago, I operated on 130 upper lids for entropion and trichiasis by Snellen's method, slightly modified, with excellent results A large majority of the cases requiring it were those of combined entropion and trichiasis, some of them being very bad cases indeed The ordinary Snellen's operation is insufficient for many of our old neglected cases, and success in these depends entirely on the observance of the details pointed out below. If the necessary rules are followed the operation is equally suited to the mildest and to the most severe cases, to trichiasis as well as to entropion. The ordinary operation consists simply in the removal of a wedge of tarsus with its overlying muscle, the necessary incision having been made through the skin, and the parts are adjusted by Snellen's suturing. The points on which I wish to insist are as follows:—

1. A strip of skin two millimetres or more broad should be cut away, at least in all bad cases, unless the skin be contracted and scanty Otherwise it is redundant afterwards and the upper lip of the wound tends to overhang the lower. It leads to no shortening of the lid beyond that produced by the excision of tarsus.

2. (*a*) The depth of the tarsal wedge removed should in all cases be sufficient to divide completely the tarsus. If the conjunctiva be penetrated in places no harm results. The whole thickness of the tissue being divided it is found that the conjunctiva and subconjunctival tissue are sufficiently loose or extensile to permit of very considerable displacement as well as rotation of the lower segment of tarsus, which carries with it, of course, the border of the lid. (*b*) The breadth of the wedge at its base depends largely on the degree of entropion existing. When the lower portion of the tarsus is *much thickened and bent the rounded* swelling of its anterior surface renders it an easy matter, and indeed almost imperative, to remove a broader wedge than usual. But in some of the older cases of entropion the tarsus is much contracted vertically and the thickening involves the whole or greater part of it. Care has to be taken in these cases not to remove too much or the wedge may easily be made to include the greater portion of the tarsus. (*c*) The position of the wedge is important. The strip taken should be as near the free margin of the lid as possible—i e., immediately above the roots of the eyelashes Thus we have *uite a narrow strip of* tarsus left below and a comaratively broad plate above, so that when the anterior urfaces of the two are drawn together any displacement which may occur will be in the lower and not in the upper piece. The broad plate above affords a fixed basis from which one can work on the more readily moved and more readily moulded narrow marginal strip, with sutures.

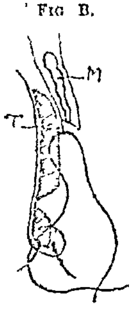
3 It is in the suturing that Snellen's operation most distinctly fails to make the most of its opportunities (Fig. A.) The sutures should be entered as in Green's operation. The curved needle is to be introduced a little behind the most posterior lashes, wherever they may be situated, and passed obliquely forwards and upwards, to be brought out immediately above the lower margin of the skin wound Thus the more the trichiasis or districhiasis the further back will the point of entry be, and when the sutures are pulled upon the more will the border of the lid be *brought forward*. (Fig B) The needle should then be passed into the anterior surface of the upper piece of tarsus distinctly above the cut surface, and brought out again after taking a firm hold; neither skin nor muscle is taken up Introduced into the tarsus thus the sutures when tightened have distinctly more effect in bringing the eyelashes forward than when introduced "through the upper lip of the tarsal less of

FIG. A.



Snellen's suture

FIG B.



Modified suture.

M is muscle T is tarsal cartilage

Pepper to see her with the view of advising an interscapulo-thoracic amputation. This being agreed upon, and the aspect of affairs being fully explained to the woman and her husband, the operation was performed on Feb. 15th. A stimulating enema having been given and ether having been administered the clavicle was sawn across in its inner half and the vessels were tied with silk. In the shaping out of the flaps all the skin of the acromial and pectoral regions that was unimplicated in the ulceration was saved, and when it had been raised the pectoral muscles, the serratus magnus and latissimus dorsi, the levator anguli scapulæ, rhomboids and trapezius, and the cords of the brachial plexus were divided, and the "part" was taken away. Bleeding vessels were secured as they showed themselves, and without any waste of time the flap was adjusted and sutured, bulky dressings were applied with compression, and the patient was taken back to her warmed bed. She was much collapsed in the evening, but at once answered to the injection into the veins of a quart of hot saline solution which was promptly given by Mr. G. D. Maynard, the house surgeon. She made a rapid recovery and when she visited the hospital a month or two later she looked extremely strong and healthy; moreover, she expressed herself as being well satisfied with the result of the treatment which she had undergone.

Remarks by Mr. OWEN.—As a rule the interscapulo-thoracic amputation is performed for malignant disease, and especially in cases of recurrent mammary scirrhus where any less extensive operation cannot be resorted to. Mr. F. Treves has also done it for gunshot wounds in South Africa. I am not sure but that this is the first report of the operation being resorted to for the cure of a patient with intractable ulceration after a burn.

The woman had a narrow chest of what Sibson called the "expiratory type," and the experience which I met with during the operation suggested that if I were describing the steps of the operation in a work on operative surgery I should insert a few lines to this effect, that in a thin, narrow-chested subject—and especially when the arm has been long hanging by the side—the subclavian vessels as they rest upon the first rib must be sought for at a very considerable distance above the level of the clavicular incision. Indeed, in my case I found that I could best reach them by making a vertical incision up into the root of the neck.

MONSALL FEVER HOSPITAL.

A CASE OF PNEUMONIA (DOUBLE); EMPYEMA; ABSCESS IN THE ABDOMINAL WALL.

(Under the care of Dr. R. W. MARSDEN.)

AT the Carlisle meeting of the British Medical Association the late Mr. William Anderson drew attention to the surgical importance of the sub-peritoneal space. He showed that it was a frequent site for new growths, and that in it formed many abscesses, such as the remarkably extensive one which is described below. In that case the septic infection probably came primarily from the empyema or the pneumonia, and made its way through the diaphragm, perhaps by one of the normal openings in that muscle; it then found itself in the sub-peritoneal space, where it spread easily amongst the soft areolar tissue.

A girl, aged 11 years, was admitted into the Monsall Fever Hospital on June 13th, 1900, with signs of pneumonia at both bases. The history stated that she had been ill for three weeks commencing with headache, and that she had subsequently frequent vomiting and diarrhœa. The temperature was 104·4° F. on admission and during the next three days it fell by lysis to 100°. As the spleen was enlarged to percussion and palpable a diagnosis of enteric fever complicated by double pneumonia was made, but an examination of the blood serum for Widal's reaction gave a negative result. In the meantime the pneumonic signs at both bases had spread over a larger area, and by June 20th, as a marked remission in the temperature had occurred on three consecutive mornings and as the percussion note at the bases gave the impression of increased solidity, a diagnosis of early empyema was made, but since the bronchial breathing at each base was loud and clear, an exploratory puncture was deferred. Between June 20th and 29th the morning temperature averaged 99° and the evening temperature 103°, and the physical signs at the bases seemed to be quite at a standstill. The patient complained, however, of abdominal pain, which was thought to be of pleuritic origin, since though the abdomen was full and somewhat tense, with a girth at the umbilicus of 20⅞ inches, there was no tenderness or hardness and percussion revealed no unusual want of resonance. It was, however, noted that respiration was of the costal type.

As the patient seemed to be rather worse an exploratory puncture was now made into the right pleural cavity posteriorly, and a syringeful of yellow, creamy, non-odorous, thick pus, of uniform consistence and free from lymph particles, was withdrawn. From the left base also a few drops of purulent material were obtained. Accordingly a piece of rib was removed from the right side, but only two ounces of pus with the characters above mentioned were evacuated. Up to July 3rd the remissions were daily becoming less, and their continued presence was attributed to a small quantity of pus in the left pleura. On the evenings of July 3rd and 4th the temperature was 102·4° and 103° respectively, and on the morning of the 5th the patient was very decidedly worse. During the preceding night she had passed six watery brown stools and had vomited frequently. (It should be mentioned that on two previous occasions—viz., June 20th and 27th—she had vomited, and that throughout the period of observation in the hospital, though the bowels had acted on an average once daily, yet the stools had been very variable in consistence.) She was now lying with her legs flexed upon the abdomen; there was, however, no pain on palpation and no sign of hardness or localised fulness, but a general feeling of tenseness and elasticity. The dulness of the liver and spleen was quite distinct, and percussion of the rest of the abdomen gave a perfectly resonant note. Measurement of the abdomen at the umbilicus showed an increase to 22¼ inches, and fluctuation could be obtained from one side of the hypogastrium to the other, but not when pressure was made in the middle line.

Though unable to diagnose the condition of the abdomen, as the patient was so much worse it was decided that exploration was indicated. Accordingly an incision was made in the middle line below the umbilicus. Immediately the sheath at the posterior surface of the rectus abdominis was divided thick yellow pus with the characters already described began to well up into the wound. On inserting the finger it was evident that the pus proceeded from a shallow space between the peritoneum and the transversalis fascia. The outlines of this space could not be determined though a probe was passed almost to the costal margins above and to the extreme flank on each side. No less than 35 ounces of pus were measured, and by inserting a large drainage-tube from the central incision to a counter-opening in each flank, a free exit for the remainder was provided. The patient immediately began to improve and ultimately left the hospital on Sept. 11th, 1900.

Remarks by Dr. MARSDEN.—The uniform distribution of such a large quantity of pus over the front of the abdomen gave so little alteration in the usual physical signs that I have to confess that I did not suspect its presence in that situation, and it is especially on account of the consequent possible difficulty in diagnosis that I have thought the case worthy of record. As regards its origin I am of opinion that it was subsequent to the double pneumonia, both from the course of the disease and the character of the pus, but as I have not previously seen or heard of such a condition, I should be pleased to have information from any readers of THE LANCET who have had a similar case.

BIRMINGHAM GENERAL HOSPITAL.

TWO CASES OF "TRAVELLING" FOREIGN BODY.

(Under the care of Mr. T. F. CHAVASSE.)

IN the Mirror of Hospital Practice in 1898[1] we published an account of a case in some respects resembling the first of the two cases described below; a piece of steel passed from the stomach into the subcutaneous tissue of the abdomen whence it was removed by Mr. John H. Morgan. In Mr. Chavasse's case the shawl-pin probably perforated the wall of some part of the small intestine. For the notes of the cases we are indebted to Mr. R. E. Sedgwick.

CASE 1.—A girl, aged three years, was admitted to the

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[1] THE LANCET, Feb. 5th, 1898, p. 365.

Birmingham General Hospital on May 28th, 1900, with a history of having two months previously swallowed a brass shawl-pin. She complained of abdominal pain on movement, and on examining the abdomen a definite tumour of about the size of a hazel-nut could be felt, half an inch outwards and downwards from the umbilicus on the left side. This was painful on pressure and on deep expiration. A long pin, with its head pointing upwards, was seen when the child's abdomen was examined with the fluorescent screen. On June 1st Mr. Chavasse made a small incision over the tumour and at half an inch from the surface came upon dense fibrous tissue surrounding a small collection of pus, in which the pin was lying. The pin on extraction was a large brass shawl-pin two and a half inches in length. The child made an excellent recovery and was discharged from the hospital ten days later. At no time was there any trace of fæcal matter, although the pin had apparently ulcerated through the intestine into the abdominal wall.

CASE 2.—A man, aged 23 years, was admitted into the Birmingham General Hospital on August 7th, 1900, with a red œdematous swelling over the front of his neck in the middle [illegible] for two inches He had some [illegible] His history was [illegible] while going fishing, he [illegible] something in his throat which almost choked him, but which passed away after five or six minutes." Three days later his throat became sore and he attended the hospital and was given medicine and gargle which relieved him. Five days previous to admission his throat began to swell and had gradually increased. An incision one and a half inches long was made in the middle line below the level of the cricoid cartilage. No pus was found although Hilton's method was extensively used Hot boric fomentations were applied and two days later a fair amount of thin pus was discharged and his temperature fell to normal. The swelling went down and the incision healed, except a small sinus, which continued to discharge from 15 to 20 minims of pus a day. He went out, the sinus continuing in the same condition till Sept. 22nd, when on squeezing it the husk of an oat was discharged. The sinus closed three days later. This husk had apparently got caught in the larynx, possibly in the ventricle, and had ulcerated through into the tissues of the neck, to be finally discharged through the skin.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Oct 26th, Sir R. DOUGLAS POWELL, the President, being in the chair.

The new arrangements for the exhibition of cases, referred to in a previous number of THE LANCET, were adopted for the first time on this occasion

Mr. J. JACKSON CLARKE showed a male patient, aged 56 years, from whom one and a half years ago he had removed the greater part of the [illegible] with by a modified Kraske's op[illegible] of the operation necessitated le[illegible] bowel open in the mid-posterior line To remedy the incontinence thus caused Mr. Clarke, four months ago, closed the gap by a plastic operation, the chief features of which were: (1) freshening and completely freeing the bowel; (2) denuding the surface to the left of the gap by dissecting off a strip of skin and fat; and (3) mal[illegible] side of the gap and fixi[illegible] mattress sutures to the [illegible] side and its edge to the [illegible] The operation had answered its purpose perfectly The patient was now in good health and free from any sign of local or metastatic recurrence of the original growth —Mr. CHARTERS J SYMONDS congratulated Mr Clarke on the admirable results achieved and suggested that an illustration and diagram of the case should be added to the description of the operation for the Transactions of the Clinical Society.

Dr J WALTER CARR exhibited a case of Myositis Ossificans Progressiva. The patient was a boy, aged seven years The symptoms were said to have been noticed only eight months and the patient had been under observation for five months, during which time the disease had made very little progress There was extensive ossification of the dorsal muscles, of the pectorals, the latissimus dorsi, the biceps, and the left rectus abdominis. The back was almost rigid, the movements of the shoulder and elbow-joints were greatly restricted, and respiration was mainly diaphragmatic. There [illegible] e of the forehead (following upon [illegible] of the right hand, just below the [illegible] each tibia, on the left internal malleolus, and on the proximal phalanx of each great toe Beneath the skin below the spine of the left scapula was a flat piece of bone over two inches long. The great toes were, as usual in these cases, shortened and turned outwards, and only one phalanx could be felt in each. The thumbs were normal

Mr. HERBERT TILLEY exhibited a case illustrating the Radical Cure of Chronic Frontal Sinus Empyema. The patient was a female, aged 50 years, who had complained of purulent discharge from the left nostril of five years' duration, with occasional attacks of severe frontal headache, "dryness of throat," and unpleasant taste and smell. When she came under the care of Mr. Tilley in April, 1900, the left nasal cavity was full of polypi bathed in pus. These were removed. Exploration of the maxillary antrum showed a small quantity of pus present and this was drained by the alveolar method. The anterior half of the middle turbinal was next removed, followed in the course of 10 days by external radical operation upon the frontal sinus. The patient left the hospital quite cured 21 days after the operation There was no discharge from the sinus at present and the case showed how very unnoticeable was the external scar, although practically all the anterior wall of the sinus had been removed.

Dr. STCLAIR THOMSON exhibited a man, aged 40 years, with Growth of the Left Tonsillar Region It was first noticed in June last The anterior pillar of the fauces on the left side was occupied by a new growth which spread in various directions The margin was well defined. The surface was flat and irregular and did not feel hard to the finger. There were no enlarged glands and no pain; the tongue was protruded easily, although the growth had affected its base. There was no history of specific infection and the condition had been unaltered by the administration of mercury and iodide. (A section was exhibited under the microscope)—Mr. TILLEY suggested applying salicylic acid to the papillæ (which were the seat of a curious horny change) in the same way as to a corn. It would probably be efficacious.—Mr. CHARTERS SYMONDS expressed the view that the growth beside the tonsil was an epithelioma in spite of the small amount of infiltration. He had seen similar cases where the growth appeared like a plaque and was only just visible to the laryngoscope. He did not think it would be possible to completely eradicate the growth without removal of the upper jaw. Caustics would not be of any use.—Mr. JACKSON CLARKE was decidedly of opinion that it was epitheliomatous and should be removed at once —Dr. STCLAIR THOMSON, in reply, said that the case was somewhat atypical. Tuberculosis had been suggested as a diagnosis. He had watched the case for three months but had not come to any conclusion as yet.

Dr. PERCY KIDD exhibit[illegible] Disease of the Knee-joint ([illegible] inly due to enlargement of the articular ends [illegible] by the radiographs. [illegible] the joint was swollen [illegible] red and shiny. Ther[illegible] crepitus could be recognised on manipulation. Numerous bruises were seen on various parts of the body as the result of slight injuries During the first fortnight there was an irregular remittent pyrexia (from 103° to 99° F.), but since then the temperature had been normal With rest in bed and application of splints the pain and tenderness of the joint disappeared and the swelling diminished There was a history of injury to the joint five days before admission. Profuse bleeding from slight cuts and injuries had occurred repeatedly from an early age.—Dr. A E SANSOM remarked that it was not unusual to find joint affection with hæmophilia but its nature was obscure Sometimes it was thought to be rheumatic and sometimes tuberculous In this case there was at the present time no his address, which was seconded by Dr. **Macfie Campbell** and carried with acclamation.

Strangulated Femoral Hernia.—Trephining for Meningeal Hæmorrhage.—Pneumonic Consolidation.—Pulsus Paradoxus.—Myelopathic Albumosuria.

The second meeting of the session of this society was held on Oct. 25th, Mr. **Edgar Browne**, the President, being in the chair.

Mr. G. P. **Newbolt** read notes of two cases of Strangulated Femoral Hernia in which he had resected the bowel, using Murphy's button to approximate the ends. One occurred in a woman, aged 70 years, and the other in a man, aged 41 years. Both recovered, the button passing in the first case in 18 days and in the second case in 24 days.—Mr. F. T. **Paul** said, notwithstanding the success which had attended the use of Murphy's button in Mr. Newbolt's cases, that these sort of appliances were daily losing favour. They had served an excellent purpose in teaching surgeons the importance of accurate and water-tight approximations and they shortened the time occupied by the operation, but they managed to unite bowel and stomach wounds now both accurately and quickly with simple suture and by so doing avoided the risk of the presence of a foreign body lying in contact with the wound, a risk which had caused many fatalities. Recently he had only used the button when the difficulties attending sutures were unusually marked.—Mr. R. W. **Murray** remarked upon the difficulty there was in knowing how best to deal with the injured gut, whether to return it or to excise it, and suggested that in all cases of doubt it would be better to excise it. He related a case of strangulated hernia (inguinal) in which he had successfully removed a gangrenous portion of small intestine, uniting the cut edges by simple suture—a method he much preferred to the use of Murphy's button.

Mr. **George Hamilton** related a case of successful Trephining for Meningeal Hæmorrhage. A boy, aged eight years, while running along with his hoop fell on the pavement; though feeling a little sick and vomiting once he played about until bedtime. Next morning he appeared to be well, but became drowsy and unconscious the following day. The main features in the case were: (1) the considerable period elapsing between the accident and the symptoms; and (2) the marked dilatation and fixation of the left pupil. These led to the almost certain diagnosis of hæmorrhage. The boy made an excellent recovery and never had a rise of temperature.—Mr. W. **Thelwall Thomas** drew attention to the importance of dilatation of the pupil in extra-dural hæmorrhage as an indication of cerebral pressure in the middle fossa of the same side; if, on trephining and removal of the extra-dural clot, oozing of blood still proceeded from deeper down and light gauze packing failed to arrest it the external carotid artery should be tied.

Dr. C. J. **Macalister** directed attention to cases of Pneumonic Consolidation which, after running a very chronic course, resolved immediately, after exploratory puncture with an aspirator needle. This sequence of events had occurred so frequently in his experience that he had come to regard it as something more than coincidence. He related cases in which it had happened and in which recovery had quickly followed the puncture, and he also referred to a case of consolidated lung associated with fever of several weeks' duration in which improvement leading to hope of recovery ensued, but which afterwards proved to be the result of some malignant trouble connected with the liver from which the patient ultimately died.—Dr. W. **Blair Bell** said that he had a case recently where unresolved lung existed 14 days after croupous pneumonia. Puncture with a trocar brought about rapid resolution. He thought the reason for the cure was explicable if the comparison was made between lung in a state of inflammation and inflammation in any other part of the body where the knife or needle gave rapid relief, probably by causing a flow of blood from the inflamed part, thereby relieving the congestion and condition of stasis which occurred in the course of inflammation and so bringing about resolution. It was advisable to use a large puncturing instrument, such as a trocar, to insure bleeding, and to adopt this method of treatment as soon as ordinary natural resolution seemed improbable.—Dr. T. R. **Bradshaw** said that he wished to draw attention to the manner of operation. It was never desirable to use an exploring syringe with a small needle, because if fluid were found the aspirator would have to be employed and so the patient would be put to the pain of two punctures instead of one, or, on the other hand, the fluid might be too thick to run through the small needle, hence a fairly large needle connected with an aspirator should be used.

Dr. **James Barr** read a note on the so-called Pulsus Paradoxus and also on a case of Myelopathic Albumosuria.—Dr. **Bradshaw** said that Dr. Barr's was the twelfth undoubted case of myelopathic albumosuria which had been thoroughly investigated, and that now that the condition was more generally understood cases were becoming more frequent. The records showed that it was a disease of the second half of life and all but one of the recorded cases were in males. The first symptoms were generally associated with bone lesions, but there was reason to believe that the presence of albumose could be detected at an early period if it were sought for. It was highly important to distinguish this form of albumosuria from that which was often found in pneumonia and other inflammatory conditions and which the late Sir William Roberts called peptonuria. The form under consideration was always associated with a cellular infiltration of bone known as multiple myeloma, but the manner in which they were related was at present merely a matter of conjecture. The term "myelopathic albumosuria" was a convenient one to express the association.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Inaugural Address by the President.—Aneurysm of the Coronary Arteries of the Heart.—A Method of Intestinal Suture for Gastro-enterostomy and Enterectomy.—Exhibition of Cases and Specimens.

The opening meeting of the session of this society was held on Oct. 19th, Dr. **Gordon Black**, the President, being in the chair.

The **President** gave his inaugural address on Some of the Duties of Members of the Medical Profession to Each Other.

Dr. **Wardrop Griffith** read a paper on Aneurysm of the Coronary Arteries of the Heart and showed specimens illustrating it.

Mr. H. **Littlewood** advocated a method of Intestinal Suture for Gastro-enterostomy and Enterectomy by excising a portion of the mucous membrane and then uniting the cut edges of the stomach and the intestine by means of a continuous cat-gut suture, interrupting the suture by knotting it at two equi-distant points. The parts were clamped and held in apposition by Doyen's clamp forceps—these guarded by rubber tubing made admirable intestinal clamps—an incision was made down to the mucosa, an elliptical portion of the mucous membrane was excised, and the coats were separated for a short distance from the mucosa. This method prevented the troublesome closing sometimes occurring after gastro-enterostomy, and both in this operation and in that of enterectomy it allowed a broad surface consisting of all the other coats to be easily united by the continuous suture. It was not found necessary to bring the two serum surfaces in contact along the whole line of suture. Mr. Littlewood preferred a small curved Hagedorn's needle used on the flat to any special needle and chromic gut for suturing. (Mr. Littlewood showed a woman, aged 51 years, on whom he had operated three months ago, removing the cæcum for malignant disease and uniting the ileum to the ascending colon by the method described. He also referred to five cases of gastro-enterostomy successfully performed by this method.)

The following cases and specimens were exhibited:—

Dr. **Wardrop Griffith**: A man with great Œdema of the Eyelids together with some Œdema of the Forehead. There was no visceral disease and no history of erysipelas. The œdema was remarkably firm.

Mr. **Constable Hayes**: A case of Multiple Odontomata probably in connexion with the Bicuspids, which were all missing.

Dr. E. F. **Trevelyan**: A case of Functional Tremor simulating Paralysis Agitans in a man, aged 28 years. The tremor was of three years' standing. It sometimes ceased completely when the patient supposed that he was not being observed and there were no other symptoms of paralysis agitans.

Mr. **Mayo Robson**: (1) Cæcum removed for Tuberculous Disease producing Stricture at the Ileo-cæcal Valve; (2)

Cæcum removed for Cancer of the Ileo-cæcal Valve; (3) Extra-uterine Gestation Diagnosed and Removed at the Eighth Week, before Rupture; (4) Microscopical Section showing Interstitial Pancreatitis; and (5) a Specimen of a Recurrent Papilloma of the Bladder illustrating its Infectivity.

Mr. A. E. LITTLE: (1) A Slide showing the Plague Bacillus; and (2) Photographs of Plague Hospitals.

Dr. C. M. CHADWICK: (1) Splenic Leucocythæmia (specimen of blood shown); and (2) a Stomach, much Elongated, with Hour-glass Contraction (death from tetany).

Dr. ALLCOCK (Goole): Cystic Dilatation of a Corpus Luteum.

Mr. BASIL HALL (Bradford): A Perfect (?) Method of Sterilising Catgut.

Dr. A. L. WHITEHEAD: (1) Cavernous Angioma of the Orbit; (2) Epithelioma Auris; and (3) a Superior Cervical Ganglion of the Sym[illegible]

Mr. H. LITTLEWC[illegible] Disease, with End-[illegible] specimen); (2) A c[illegible] [illegible] years.

Dr. A. G. BARRS: (1) A case of Obstruction of the Superior Vena Cava; [illegible] tonitis with Secondary [illegible]

Mr. B. G. A. MOYNII[illegible] Uterus removed by Vaginal Hysterectomy; (2) Fibroid Uterus removed by Vaginal Hysterectomy; (3) Vulva and Portion of the Vagina removed for Carcinoma; and (4) Primary Carcinoma of the Vagina.

Mr. LAWFORD KNAGGS Epithelioma of the Bladder springing from the Vicinity of the Prostate.

CHELSEA CLINICAL SOCIETY.—The opening meeting of the session of this society was held on Oct. 16th, when Dr. William Ewart, the President, delivered an address on "A Clinical View of some of [illegible] and its Valves," of which t[illegible] He commenced by observing [illegible] congratulated upon the useful [illegible] large share of the success which had been achieved was to be ascribed to the energy of the retiring president, Mr. Foster Palmer, and to the exertions of the senior honorary secretary, Dr. Austin Cooper. The special purpose of the address was to illustrate the methods applicable to the problems of cardiac disease. For the elucidation of the intricate questions connected with valvular defects and with their physical signs that which was most needed was a [illegible]d physiology. Where phy-[illegible]ll the information required [illegible]ned to account for the study [illegible] in disease. In spite of its [illegible] dependence upon theory to bridge over the gaps between definitely proved facts, and of the provisional character of its conclusions, that method possessed a solid strength in the never-failing supply of the unerring experiments of disease. In the course of a brief anatomical introduction a description of the more rigid apparatus of the bullock's heart with its two bony plates helped to throw light upon the existence and the functions of the two fibrous roots or fibro-cartilages of the aorta in the human subject, of which specimens were exhibited. The larger root had been described by Sibson as the central fibro-cartilage; but they both fulfilled essential functions not only as forming part of that internal axis for the intrinsic movements of the heart which it was possible to identify with the ventricular septum and the foot of the aorta, and as affording attachment to the auriculo ventricular valves and to the so-called "fibrous ring," but also as the means of bringing about those slight changes in the position and in the direction of the aorta which on careful inspection could be recognised in the fully contracted heart In connexion with the ventricular systole, the mechanism of which was compared to the action of hand-bellows, stress was laid upon the changes occurring in the "supra-papillary space" and the "aortic channel," whilst the "infra aortic space" remained patent Attention was called to the contrast between the recent views of Potain and those of Chauveau as to the function of the auricle during the preliminary stage of ventricular systole, the so-called "pre-systole." As regards the mitral mechanism it was suggested that since all hearts differed in their individual structure, differences might exist in the mode of closure, ranging between the two extreme types described as the "high closure" and "low closure," the latter being the normal type. The varied functions of the papillary muscles and of the chordæ and the myotatic theory of auriculo-ventricular peristalsis were discussed, and the production of the first sound was referred largely to papillary agency. Clinical illustrations were drawn chiefly from the varieties of mitral disease which at an early stage present little differentiation as regards lesions. An explanation was offered for the evolution of apparently identical changes into pure valvular incompetence in one set of cases and into pure stenosis in the other. The development of stenosis was more likely in young and healthy hearts with a thoroughly normal low closure, whilst incompetence resulted from opposite conditions The late stages of mitral stenosis were distinct in every way from the earlier stages. The mechanisms and the physical signs were largely influenced by the protrusion of the auricle into the ventricle. It was suggested that this complication might be connected with the production of the murmurs of stenosis, with the suppression of some of them at a later stage, and with the disappearance of the aortic second sound at the apex. The peculiar character of the pulse of compensated mitral stenosis seemed also capable of explanation upon the same lines, Most of the points which were brought forward were illustrated by specimens and diagrams.—A vote of thanks to the President, proposed by Dr. J. B. Ball and seconded by Dr. C. J. Harrison, was carried. It was resolved that the address should be published at the expense of the society.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—The first meeting of the session of this society was held on Oct. 24th, Mr. W. B Holderness, J.P., the President, being in the chair.—The President showed the following radiographs: [illegible] Months after the Reductio[illegible] humerus split and broken; [illegible] case of Achondroplasia.—Dr. E. B. Hulbert showed (1) several drawings and photographs of Epidemic Eczema, one or two of which exhibited the dusky pigmentation of the skin following an attack; and (2) (by kind permission of Mr. J. R Lunn, of St [illegible] and photographs of [illegible] Melanotic Sarcoma, [illegible] Rodent Ulcer, and a Rare Eruption in a Case of Renal Disease —Mr. Clinton T. Dent (surgeon to St. George's Hospital) delivered an address entitled "Surgical Lessons of the War" After pointing out that the great interest evinced some months back in the surgical results of the war was already waning and that there was a risk of much of the valuable experience which had been gained being lost to posterity he said that experiments with small-bore bullets which had been carried out before the war did not conform closely with the results arrived at by practical experience. He considered that, well as the members of the Royal Army Medical Corps had worked, the system was capable of improvement, more particularly in the direction of the formation of an army medical reserve composed of men of active [illegible] standing. He suggested [illegible] to encourage a general [illegible] The mild character of the wounds had been greatly exaggerated in the press, but [illegible] provement upon the results o[illegible] favouring these satisfactory r[illegible] bullet, (2) the use of anti[illegible] condition of the men and [illegible] ing the Lee-Metford bull[illegible] velocities Mr Dent described the eccentric rotation of bullets which led to their retention in soft tissues even when no bone had been struck. Clean perforations of bones which abounded in cancellous tissue were common, but when the shaft of a long bone was struck the bone was broken up and expanded as well as fissured. Union usually took place in consequence with much callus Mr. Dent pointed out that wounds of great joints (the ankle excepted) did well, as also did head injuries in which trephining was frequently practised, and in every case it demonstrated the necessity of relieving the pressure on the brain from the splintered inner table, thus embodying the teaching of Ambroise Paré 350 years ago. He concluded a lucid and suggestive paper by insisting on the great difficulty of the surgical problems and on the need for long and minute study of them in order that a class of specialists in military surgery could be created.—Mr. S. Osborn (of the St. John Ambulance Brigade), who had been serving with the Van Alen Field Hospital attached to Lord Methuen's column, spoke in corroboration of the remark made by Mr. Dent that the surgical lessons of the war were of the greatest value as showing how much less serious were the injuries in the South African war than were those sustained in previous wars. This satisfactory condition he attributed largely to the pointed character of the Mauser bullet taken in connexion with the excellent antiseptic precautions adopted almost immediately on receipt of the injury. Having been present in the Turco-Greek war he was able to compare the injuries with those in the Boer war and he showed by comparing the Martini bullets with their blunt extremities which he had removed in the former war with the conical ends of the Mauser bullets of the present war what a much more formidable projectile the Martini bullet was as compared with the Mauser bullet. In conclusion Mr. Osborn hoped that someone would read a paper on the medical lessons of the war, as that was the side which demanded more special attention. It was also a question whether by the attachment of a skilled sanitarian to every army corps and the formation of a sanitary corps similar to those which were employed in continental armies the sanitary condition of the army in the field might not be improved and the terrible mortality on the medical side in future wars be considerably lessened.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held in the Medical Institution, Liverpool, on Oct. 19th, Dr. J. B. Hellier (Leeds), the President, being in the chair.—Dr. H. Briggs (Liverpool) related a case of Tubal Pregnancy with formation of a tubal mole which had been retained in the unruptured Fallopian tube for four months, no hæmatocele being present. A tubal swelling was detected lying in the floor of the pelvis; this was removed by posterior vaginal section. The distended Fallopian tube was unruptured. The absence of hæmatocele was a feature of interest and Dr. Briggs believed that the tension in the tube had been limited by leakage of blood from the uterine end of the tube into the cavity of the uterus. On section the tube contained a mole with some fluid blood.—Dr. A. Donald (Manchester) related a case of Tubal Pregnancy in which a five months fœtus with placenta was removed by abdominal section. The patient, a woman, aged 40 years, had one child 16 years before. She complained of recurrent attacks of abdominal pain with amenorrhœa for nine months. The pain was only of six weeks' duration. The abdomen presented a diffuse fluctuating swelling, reaching from the pelvis to the level of the umbilicus. The uterus was considerably enlarged and could be felt lying in front and to the right of the swelling. Abdominal section was performed. A sac containing a living fœtus at five months' development was discovered; the fœtus was removed, amniotic fluid escaping. The placenta occupied the floor of the pelvis and was removed without difficulty from the broad ligament. Hæmorrhage was readily controlled by silk ligatures at the uterine and pelvic borders of the broad ligament. Dr. Donald considered that the placenta probably occupied the Fallopian tube, inasmuch as there had been no history of rupture. A few hours after the operation a very large decidual cast was expelled from the uterus. The patient made a rapid recovery.—Dr. Arnold Lea (Manchester) showed a Fallopian tube from a case of Extra-uterine Gestation with Hæmatocele. The ruptured tube was removed per vaginam after evacuation of a quart of clotted blood from the peritoneal cavity.—Remarks were made by Dr. Lloyd Roberts (Manchester), Dr. E. Stanmore Bishop (Manchester), Mr. R Favell (Sheffield), and others.—Dr. J. E. Gemmell (Liverpool) showed a Fibro-cystic Pedunculated Tumour of the Uterus removed by abdominal section from a patient, aged 32 years. The tumour had grown outwards between the layers of the broad ligament, but was removed without difficulty, the uterus remaining intact. The patient made an uninterrupted recovery.—The President showed:—1. A Uterus, Pregnant five and a half months, with Multiple Myomata. The patient, a woman, 33 years of age, had a tumour which filled up Douglas's pouch and which would have obstructed labour. Abdominal section was performed and the uterus with the tumours were removed by supra-vaginal abdominal hysterectomy. The patient rapidly recovered. 2. Bilateral Suppurating Ovarian Cysts removed by abdominal section from a patient who had suffered from septic puerperal infection after delivery 14 months previously.—Dr. E. T. Davies (Liverpool) read notes of three cases of complicated Ovarian Tumours. Case 1. The patient was a women, aged 58 years, with a history of recurring attacks of pelvic pain for several months. At the operation the pedicle had undergone torsion and numerous adhesions to the bowel and omentum were present. Case 2. The patient, a woman, aged 43 years, on whom ovariotomy had been performed 13 years previously, was suddenly seized with acute abdominal pain and peritonitic symptoms. A cystic tumour was felt in the pelvis. Abdominal section revealed an ovarian cyst with acute torsion of the pedicle and hæmorrhage. Both patients made good recoveries. Case 3. The patient, a woman, aged 53 years, had a solid tumour of the ovary, accompanied by ascites and the symptoms of acute peritonitis. At the operation no twisting of the pedicle had occurred, but the peritoneum showed evidence of acute inflammation. This patient, though extremely ill, with a temperature of 104° F. and a pulse of 140 at the time of operation, made a good recovery.

BEDFORD MEDICAL SOCIETY.—A meeting of this society was held on Oct. 25th, Mr. Jabez Carter being in the chair.—Dr. Henry Skelding showed a boy with Webbed Fingers, on one of which he had operated by Morton's method, and a boy with Keloid Scars which had followed an operation for lop ears performed in South Africa.—Dr. G. P. Goldsmith showed a skiagram of a case of Transverse Fracture of the Patella in which bony union appeared to have been obtained by fixation on a back splint for three months.—Dr. R. H. Coombs showed the Kidneys from a case of Anuria of 10 days' duration. The right kidney was hydronephrotic and useless, the left was hypertrophied and hydronephrotic, its upper third consisting of a bilocular sac which had no communication with the pelvis of the kidney. The left ureter was blocked by a calculus near its upper end. Both ureters were dilated and the bladder was hypertrophied. The symptoms were anuria and vomiting. An hour before death Mr. W. G. Nash cut down on the left kidney and evacuated four or five ounces of purulent urine from the cyst in the upper third of the kidney which presented in the loin.—Dr. Coombs also showed a woman with Molluscum Fibrosum and a man with Progressive Muscular Atrophy.—Dr. F. B. Willmer Phillips read notes of a child who had repeated attacks of Fever, which he attributed to gnat-bites.—Dr. H. Savory showed the Kidneys from a child, aged 10 weeks. They were the seat of congenital cystic disease. A previous child in the same family had died from this disease in 1898 and the kidneys were shown.—Dr. A. O. Hartley showed a Hairball from a Cow's Stomach.—Mr. W. G. Nash showed:—1. A Uterine Mole passed at six months. Growth had ceased at 10 weeks when a slight hæmorrhage occurred. The symptoms were amenorrhœa and pelvic discomfort. There was retroflexion of the uterus. 2. A Suppurating Dermoid Cyst removed from a woman, aged 41 years, who had borne six children without any difficulty in delivery. The pedicle had become twisted two turns and was nearly obliterated. This had caused hæmorrhage, suppuration in the cyst, and peritonitis around it. The patient made a good recovery. 3. A Papillomatous Cyst of the Ovary and an Annular Carcinoma of the Small Intestine which had been removed from the same patient. The symptoms were those of intestinal obstruction. A large, rapidly growing ovarian tumour was removed and at the operation the growth in the bowel was discovered. The growth with four inches of the small intestine and several glands in the mesentery were removed a fortnight later. Allingham's bobbin was used to connect the divided ends of bowel. The patient made an excellent recovery.—Mr. Nash also read notes of a Gastrojejunostomy performed for cancer of the pylorus. Murphy's button was used. The patient had been much benefited by the operation and had increased 20 lb. in weight in three months.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—The opening meeting of the session was held on Oct. 11th, when the President, Dr. E. Wearne Clarke, delivered his introductory address on Medicine in Fiction. Commencing by a brief reference to medicine as seen in pictorial art, [illegible] medicine and [illegible] particularly in the [illegible] as represented in [illegible]. Turning to the novelists the address next dealt with some of the medical men and medical incidents portrayed by Balzac, by Tolstoii in "Anna Karénina," and by Conan Doyle in "The Curse of Eve" and other works. The Doctor Lydgate of George Eliot's "Middlemarch" was next noticed at some length, and the address closed with reference to "The Diary of a Late Physician," by Samuel Warren; to "The Ralstons," by Marion Crawford (as an example of Transatlantic medicine); and finally, to "Ian Maclaren's" well-known Doctor Maclure in his book "Beside the Bonnie Briar Bush."

Reviews and Notices of Books.

Diseases of the Throat, Nose, and Ear; A Clinical Manual for Students and Practitioners. By P. McBRIDE, M.D., F.R.C.P. Edin., Fellow of the Royal Society of Edinburgh; Surgeon to the Ear and Throat Department of the Royal Infirmary; Lecturer on the Diseases of the Throat and Ear in the University and in the School of Medicine of the Royal Colleges, Edinburgh. Third Edition, revised and partly re-written. With Coloured Illustrations from Original Drawings. Edinburgh and London: Young J. Pentland. 1900.

THIS is a well-printed and handy manual of some 700 pages, furnished with a copious index. The first section dealing with affections of the larynx and pharynx occupies nine chapters. Eleven chapters are devoted to nasal affections and an equal number to diseases of the organ of hearing. The author wisely omits anatomical and physiological details, which can be studied in appropriate treatises, so that the bulk of the work is devoted to clinical material and details. The whole of the former work has been revised and in part re-written to keep pace with the ever-increasing literature of the subjects

The chapters on Affections of the Pharynx and Larynx are marked by reliable diagnostic rules and abundant directions for treatment, the writer not failing to express the results of his own experience. Some of the coloured plates of laryngeal diseases are exceedingly good and exactly represent the appearances seen in syphilis, tubercle, and carcinoma The chapter on Laryngeal Neuroses is also clear and useful, the subject being treated briefly, and only ascertained important facts are placed before the reader; much of the speculative theory so often written of in the numerous text-books on this subject is perhaps wisely omitted. All the affections of the nose commonly met with are thoroughly explained and their treatment is described. We think that hardly enough stress is laid on the difficulties of the after-treatment of nasal polypi in preventing return, and the association of these growths with sinus suppuration and necrosis is not prominently discussed. The illustration of a nasal polypus on p. 359 is also too highly coloured for clinical accuracy. The difficult subject of sinus suppuration might with advantage be amplified. We are all well aware that chronic discharges from the ethmoidal and sphenoidal regions are among the great difficulties of nasal surgery, and we should hail any advance in their treatment gladly. All these criticisms are, however, of a minor nature and do not detract from the value of the section on nasal diseases.

The section on Diseases of the Ear is eminently practical and marked by sound common sense and absence of recommendation of speculative methods of treatment. It is noteworthy to find that an authority in the position of Dr. McBride modestly explains his incapability of speaking with certainty on several debated points because of his want of experience. With regard to the radical operations on the mastoid in suppurations of the middle ear he remarks: "There are certain risks associated with the performance of all of them. ...... I do not think, however, that it is ever safe to be too sanguine as to the cure of the discharge, though this desirable result is often attained. In this respect the prognosis should be distinctly guarded." The author's views on the treatment of that common and inveterate cause of deafness—chronic aural catarrh—are eminently moderate and sensible and here, as throughout his work, no methods of treatment are advised that would not stand the test of clinical experience. This part of the book has some excellent coloured illustrations of diseased conditions of the membrane.

A critical digest is presented of intra-tympanic operations in chronic deafness with Eustachian obstruction, sclerosis, and adhesions. The writer points out forcibly their experimental nature. "The tendency of modern otologists—more particularly of the German school, who have in this respect been followed to some extent by American, French, and Italian authorities—is too much towards operations which are at best purely experimental. It would be no unfair criticism to state that, on perusing a chapter on this matter in any of the larger German works, the idea remains with the reader that otologists have vied one with another to cut out ever-increasing portions of the tympanic structures, that their reasons for so doing are not always sound, and that most credit is acquired by him who has succeeded in extracting most. It is true that the published cases are often said to be successful, and that we do not read of inflammatory reactions; but it is this very absence of inflammation in the recorded cases that makes one fear that, beyond those which have seen the light of day, there may be other instances of experimental operating which have been followed by less satisfactory results."

A prominent feature of this book is the abundance and nature of the local and general therapeutical remedies attached to each section. Another equally striking characteristic is the pronouncement of the author on the value of remedies, not from hearsay, but from his own experience.

As affections of the ear, nose, and throat are largely associated in practice, so this book must be exceedingly useful to practitioners, who will find in one volume an excellent practical account of these various maladies. The work is trustworthy throughout; errors of commission are practically not to be found, and those of omission are few. It cannot fail to enjoy the usefulness and deserved popularity of the preceding edition.

Treatment by Hypnotism and Suggestion, or Psycho-Therapeutics. By C. LLOYD TUCKEY, M.D. Aberd. Fourth edition, revised and enlarged. London: Baillière, Tindall, and Cox 1900 *Pp. 392. Price 7s. 6d.*

THE Treatment of Disease by Hypnotism and Suggestion continues to hold an irresistible attraction to the lay mind. By the practitioner of medicine, however, hypnotism is still regarded with some suspicion, but the opposition to its employment is not so great as it formerly was and it is generally believed that certain functional conditions can be favourably influenced by it. Even the most ardent supporters of psycho therapeutics, however, can scarcely claim that any great advance has been made, in this country at any rate, in the general adoption of hypnotism and suggestion as therapeutic measures, but if a physician select hypnotism as a method of treatment in certain functional disorders he can do so without fearing slight from his colleagues. As long as the treatment by these means is confined to functional affections no objection can be raised, but if it be claimed that all organic conditions can also be influenced then naturally serious opposition would be raised. In the work now before us Dr. C. Lloyd Tuckey treats the subject in an open and scientific measure He is evidently sincere in his belief in the efficacy of the measures which he recommends, and although we should take exception to some of his statements, yet as a whole there is much in the book that is interesting and instructive.

Much stress is naturally laid on the power of the mind over the body. We admit that certain symptoms may be brought about by expectant attention, that a rise of temperature may be the result of nervous excitement, that extreme anæmia may be caused by depressing emotions, but we are hardly prepared to admit that structural alterations can be so produced.

The methods of inducing the hypnotic state and the various phenomena produced are well described, and some points in the physiology and psychology of hypnotism are described in a thorough and interesting manner.

Considerable attention will naturally be directed to the accounts of cases which have been treated by hypnotism and suggestion by the author himself and by other observers. Most of these will be well understood as being especially applicable for this method of treatment, and they would be very likely to prove obstinate to the therapeutic measures in ordinary use, such as insomnia, neurasthenia, functional heart trouble, functional dysmenorrhœa, dipsomania, "mischievous morbid impulse," agorophobia, hysterical contracture of leg, hysterical aphonia, &c. With regard to some of the other cases, however, we admit we are sceptical. For instance, a case is recorded of a man who suffered from "syphilitic retinitis and optic neuritis." He was treated by mercurials, iodides, strychnine, electricity, but without avail, and his sight rapidly deteriorated. "In the left fundus there was a central scotoma and the right eye had lost the inner half of its field of vision. The right eye, which afterwards became the better of the two, appeared to be atrophic, its arteries were contracted to half their proper size, and the veins were also diminished in calibre." After 46 sittings we are told "there was very marked improvement . . . and it is evident that hypnotic suggestion was the curative agent." But we are not told the condition found in the fundi at the end of the treatment, and the weakness of the case is further emphasised by the passage—"In addition to being almost blind the patient, when he came under treatment, was affected with great mental depression and haunted by continual thoughts of suicide. He was also an excessive smoker." The removal of the mental symptoms and the desire for tobacco might be removed by hypnotic suggestion and the cessation of the excessive use of tobacco might account for the improvement in vision.

There are several cases that we might thus comment on. As we have already said, the majority of cases recorded are well chosen and demonstrate the uses to which hypnotic suggestion may be applied.

LIBRARY TABLE.

Original Contributions concerning the Glandular Structures appertaining to the Human Eye and its Appendages. With 71 Original Illustrations. By Adolf Alt, M.D., Professor of Ophthalmology in Beaumont Hospital Medical College, St. Louis. Published by the *American Journal of Ophthalmology*, St. Louis, Mo. 1900. 8vo. Pp. 23. Price $1.50, or 6*s.*—Although this is a very thin volume the drawings which it contains represent a considerable amount of work. The photographs, which were made by Professor Alt from his own sections, exhibit the appearances presented by sections of the orbital and palpebral lacrymal glands, the structures contained in the upper and lower lids as the Meibomian and acinous glands, the eyelashes and their sebaceous glands, and the sweat glands as seen both in horizontal and in vertical sections and in sections made parallel to the surface. In some points of view photographs are superior to drawings made by hand; they give relative size and position with an exactitude which is unattainable by the draughtsman, however expert he may be; on the other hand, there is a mistiness and a defect of clearness in the details that are disappointing and show that still much remains to be done in micro-photography. In the text that accompanies the plates the author gives the results of his dissections and mentions some interesting facts. He finds that the lacrymal gland is, as a rule, larger in the negro than in the Caucasian, sometimes even twice as large. The number of excretory ducts, as usually given in text-books (from 6 to 12), is, he thinks, exaggerated. Like Waldeyer, he has never observed a true lymph-follicle in the human conjunctiva; isolated acinous glands are, however, present both in the palpebral and ocular conjunctiva. Besides these he finds acino-tubular glands and others which he regards as modified sweat glands. The two lacrymal canaliculi he believes generally unite to form a single tube before discharging their contents into the lacrymal sac. Lastly, he has found a small spiculum or plate of hyaline cartilage in the tissue just below the lacrymal caruncle.

Manual of the Diseases of the Eye for Students and General Practitioners. With 243 Original Illustrations, including 12 Coloured Figures. By Charles H. May, M.D. Columbia University, New York. London: Baillière, Tindall, and Cox. 1900. Pp. 422. Crown 8vo. Price 8*s.* 6*d.* net.—Manuals of the size of the present volume upon ophthalmology are numerous and afford little field for originality. In all, the mode of examination of the eye by inspection, by subjective or functional methods, by objective examination with the ophthalmoscope, constitutes the subjects of the initial chapters. The diseases of the several structures, as of the lacrymal apparatus, orbit, conjunctiva, sclera, iris, chorioid, lens, and vitreous, usually follow and are succeeded by an account of glaucoma, the affections of the retina, errors of refraction, and disturbance of motility, and there is commonly a chapter on ocular therapeutics. This plan has been adopted in the present volume. The author does not pretend to give any original views on these subjects, but the accounts of the several affections are briefly and clearly given and supply just the details that a busy practitioner or a student dressing in the eye ward requires. The directions for the performance of the operations for ptosis, entropion, ectropion, enucleation, and evisceration of the globe, and for cataract extraction, which Dr. May thinks is now usually done without iridectomy, are concise and good. Dr. May seems to have fulfilled the object which he had in view—of saying enough but not too much. The illustrations are rather rough but are quite intelligible.

A Handbook of the Diseases of the Eye and their Treatment. By Henry R. Swanzy, A.M., M.B. Dub., F.R.C.S. Irel., Ophthalmic Surgeon to the Adelaide Hospital, Dublin. Seventh edition, with Illustrations. London: H. K. Lewis. 1900. Pp. 633. Price 12*s.* 6*d.*—When a manual for students has reached its seventh edition it may be considered to have passed successfully through its period of probation and to have proved its utility to those for whom it was intended. And, indeed, Dr. Swanzy's treatise is a very well-arranged manual. It owes its success to the clearness with which it is written, the care the author has taken to avoid unnecessary detail, the reliance that may be placed on the accuracy of the account given of each disease, and on the judicious treatment recommended, due to the fact, not only that Dr. Swanzy has had large opportunities of comparing different methods of therapeutic and operative procedure in the important hospitals with which he is connected, but that he possesses great powers of observation and a retentive memory. The subject of refraction, so difficult to give briefly, occupies a reasonable space, only those facts being given which it is imperative that every ophthalmic student should know. In regard to light perception, which is too rarely tested, Dr. Swanzy regards the photometer of Dr. Wallace Henry of Leicester as the best, in which a standard light is gradually revealed by the removal of successive plates of opal glass. The author considers at some length both in the text and in an appendix the method employed by Professor Hering for determining the colour sense. Recent ophthalmological work has been carefully studied. Thus we find that Dr. Bleuler's recommendation of applying cocaine ointment made with lanoline in the proportion of 1 per cent. is mentioned as affording great relief to pain in cases of herpes zoster ophthalmicus. Dr. Mules's operation for ptosis is also given in full, as is an account of the remarkable affection of which numerous histories have been collected by Dr. StClair Thomson—optic neuritis associated with persistent dropping of watery fluid from the nostril, which fluid is believed to be of cerebrospinal origin. In regard to cataract Dr. Swanzy seems to prefer the three-millimetre flap operation with iridectomy, first proposed by de Wecker, and he describes the proceedings to be adopted with great minuteness of detail. The application of the Roentgen rays for the discovery of foreign bodies, such as chips of metal in the eye, is fully described, and the text is illustrated by several drawings showing the mode of employment of the apparatus devised by Mr. Mackenzie Davidson for this purpose. When once the position of the chip is known with an approach to accuracy the introduction of a magnet will sometimes effect the capture and will enable it to be withdrawn without much injury to the vitreous. The book will be found very useful both by the student and the practitioner, and contains all that is requisite to guide them to the right diagnosis and treatment of the principal diseases of the eye.

The Frog: an Introduction to Anatomy, Histology, and Embryology. By the late A. MILNES MARSHALL, M.D., D.Sc., M.A., F.R.S., Professor in the Victoria University, Manchester. Edited by G. HERBERT FOWLER, B.A., Ph.D., late Assistant Professor of Zoology, University College, London Seventh edition, revised and illustrated. London: David Nutt. 1900. Pp. 168. Price 4*s*.—The first edition of this work was published in 1882 and various minor alterations prompted by the inquiries of students or found advantageous in its use as a manual of dissection were made by the author in successive editions until his recent lamented death. The work has been placed in the hands of Dr. Fowler who states in the preface that he has not found it requisite to make any substantial alteration either in the substance or in the arrangement of the treatise. After a short introductory chapter on the use of the microscope and the mode of examining preparations the several chapters are devoted to the general anatomy of the frog: the digestive, vascular, osseous, muscular, and nervous systems, the eye and ear, the reproductive system, and the development of the animal. The most important addition consists in the introduction of a new set of woodcuts, drawn by Miss Mabel Green, in illustration of the process of development and metamorphosis. These are very well done and reflect credit on her accuracy and skill.

FEES FOR LUNACY CERTIFICATES.—At the meeting of the Devonport Board of Guardians held on Oct. 26th it was stated that letters had been sent to 25 medical practitioners asking whether they would accept half a guinea as the fee for the examination of pauper lunatics. 18 replies had been received. Six medical men agreed to accept the fee, 10 were against doing so, and two declined to express an opinion. After some discussion the guardians resolved to write to the bench of magistrates asking them to appoint one of the six medical practitioners to examine supposed cases of insanity in paupers.

Analytical Records

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VARIOUS CANADIAN WINES.

(J. S. HAMILTON AND CO., BRANTFORD, ONTARIO, CANADA. AGENTS J. AND W. J. COURTNEY, 14, TOOLEY-STREET, LONDON, S.E.)

CANADIAN wines are not very well known in this country and the analysis of some specimens which we have recently received should therefore be of interest. The varieties of wines produced comprise dry and sweet white wines, sparkling and still, and red wines. As might be conjectured it is usually the practice where wine is produced to obtain spirits also and grape brandy is amongst the other products of viticulture in Canada. We have examined four distinct specimens of Canadian wine and the results were as follows:—Medoc (Chateau Pelee): extractives, 3 57 per cent.; mineral matter, 0 15 per cent.; alcohol, by weight 10 69 per cent., by volume 13 24 per cent., equal to proof spirit 23 21 per cent.; volatile acids reckoned as acetic acid, 0 276 per cent.; fixed acids reckoned as tartaric acid, 0 277 per cent.; and sugar, 0·51 per cent. This is a red wine simulating the wine of the Medoc district. We do not doubt that it is a perfectly pure wine, but, as will be seen from the analysis, it is somewhat acid in character and the somewhat sour taste confirms this result Some amount of acetification had set in, otherwise the flavour was delicately fruity, suggesting muscatel grape. Dry Catawba: extractives 2 29 per cent.; mineral matter, 0 115 per cent.; alcohol, by weight 12·38 per cent., by volume 15 30 per cent., equal to proof spirit 26·82 per cent.; volatile acids reckoned as acetic acid, 0·198 per cent.; fixed acids reckoned as tartaric acid, 0·48 per cent.; and sugar, 0 35 per cent. This is a dry wine resembling Sauterne. It is clean on the palate and sound. As will be seen it contains a very small amount of sugar and is therefore correctly described as dry. St. Augustine: extractives, 12 19 per cent.; mineral matter, 0 11 per cent.; alcohol, by weight 13 92 per cent., by volume 17·17 per cent., equal to proof spirit 30 09 per cent.; volatile acids reckoned as acetic acid, 0 132 per cent.; fixed acids reckoned as tartaric acid, 0·247 per cent.; and sugar, 11·40 per cent. This is a red wine possessing the style of port. It is quite sweet as the figures of analysis will convey. It is a pure, sound wine with good fruity taste. It is intended chiefly for sacramental purposes. L'Empéreur: extractives, 4 675 per cent.; mineral matter, 0·105 per cent.; alcohol, by weight 11 54 per cent, by volume 14·27 per cent., equal to proof spirit 25 01 per cent.; volatile acids reckoned as acetic acid, 0 168 per cent.; fixed acids reckoned as tartaric acid, 0 48 per cent.; and sugar, 3 24 per cent. This is Canadian champagne and it is a very good wine. Though described as dry it contains a little over 3 per cent. of sugar, but it is not excessively sweet to the taste. There is no evidence to show in these results that the wines are not the normal and genuine products of fermented grape-juice. Doubtless, as further experience is gained in the methods of cultivation of the grape and of the rearing of the wine which it yields even better results will be attained. As it is, they are already encouraging

SPIRITINE.

(SPIRITINE, LIMITED, 5, CARTERET STREET, LONDON, S.W.)

Spiritine is described as a solidified spirit. We doubt whether, strictly speaking, that is the case. It is a waxy-looking substance, coloured blue, contained in tins provided with a screw-down lid. It burns on applying a light just as ordinary spirit burns. The device is most ingenious and most convenient. It is quite safe to use and may be carried about fact furnishes a very good answer to the question, What about other professional witnesses? The members of no other profession are called upon to give evidence so often as are those of the medical profession—had they been so required in all probability the fees would have been increased long ago. It is only among that profession the duty of whose members it is to give death certificates without fee and who work gratuitously among the poor that the injustice of being compelled to suffer pecuniary loss would so long have been endured.

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Lord ROSEBERY in an address delivered on Friday, Oct. 26th to the Christian Social Union gave some very good advice as to the approaching elections. Some of his remarks were so obviously true that they appeared trite, but it is a commonplace of life that it is the obvious which most often escapes notice, and a loss of perception of the relative importance of events is often shared by a vast majority of a great nation. "Our interests are not all in South Africa," said Lord ROSEBERY, "and the inhabitants of this great metropolis should remember that not all their interests are locked up 6000 miles from home," a truism not universally appreciated at the present moment. Lord ROSEBERY pointed out the great good that might follow upon the revolution in the municipal management of London, and although the beatitude of the millenium is not to be expected from the deliberations of the borough councils, we agree with his lordship, who speaks not only as a wise man but also with the special authority of an ex-chairman of the London County Council. London has outgrown vestries, and the new duties of the borough councils will be by no means trivial. The men who should be selected to sit on them should be those who come forward, not to serve themselves but the public interest. They should not wish to use the Council as a preliminary debating society through which to pass on their way to St. Stephen's They should be uncorrupted and incorruptible. They should not be chosen by the political label they may choose to adopt; they should be men whose only interest is that of their constituencies. They should be men of business. A fair proportion of the recent candidates seem to have fallen under this category. There are two classes of persons, who, according to Lord ROSEBERY, are *primâ facie* likely to be undesirable borough councillors. Builders and owners of property are, he thinks, open to suspicion. Of the builder he would ask where and what he has built and of the owner where is his property. The list, we think, might be extended. Why, for example, should not publicans and public-house proprietors be included in it? What should be said of owners of factories which poison the air with foul smoke? But the question of the housing of the poor is evidently the one which Lord ROSEBERY has at present most at heart, and the medical bearings of this question in its relation to public health make it one of the first interest to medical men.

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Annotations.

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A CASE OF FAMILY PERIODIC PARALYSIS.

THE disease known as "family periodic paralysis" is a very rare and striking condition and while in all only four instances have been published only three of them strictly conform to the conditions necessary—viz, periodicity, occurrence in more than one member of a family, and associated spinal paralysis. Dr. Leo M. Crafts, professor of nervous diseases in the Hamline University, Minneapolis, U S A., records the following interesting case in the *American Journal of the Medical Sciences* for June A young man, aged 37 years, a commercial traveller, with large hands and feet and an awkward waddling gait suggestive of the early stage of pseudo-muscular hypertrophy, active and energetic, has been under observation at intervals for about seven years His physical development is remarkable. "The lower legs, the hips, and the thighs are abnormally large, strikingly like those of pseudo-muscular hypertrophy, and the lumbar curve is emphasised. The arms, too, are moderately heavy, but the muscular strength does not correspond at all to the development, and while it is not weak it is distinctly less than normal and he has comparatively little power of endurance." His height is five feet five inches and his weight is 140 lb The calves measure 15¼ inches, the thighs 19¼ inches, and the forearms and upper arms 11 inches each. The superficial veins in both upper and lower extremities are very large and prominent. The family history is distinctly neuropathic. The father was a heavy drinker, the mother was of frail health, one aunt was markedly eccentric, and two or more ancestors had died from "paralysis" The patient himself at the age of 12 years was suddenly attacked with illness one morning in bed and was unable to get out, being only able to move his arms and legs slightly and with great difficulty. He improved in a few days, but had a recurrence six months later, and other attacks since then at varying intervals. A year after the first attack he had a severer attack and three years later another serious attack. His last serious attack, the worst of all, occurred three years ago following extreme exertion. He suffered from great exhaustion and muscular feebleness and also from constant vomiting, fluid in character and charged with bile. He became pale, sallow, and collapsed, with small rapid pulse and great prostration which lasted three days, after which he recovered. The attacks had recurred periodically and were as a rule preceded by constipation. A frequent immediate cause was over exertion, either prolonged or short and sharp, as, e g., running to catch a train while carrying heavy bags. "Indiscretions in diet seemed to have a direct bearing on the occurrence of the condition and he has learned to avoid certain foods, such as rich pastry, sweet preserves, and cheese." The onset of an attack was always gradual, usually beginning simultaneously in the hands and feet. Over-exertion while an attack was subsiding generally caused recurrence or altered a partial seizure to a complete one. The muscles of the limbs and body felt soft and flaccid and entirely relaxed in an attack; the chest-wall hardly moved and respiration seemed entirely confined to movements of the diaphragm. The blood showed marked lymphocytosis, and analysis of the fæces yielded a toxic substance which produced in rabbits a paralysis lasting 48 hours. Bernhardt regarded the affection as allied to the dystrophies, but its exact pathology is as yet obscure, though Dr. Crafts's observations confirm its toxic nature.

THE TERM "INFLAMMATION."

DR ANDREW H. SMITH of New York recently published in the Transactions of the Association of American Physicians a most interesting and in some respects original paper bearing on the above subject. Dr. Smith holds views almost identical with those expressed by Dr. J. F. Payne at the meeting of the British Medical Association in 1898 with regard to the anomaly of the term "inflammation" as used now—that is, when the fact of the remarkable advance made in pathology is taken into consideration. Dr. Smith, however, is more bold in setting forth his opinions and in addition suggests a remedy. He points out that of the four cardinal symptoms which were originally held to constitute the conditions known by the name of inflammation only one is still insisted upon to identify the inflammatory process—namely, swelling. He shows that by doing away with all but this one test the difficulty of defining the term is immensely increased, and further insists that the difficulty is inevitable so long as we insist upon the idea that a new action is set up by some exciting cause and that once initiated this new action goes on independently and works out results due to itself After describing the action of inflammation as it appears to him Dr. Smith claims that the termination "itis" should be dropped for the reason that most of the phenomena heretofore included under the term "inflammation" are manifestations of the local action excited by a micro-organism or by a poison circulating in the blood. Such action should be expressed by a termination to be affixed to the name of the organism or poison, if the same be determined, or to the organ or part affected in case the particular infecting organism or poison be not identified. Attention is drawn to the fact that we have a universally accepted precedent in the case of tuberculosis, and Dr. Smith is of the opinion that if a general name is demanded as a substitute for inflammation no one word ought to be made to include all the heterogeneous unrelated processes and conditions which have been comprised under that term. At least three words would be required to express different kinds of *noxæ* acting in different ways and leading to essentially different results. These, he thinks, might be "traumosis" to include wounds and injuries, "toxosis" to include the local action of poisons in the blood, and "bacteriosis" to include the action of micro-organisms. The *New York Medical Record* of Oct. 6th has a highly eulogistic article, upon Dr. Smith's suggested radical innovations in medical and surgical phraseology, but is inclined to think that the medical profession is too tightly bound by custom and routine to be easily persuaded that the benefits to be derived from the proposed changes will outweigh the disadvantages and trouble consequent upon such changes. The *New York Medical Record*, however, truly says that Dr. Smith's courageous arraignment of the inappositeness of the term inflammation, as used now is, a valuable contribution to latter-day scientific literature, which should embolden those less fearless to follow his sagacious lead into this interesting field of inquiry. The most valuable outcome from the propagation of the view that inflammation is in no proper sense a new force, an enemy projected into the arena, a disturbing influence to be dreaded, a disease to be "treated" will be that its treatment will be abandoned. The cause of the true malady will be sought for, and when found attacked. The direction of modern therapeutics, too, tends towards the method of not treating the disease so much as the patient in acute infectious diseases. If Dr. Smith's conclusions and the conclusions of those who have written to the same end but have not stated the case so strongly are accepted their communications will serve a most beneficial purpose and should pave the way to a more enlightened therapy Since the latter is the very essence of the physician's life-work, the importance of the theme cannot be over-estimated.

BLACKWATER FEVER.

IN the *Deutsche Medicinische Wochenschrift* of Oct 4th Dr. Hans Ziemann of the German navy gives some account of the views to which he has been led by his experience of blackwater fever at Cameroon, West Africa. He has never found any specific exciting cause for the disease. He considers that in some very unhealthy malaria districts a predisposition to blackwater fever becomes established in a certain number of persons, and that in general this predisposition increases with the number of attacks of malaria which the patients have; but, on the other hand, it may diminish if some power of resistance to malaria is attained. This predisposition may affect the most robust members of quite healthy families, but it is more apt to occur in persons in whom the hæmorrhagic diathesis may be suspected and in those who live under depressing conditions of mind or body It seems to arise most readily in persons who have been infected with the minute parasites of tropical or æstivo autumnal fever. The predilection of blackwater fever for certain districts may be owing to local conditions increasing the virulence of the parasites, their essential characteristics being otherwise unchanged. In Cameroon, where blackwater fever is so dangerous, only a few sexual parasitic forms, such as crescents, are to be found in the blood. In Italy, on the other hand, these forms are of very frequent occurrence and are most abundant in cases having a tendency to recover. In Cameroon there is often a great disproportion between the clinical symptoms and the number of parasites in the peripheral blood, but in Italy, where blackwater fever is extremely rare, although infection with parasites closely allied to those of tropical fever is very common, Dr. Ziemann seldom met with this disproportion. Predisposition being assumed in all cases as already mentioned, all the conditions under which blackwater fever arises may be reduced to four—namely, (1) in the course of an attack of malaria without quinine having been given, but this is rare; (2) in the course of an attack of malaria treated with quinine, this being by far the most common condition; (3) in patients who have recovered from malaria and have no parasites in their peripheral blood but are nevertheless taking quinine; and (4) in patients who have recovered from malaria and blackwater fever and have no parasites in their peripheral blood and are not taking quinine, this condition being rare. Dr. Ziemann, therefore, recognises no distinction between the so-called quinine hæmoglobinuria and hæmoglobinuric malarial fever. Blackwater fever occurs also among the Togos negroes who have never taken quinine, and the same thing has been observed on the Congo. Dr. Ziemann has recorded a unique case in which tropical fever was diagnosed microscopically, and in this patient hæmoglobinuria was brought on by 0 01 gramme (one-sixth of a grain) of quinine. On the west coast of Africa it is by no means uncommon for from 0 1 gramme to 0 25 gramme (from one and a half grains to four grains) of quinine to produce hæmoglobinuria in predisposed persons suffering from malaria, so it is evident that in that district quinine should be administered with caution. Dr. Ziemann has found benefit from injections (Infusionen) of physiological salt solution in anuria and from chloroform solutions given by the mouth in obstinate vomiting.

THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH AND THE DIAGNOSIS AND TREATMENT OF PLAGUE.

WE are informed by the editor of *Public Health* that the Council of the Incorporated Society of Medical Officers of Health have arranged for a lecture and demonstration upon Plague to be given on Saturday next, Nov. 10th. Mr. Cantlie has accepted the task of dealing with the etiological and clinical parts of the subject and Dr. E. Klein will undertake the bacteriology. Dr. A. K. Chalmers will describe the suitable preventive measures, more especially with regard to the line followed at Glasgow. The meeting for this purpose is fixed for 2 30 P M on Saturday next, the day following the ordinary meeting of the society, and will be held at the Examination Hall of the Conjoint Colleges, Thames Embankment. The meeting will be open to the whole profession, but admission will be by ticket, application for which is to be made to the honorary secretaries, 197, High Holborn, W.C.

INFECTION THROUGH A MANGLE.

DR. JOSEPH PRIESTLEY, the medical officer of health of Lambeth, presented to his vestry on Oct. 25th a most interesting report upon an outbreak of typhoid fever in the parish due to infected mangles. The incidence of the disease was practically limited to three streets covering an area of half a square furlong and containing 124 houses at rents varying from 10*s.* to 14*s.* a week. There were in all 41 cases occurring in 24 houses, and 16 of the patients were males, while 25 were females. The first case was notified on Sept. 7th There was much inter-communication between persons and families living in different houses, but the most important means of inter-communication was found to be in connexion with the mangling of clothes. Many of the inhabitants of the area after washing their clothes in their own homes took them to some neighbour to be mangled Owing to this custom bedding often stained with urine and fæces from typhoid fever patients were mixed together with, and mangled in the same machine as, bedding from non-infected houses. Thus the disease was spread. Four definitely infected mangles were traced and these four were responsible for 26 cases of typhoid fever. On August 14th a child, aged two years, sickened and was treated as suffering from infantile diarrhœa. The clothes from this house were washed and then sent to a house where there was a mangle—namely, 14, S—— Place—in which house there was also a case of unrecognised typhoid fever which was not diagnosed until about three weeks had passed 12 cases of typhoid fever were directly traced to this infected house. Nine infected houses gave rise to 17 secondary cases due to infection from previous patients before such patients were removed to the hospital. Undiagnosed cases were also responsible for the spread of the disease. Thus, one child living in F—— Street whose case was unrecognised for a space of 26 days infected directly three other persons who in their turn infected nine more. One case presumably arose from the eating of ice-cream. Dr. Priestley lays special stress upon the paramount need for early diagnosis. Bacteriological examination is supplied free of cost by the vestry and is being more and more used. Early removal to hospital is also imperative, there being no means of home isolation in the neighbourhood.

URETERAL ANASTOMOSIS.

IN the *Journal of the American Medical Association* of Oct. 6th is published an important paper on this subject which was read at the recent meeting of the American Medical Association by Dr. Howard Kelly of Baltimore. Under the subject are included two operations—uretero-ureterostomy (in which a piece of ureter is sacrificed and the ends are brought together) and uretero-cystostomy (in which the vesical end of the ureter is sacrificed and the upper end is anastomosed to the bladder). A ureteral anastomosis is as difficult an operation as can be performed, fully as delicate as any eye operation. It is usually required for accidental injuries of the ureter during operations, usually of the pelvic portion—a fact of importance for successful anastomosis. The ureter may be cut in mistake for a blood-vessel or torn out of the pelvis with an adherent ovarian cyst, myoma, pyosalpinx, or similar condition. It is voluntarily sacrificed when it passes through a carcinomatous mass in the broad ligament. Before performing the difficult operation of anastomosis it is important to make sure that the ureter is performing its function, for occasionally the disease which necessitates the pelvic operation has occluded the ureter and led to abolition of its function. The success of an anastomotic operation depends on accurate union without injury of the delicate ureteral structures, which is rendered difficult by their flaccidity and sometimes by difference of calibre. To overcome these difficulties Dr. Kelly has constructed a ureteral guide which looks like a little hammer with the handle attached at an angle and flush with one end. The head or guiding part is four centimetres long and rounded at the free end. Near the end is a groove in which to tie the ureter in order to fix it during anastomosis. The following instruments are needed: delicate ureteral tissue forceps, fine scissors, a tiny round curved needle with the eye open at the end, and delicate needle-forceps. The operation is performed thus: a fine silk mattress-suture is passed through the under surfaces of the cut ends and tied, bringing them accurately together. A longitudinal slit is made in the upper end of the ureter two centimetres distant from the extremity just large enough to admit the guide easily. The rounded end of the guide is pushed through the slit into the ureter down through the open end and well into the lower end, where it is loosely tied in the groove. Fine silk sutures, interrupted or mattress, are passed at intervals of from one to one and a half millimetres through all the coats except the mucosa. During the suturing the ureter can be rotated from side to side by moving the handle of the guide. At the completion the ligature tied around the guide is cut and the guide is withdrawn. The success of the suturing may now be tested by injecting water through the slit and seeing it flow freely towards the bladder without leakage. The slit is readily closed by three or four fine mattress sutures of silk. Dr. Kelly has the guides made in three sizes. When there is a marked difference in calibre between the upper and lower portions of the ureter he uses a large size to dilate the smaller end and to facilitate approximation. A surgeon who would rarely have to do this operation and has not the "guides" can easily extemporise one by cutting a piece of wood to the desired shape, fixing a thread or a long needle in one end, and sterilising this makeshift. Uretero-cystostomy is similarly performed. A slit is made in the peritoneal surface of the bladder, the guide slipped in, the right or left vesical cornu pushed out in the direction of the divided urethral end, and an opening made at the nearest point just enough to admit the ureter. The guide is then slipped into the ureter and tied, and the ureter with its lower end slit up half a centimetre is drawn well into the bladder and stitched on all sides to the muscular vesical walls. The guide is removed and the abdomen is closed, a gauze drain being left in in the event of leakage.

MEDICAL MUNIFICENCE.

IT is occasionally said that although members of the medical profession willingly render gratuitous service to hospitals they but rarely subscribe to the funds of these institutions; indeed, in the unhappy dispute that has recently arisen between the medical staff and the managers of the National Hospital for the Paralysed and Epileptic this taunt has been levelled against the staff. That the reproach is unmerited is well known to those connected with the management of medical institutions, and a conspicuous instance to the contrary is to be found in the donation of £5000 by Dr. A. Garrod Thomas as the nucleus of a fund for the erection of a new hospital at Newport. The Newport and Monmouthshire Hospital was established in the year 1867 with accommodation for 50 patients and for a time sufficed for the needs of the district, but the rapid growth of the town and the port placed a great strain upon the resources of the institution, and the outcome of Dr. Garrod Thomas's liberality has been the erection of a new building at a cost of about £30,000, of which all but £8000 have been subscribed. For the liquidation of the latter sum there was held in Newport for four days commencing Oct. 23rd a bazaar the proceeds of which contributed no less a sum than £5600.

PNEUMOCOCCIC PERITONITIS.

PNEUMOCOCCIC peritonitis, like pneumococcic arthritis,[1] is a condition which, though well known to continental writers, seems to have been less commonly recognised in this country. In children primary pneumococcic peritonitis is described as rather frequent by French writers. Cases have been described by MM. Sevestre, Dieulafoy, Brun, Moizard, Kirmisson, Galliard, Remy, and others. In adults, on the contrary, the disease is extremely rare. In the first volume of his valuable "Cliniques de l'Hôtel-Dieu" M. Dieulafoy states that only two cases out of 17 occurred in adults. At the meeting of the Société Médicale des Hôpitaux of Paris on July 13th M. Menetrier and M. Legroux described two cases. A vigorous, healthy man, aged 32 years, was suddenly seized with violent colicky pains unaccompanied by diarrhœa or vomiting. As they persisted he took on the third day a saline aperient which produced vomiting and passing diarrhœa. Continuing to suffer, he entered hospital on the sixth day with the typical *facies abdominalis*, drawn features and sunken eyes. The tongue was moist and furred. There were slight tympanites and diffuse abdominal tenderness. The urine was scanty and very albuminous. There was no fever. On the following days the pains were excessive and the tympanites became more marked and interfered with respiration. He vomited once and the stools were liquid. The temperature was subnormal, 96·8° F. Death occurred on the tenth day. At the necropsy general purulent peritonitis was found. The intestines were adherent to one another and to the abdominal wall. A coating of yellowish adherent pus covered the intestines, viscera, and abdominal wall. The pus when stained showed on slides numerous microbes of varied form. Cultures gave *colonies of the pneumococcus and colon* bacillus. The microbes other than the pneumococcus were thought to be of cadaveric origin. This case conformed to the type of ordinary acute septic peritonitis In the second case, on the contrary, the peritoneal symptoms were masked by others. A man, aged 35 years, was suddenly seized with acute abdominal pain, vomiting, and diarrhœa which ceased on the following day and were followed by constipation. There were tympanites and slight splenic enlargement. The pain diminished and was provoked only by pressure. The pulse was 115 and the temperature was 104·2° F. The urine contained one gramme per litre of albumin. Thrombosis of the right popliteal and left radial artery took place. On the twenty-second day the abdomen again became tympanitic and diarrhœa alternated with constipation. On the twenty-fifth day there was vomiting and a zone of dulness was found in the flanks. Persistent hiccough began and the patient became comatose. Two days later he died. At the necropsy two or three litres of reddish turbid fluid containing flocculi were found in the peritoneum. *Cultures yielded* the bacterium coli, the staphylococcus albus, and the pneumococcus. The pneumococcus was also found in a clot from the Sylvian artery which had been thrombosed recently—not more than 40 hours before death. The clot was composed principally of polynuclear leucocytes. There were infarcts in the spleen and kidneys. M. Menetrier and M. Legroux thought that the multiple thrombosis was *due to pneumococcic infection of the blood and that this* led to agglomerations of phagocytic leucocytes in the vessels which obstructed the circulation.

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[1] THE LANCET, June 16th, 1900, p. 1740.

PROGRESS IN THE TREATMENT OF IDIOTS, IMBECILES, AND DEFECTIVES.

IN the Presidential Address before the Medico-Psychological Association, which is published in the October number of the *Journal of Mental Science*, Dr. Fletcher Beach referred to the progress which had been made in the treatment of "certain defective classes of society, such as idiots, imbeciles, the feeble-minded, the epileptic, and juvenile delinquents." The pioneer to whom belongs the honour of having created the true method of teaching idiots and imbeciles was Séguin, who in 1841 published his "Théorie et Pratique de l'Education des Idiots," based on his experience and the *means adopted by him for* training and educating idiots at the Hospital for Incurables in Paris. His work was continued at the Bicêtre, and five years later Séguin published his admirable book, "Traitement Moral, Hygiène et Éducation des Idiots, at des autres Enfants Arrières," which still continues to be the manual for all those who are interested in the education of idiots. Special institutions for idiots made their appearance *after* this in various countries—e.g., Guggenbuhl's Institution for Idiots at Abendberg, Switzerland (1845), Park House, Highgate (1848), and the Earlswood Asylum for Idiots, Redhill (1855). Since then various institutions have been provided for the same purposes, the most notable of these being the Royal Albert Asylum, Lancashire, for Idiots and Imbeciles of the Northern Counties (1870), and the Metropolitan Asylum at Darenth (1879) for the London district. Similar institutions have sprung up in Scotland, Ireland, the United States, and in Canada. With regard to the degenerates of the "moral imbecile" type, Dr. Fletcher Beach points out that whereas they were kept in prison 60 years ago they now find their way into institutions for idiots and imbeciles. They are a difficult class to deal with, for they are often intellectually sharp and clever, but they are thievish, lying, and *sometimes the subject of graver* criminal tendencies. The late Dr. Kerlin, who was superintendent of the Pennsylvania Institute for Feeble-minded Children, was *of* opinion that they should not be educated, as it increased their power for evil, but that they should live in separate buildings apart from other children in order not to infect them with their bad tendencies. Dr. Jules Morel of Belgium has stated that they should be received into special "institutions for the degenerate," as they are not fit subjects for lunatic asylums, reformatories, or prisons, in which opinion Dr. Fletcher Beach concurs. In 1899 the Elementary Education (*Defective and Epileptic Children*) Act was passed, whereby a school authority may make arrangements for ascertaining "what children in their district, not being imbeciles, and not merely dull or backward, are defective—that is to say, what children by reason of mental or physical defect are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools," so that they can be sent to special classes in institutions provided by the local authority for their education and training. Indeed, such special "classes" had already been established and in operation since 1892 in parts *of London, Leicester, Birmingham, Brighton, Bristol,* Nottingham, and a few other towns, so that when the Act came into force in 1899 its provisions of the Act at once became efficient. Dr. Fletcher Beach refers to similar establishments on the continent and in the United States and he hopes that much good will come from them. Reference is made to "colonies" and farms for epileptics which are regarded as useful medical institutions which may *be made in a measure self-supporting. The growing tendency* of recent legislation to provide reformatory treatment or detention in an industrial school for youthful offenders is also praised *as a step in the right direction.*

DENTAL SURGERY AND THE SERVICES.

A MATTER of considerable importance in connexion with War Office reform is dealt with in the current number of the *Journal of the British Dental Association* in an article entitled, "On the Need for the Recognition of the Assistance of Dental Surgeons by the War Office and Admiralty." The writer of the article, after reviewing the attempts which have been made in the past to initiate the institution of some system by which efficient dental assistance might be provided for our soldiers, sailors, and recruits, proceeds to discuss the conditions which obtain at the present time in *this country* and in various *foreign* States. He criticises severely the list of instruments provided for the use of army surgeons, and brings evidence to show that there is "no effective conservative *dental aid* provided in the British Army." He then deals at length with the regulations issued by the War Office and Admiralty for the guidance of medical examiners of candidates for commissions and of recruits, a large number of whom are rejected, when otherwise fit, solely on account of defective teeth, whereby a great loss to the nation is needlessly incurred. Great stress is laid in the article on the point that in making these examinations army surgeons are placed on a footing entirely different from that of their civil brethren, inasmuch as they are called upon to pass judgment on work executed by qualified dental surgeons of a kind which they themselves would be the last to undertake to perform. The Bill now before Congress in the United States of America, which has *passed the Senate Committee, to provide* contract dental surgeons without military rank for the American army, is referred to and the article concludes by suggesting the lines upon which reform might be effected in this country. After pointing out that there are many difficulties in the way of any change analogous to that provided for by the American Bill the writer of the article shows that the treatment of recruits is perfectly feasible, and he insists further that the assistance of dental surgeons in the examination of candidates for commissions and of recruits is called for in justice to all concerned—namely, dental surgeons, army surgeons, the candidates themselves, and the nation at large.

CITY AND COUNTY OF CORK MEDICAL AND SURGICAL SOCIETY.

THE meetings of this society were resumed on Oct. 24th and the president, Dr. Henry Corby, professor of midwifery in Queen's College, Cork, took "The Medical Profession" as the subject of his inaugural address. Membership of such a society as theirs, he said, had the great advantage for medical men in general that it provided them with opportunities for speaking in public and aided them in acquiring that most useful accomplishment, the ability at any moment to express their ideas in a few pithy sentences. Oratory in the true sense was a rare talent, but even the least pretentious of public utterances lost something of its effectiveness when the speaker was unpractised—a fact not always remembered as it ought to be, for men of great mental endowments had been known to become embarrassed when suddenly called upon to make a speech after dinner. After referring to the multiplicity of authorities granting degrees and licences and the difficulty experienced by the general public in appreciating the differences which exist between the various qualifications Dr. Corby asked, "Why not establish the one-portal system?" and proceeded to point out the advantages of the uniformity which would thereby be secured He then touched on the falling off in medical fees caused by competition and overcrowding in the profession, but pointed out that there was another side to the picture. "If we love our profession," he said, "our hard work becomes a pleasure. The pain and suffering we daily witness lose much of their sting as we have the glorious consciousness of having relieved them. Can we not count on the respect and esteem of our neighbours and the unsolicited blessings of the poor?"

INFLAMMATION OF THE SPHENOIDAL SINUS.

IN the October number of the *Archives Générales de Médecine* Dr. Toubert of the military hospital of Val-de-Grâce, Paris, publishes a very long paper on the intracranial complications following disease of the sphenoidal sinus, giving full details of two cases which have come under his personal observation, together with a summary of 22 others collected from various sources. The most usual age for this disease is from 20 to 45 years, and the exciting cause is infection, sometimes by the bacillus of influenza, but principally by the pneumococcus or diplococcus of pneumonia, and by the staphylococcus and the streptococcus, which occur both in the pus of the sinus and in that of the meninges, the organisms having made their way to the sphenoidal sinus from the nose, the pharynx, or another sinus. Infection may take place directly in connexion with a general disease such as pneumonia or erysipelas, or indirectly (1) after febrile diseases, such as typhoid fever, and especially influenza which holds the first place in the list of exciting causes, or (2) after chronic diseases, such as syphilis, which tend to produce necrosis of bone. Dr. Toubert's first patient suffered from influenza, and it was through this disease that an entrance was provided for the streptococcus which set up the inflammation of the sphenoidal sinus and the subsequent meningitis. No adequate information has been collected with respect to the absolute frequency of disease of the osseous sinuses in general; many of these conditions are unrecognised during life and only discovered at necropsies. The sphenoidal sinus is, however, less liable to disease than the maxillary sinus. Diseases of the ear as a cause of intracranial complications have been carefully studied, but less has been done with regard to the perinasal cavities; there is, however, evidence that suppuration of the sphenoid bone and of its sinus is an important cause of meningitis. Pus may be formed both on the surface of the mucous lining of the sinus and also between the mucous lining and the bone, so that the mucous membrane is converted into a bag of pus floating in pus and secondary osteo-periostitis of the osseous walls is relatively frequent. Sometimes only the bone is affected (primary caries of the sphenoid), the mucous membrane being almost exempt; this often occurs in syphilis. The thinness of the bones, the special virulence of the infective agent, and the preceding necrosis of the mucous membrane are probably the chief conditions which favour osteitis. Perforation of the osseous walls of the sinus has been found in about two-fifths of the cases, not including antero-inferior perforations which do not lead to cerebral complications. The possible secondary lesions affecting the dura mater and the venous sinuses are abscess, either intradural or extradural, and phlebitis of the coronary or cavernous sinus. Abscesses are rare. Phlebitis may be considered to be the special intracranial lesion following inflammation of the sphenoidal sinus, just as intracranial abscess follows inflammation of the frontal sinus and meningitis follows ethmoiditis. Cerebral abscess proper seems never to have been found after suppuration of the frontal sinus. Weichselbaum has recorded the case of a robust young soldier who was carried off in two days by a febrile disease, accompanied by vertigo and vague pains in the face, forehead, and neck; the result of the necropsy was almost negative, but there was infection of all the sinuses of the face and the skull. Dr. Toubert therefore considers that these sinuses and the nasal fossæ should be examined in unexplained deaths following a short illness. In cases of meningitis it is usual to examine the osseous sinuses when their walls have been seen to be perforated, but the sphenoidal sinus is not always thought of, even though ocular or orbital symptoms during life may have drawn attention to the cavernous sinus of the dura mater or to the sensory or motor nerves of the eye. In Dr. Toubert's two cases the lesion of the sphenoidal sinus was discovered only at the necropsy, for there were no clinical symptoms pointing in that direction. In the first case that sinus was opened in the course of a search for the cause of a meningitis unattended by osteitis of the temporal bone. In conclusion, he gives a detailed account of Jacob's method of catheterising the sphenoidal sinus, a method which he prefers to that of Zuckerkandl.

INEBRIETY IN WOMEN.

A SPECIAL meeting of the council of the Charity Organisation Society was held on Oct. 29th at the Royal United Service Institution. The chairman was Dr. W. J. Collins who is chairman of the Inebriates Acts Committee of the London County Council. Mr. C. S. Loch suggested the following as subjects for discussion: 1. Is inebriety increasing amongst women? 2. What methods are to-day being adopted under the Habitual Drunkards Act and the Inebriates Acts? 3 Can any suggestions be made for dealing with cases of women in connexion with recent institutions, if possible, during the earlier stages of the disease? 4. Can such cases be dealt with apart from, or in connexion with, institutional treatment? The chairman pointed out that there should be greater coördination between the committing authority and the receiving authority. The task before them was to rehabilitate such women. It was said that inebriety was increasing amongst women but it was very difficult to arrive at the truth. In the discussions which followed the opinion was expressed that grocers' licences should be done away with and that sooner or later a State reformatory would have to be established for bad cases. The question of grocers' licences and of other legislation was eventually referred to a committee of the council. Whatever be the cause, whether mental instability or the greater secrecy with which the vice is practised, we believe that it is a fact that a woman drunkard is harder to reform than is a man. The Inebriates Acts are at present almost a dead letter owing to the lack of accommodation provided for cases committed by magistrates and until such accommodation is provided either by the State or by municipal or private help it is difficult to know how these unfortunate creatures can be benefited. We are glad, however, to see that two such bodies as the London County Council and the Charity Organisation Society have the matter under consideration.

BIRMINGHAM CONSULTATIVE MEDICAL AND SURGICAL INSTITUTION.

THE report of the committee of the Consultative Medical and Surgical Institution, Birmingham, has been issued. "The income and expenditure account shows a deficiency of £343 13*s.* 6*d.* on the working of the institution to date, but the committee believe that before long this debit balance will disappear and the institution will become self-supporting." We quote from the *Birmingham Post*, where the committee are also credited with the view that they "consider it very satisfactory that these results should have been obtained in so short a time, notwithstanding the organised hostility of certain members of the medical profession." The committee would seem to be easily pleased, while if any member of the medical profession is interested to learn why the profession ought not to think well of the institution he is referred to THE LANCET of May 20th, 1899 (p 1374), and June 2nd, 1900 (pp 1595 and 1633).

ROYAL COLLEGE OF SURGEONS OF ENGLAND: ANNUAL MEETING OF FELLOWS AND MEMBERS.

ON Thursday, Nov. 15th, will be held the annual meeting of the Fellows and Members of the Royal College of Surgeons of England at 3 P.M., when the Council will present their annual report. At this meeting any Fellow or Member may bring forward any motions which may be accepted by the Council, but it is necessary that any proposed motions should be sent into the Secretary at once or it may be too late. The subjects mentioned in the report are numerous and interesting, but the items of most importance are undoubtedly the centenary of the College and the creation of the Honorary Fellowship. A full account of the proceedings is contained in the report, a copy of which is sent to every Fellow and also to every Member who applies for it. We hope that the meeting will be largely attended both by Fellows and Members and that some subjects of interest and importance to all the alumni of the College will be brought forward for discussion.

THE THANKSGIVING SERVICE AT ST. PAUL'S CATHEDRAL ON THE RETURN OF THE CITY IMPERIAL VOLUNTEERS.

THE thanksgiving service at St. Paul's Cathedral was a very impressive ceremony. Although it did not commence until nearly two hours after the appointed time the congregation was not entirely ignorant of the scenes which were passing in the streets. First, the news was whispered round that the procession had been broken by the crowd; then later it was feared that the Volunteers would probably not succeed in getting through at all and that very probably the service would not take place. From time to time the great west door was partially opened and a view was obtained of the upper windows of the houses and of the flags which hung across Ludgate-hill. At length flags and handkerchiefs were waved, the sounds of cheering, first distant, then nearer and louder, were heard, and at last the City Imperial Volunteers appeared. But even in the cathedral their procession was not continuous, and some stragglers appeared after the commencement of the service. The men looked very tired. There were many earnest, thoughtful faces and many eyes dimmed with tears. The address of welcome given by the Bishop of Stepney was straightforward, hearty, manly, and brief. The congregation joined heartily in the hymns and in singing the National Anthem. The *Te Deum* was sung to music by Professor Villiers Stanford. Those who were privileged to take part in the service are not likely to forget it, and only those who have attended on such an occasion at St. Paul's Cathedral can quite appreciate the beauty of an English service at its best.

THE Working Men's College, 46, Great Ormond-street, has for some months had an ambulance class in connexion with the college, but the class is at present without an instructor, as the gentleman who has hitherto been acting in that capacity has been compelled to relinquish the duties owing to ill-health. We have been requested to publish an appeal for a volunteer and we do so with pleasure. All the work is done in the evening and every effort will be made to fix a time to suit the convenience of the instructor. Communications should be addressed to the secretary, Mr. E. C. Duchesne, at the college.

ANNUAL congresses of Russian physicians and surgeons have been established at Moscow. The first meeting will be held on Dec. 28th, 29th, and 30th, 1900. The following officers have been elected for the organisation of the Congress:—President: Professor Diakonow. Vice-President: Professor Bobrow. Secretaries: Dr. Rein and Dr. Derewjinsky. Treasurer: Dr. Bereskin. Members of the Committee: Professor Sinitzin, Dr. Soloview, and Dr. Martinow.

THE Sanitary Inspectors' Association of South Wales and Monmouthshire met at Port Talbot on Oct 27th. Mr. Edward Knox, J P., C.C., the chairman of the Margam District Council, in an address to the members expressed the opinion that all medical officers of health should be debarred from private practice and that small districts should be combined under the supervision of one officer.

WE deeply regret to announce the sudden death on Saturday last of Mr. William Anderson, surgeon to St. Thomas's Hospital and professor of anatomy to the Royal Academy. An extended obituary notice will appear in our next issue.

DR. THOMAS BUZZARD has been selected as a representative of King's College on the Senate of the University of London, vice Lord Lister, resigned.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The concession granted by the Council for the Primary Fellowship for Licentiates of the College in recognition of the Royal visit to Ireland has been extended to July 31st, 1901, in the case of Licentiates of the College engaged in the present war or resident abroad.

DIPHTHERIA AT BAMPTON.—A largely attended meeting was held at the Public Rooms, Bampton, Devonshire, on Oct. 20th to impress upon the sanitary authority the necessity for taking immediate steps to stamp out the epidemic of diphtheria which has for some months past been in existence in the town. A large employer of labour stated that if the council would not move in the matter he would build houses for his men and their families in a spot where they would be sure of good sanitary arrangements.

materia medica, have been housed on the second floor in the north corridor, and there are well-arranged collections of specimens in all these departments.

In every direction evidence is shown of an earnest endeavour to provide for each individual student the means for practical work while the lighting and the general arrangements of details call for praise.

THE WAR IN SOUTH AFRICA.

THE events in South Africa, although they have been of a stirring kind, are nevertheless easily chronicled. The annexation of the Transvaal was proclaimed at Pretoria on Oct. 25th and with it came to an end, as far as its officials are concerned, a most oppressive form of Government which, if we may believe only half the evidence and facts which are alleged to have been brought to light, was animated by a selfish spirit of monopoly and aggrandisement, and maintained by a system of fraud and corruption. As regards the Boer forces, if they have been dispersed over the country they are nevertheless extremely active in prosecuting a harassing system of marauding and in making raids in various directions. The Rob Roy of the situation is the very able and ubiquitous leader De Wet, aided by Botha, and until one or both of these are captured the British troops will continue to be subjected to attacks and find plenty of occupation in repelling them.

The City Imperial Volunteers have returned to this country and have been accorded the welcome which they merited for their pluck, soldier-like qualities, and services in the field. Out of a total strength of 1729 of all ranks, nine were killed, 43 have died, 53 were wounded, and 141 were invalided—a total of 246 or slightly over 13 per cent. This was up to the date of their embarking from the Cape, but several deaths on the voyage home have unfortunately to be added to the number. Lord Roberts's address to the City Imperial Volunteers strikes us as not only one which any corps might be proud to have received, but as very happy in its allusions; "and," says his lordship, "there is one other thing you can do—that is, to carry into the heart of the nation what you now know of the British soldier, with whom you have fought shoulder to shoulder for some months past. Tell every one of his bravery, his endurance, his gentleness, and his good behaviour. Tell them what a noble fellow he is, and how, at a moment's notice, he is prepared to lay down his life for his Queen and country." It is well to be reminded of this "lest we forget." Our readers will recall the incident of the American soldier's remark to the gushing and effusive young lady: "Beg pardon, miss, I am not a hero. I am only a regular."

War and death spare none, and it was a sad coincidence that the news of the untimely death of Prince Christian Victor, a grandson of the Queen, should have reached this country at the time of the return of the City Imperial Volunteers, and have imparted a note of pathos to Her Majesty's gracious message to them.

As regards the question of the arrangements for the sick and wounded the management of the war hospitals and the efficiency of the medical service in the field we shall all feel glad when the Royal Commissioners have concluded their investigation and furnished their report. Meanwhile we may call attention to two articles which have appeared—one in the October number of the *Edinburgh Review* headed "The Sick and Wounded in South Africa"; the other in the first number of the *Monthly Review*, a new and important publication issued by the firm of John Murray, Albemarle-street, entitled "Surgical Experiences in South Africa," by Mr. A. A. Bowlby, F.R.C.S. Eng. Both of these articles are well worth reading at the present time. There has been a very lively passage of arms between Mr. Winston Churchill, M.P., and the Earl of Rosslyn in regard to certain allegations contained in a volume recently published by the latter. Mr. Winston Churchill gave a lecture on the war in South Africa on the evening of Oct. 30th, when Lord Wolseley occupied the chair and made a speech.

SIX MONTHS' EXPERIENCE IN THE SOUTH AFRICAN CAMPAIGN.

CAPE TOWN, APRIL; BLOEMFONTEIN, MAY; SPRINGFONTEIN, JUNE AND JULY; PRETORIA, AUGUST AND SEPTEMBER, 1900.

By J. LYNN THOMAS, F.R.C.S. ENG.,

SENIOR SURGEON, WELSH MILITARY HOSPITAL; HONORARY SURGEON TO THE HAMADRYAD HOSPITAL, CARDIFF, ETC.

When I left England on March 3rd I entertained certain definite ideas regarding the duties of a surgeon in connexion with the treatment of penetrating and perforating wounds of the abdomen. I also imagined that the experience of this war would in all probability settle the respective and relative claims of bobbins, Murphy's buttons, Laplace's forceps, *et hoc genus omne*, in the field of intestinal surgery. To-day (Oct. 6th) I return to England having long abandoned the ideas which I possessed on my outward journey, and the question of the expediency of using mechanical aids for facilitating intestinal suturing is just where it was before the outbreak of hostilities.

Perhaps one of the greatest surprises in the surgery of this war has been the extraordinary success which has followed the *noli me tangere* principle of treatment of abdominal and thoracic perforating or penetrating wounds. It was perfectly astounding to find that the exit wounds of bullets which had traversed the intestinal cavity healed up as kindly as did those of entrance—in fact, the wounds healed up as quickly as if they had been inflicted by a modern surgeon in his operating-room after elaborate preparation of the skin. How a bullet can go through fæcal matter and then bore a hole which heals up without any septic complications is indeed a mystery to me. An officer who was under my care in Pretoria was shot near the spine in the right loin. The bullet came out in his perineum and then went through his foot, having traversed the rectum and urethra. The wounds in the body healed without trouble, as did that in the foot, the only serious annoyance being a few drops of healthy urine coming out from the perineum wound I saw the wounds in the rectum, so that any hypothetical explanation is unnecessary. In one case where a bullet entered over the cæcum and came out behind the left trochanter major and gave rise to melæna and hæmaturia it was seriously suggested that they were due to bruising alone. Why some men think that a Mauser bullet does not perforate intestine in such cases of easy recovery I do not know. The conditions calling for cœliotomy in bullet-wounds (Lee-Metford and Mauser) must be very rare and the recognition of those conditions must be a matter of extreme difficulty.

LODGED BULLETS.

As a rule there should be no hurry in removing bullets which have traversed either the abdomen or the thorax, no matter how temptingly near the skin they may be. They should be left alone for two or three weeks—that is, until the bullet track is firmly healed and the extravasated blood is absorbed: two splendid media in which to grow pathogenic germs. After this period no serious harm is done should the operation wound become septic. I saw a case of hæmothorax converted into one of empyema by the removal of a bullet which was under the skin of the back. The *lacerated* entrance hole in front healed up by first intention, whilst the *incised* wound of the operation suppurated and nearly cost the patient his life.

Operation for hæmothorax is very rarely required. We had one case in which the heart was pushed to the right of the sternum and by careful nursing the patient got well rapidly. A bullet entered the mass of the pectoralis major and got lodged in the skin of the posterior fold of the axilla, giving rise to an enormous hæmatoma in the axilla. At the end of three weeks the bullet was easily removed, and should suppuration have set in there would have been no fear of extension beyond the wound. "Tommy's" desire to have his bullet "cut out" is almost morbid. I think there is a superstition in the army that bullets wander about in the body until some vital spot is reached and that on that account they should be "extracted." We generally had trouble with officers as well as with "Tommy" when advising them not to have an operation done in cases where the bullets were deeply imbedded and giving rise to no symptoms whatever, but most of them soon realised that metal in the body is not harmful if surgeons put common screws in broken bones in civil life without any hurt.

THE TELEPHONE-PROBE.

My wife having read an article by Mr. Frederick Treves on the telephone probe sent one for our use. As I have not seen a medical journal since I left home I do not know what my former teacher and friend may have written about this instrument, but a few remarks may not be superfluous, as not one of the many surgeons whom I saw from Cape Town to Pretoria had had any experience of it.

The telephone-probe is one of the most useful and reliable *instruments for locating metal during an operation.* The position of Roentgen photography in the process of localisation of bullets and foreign bodies had been fairly well defined before this war, and any surgeon who has had much experience in operating knows from painful disappointment how easy it is just to miss the foreign body by one-sixteenth of an inch in situations where any small transverse cuts may involve the division of a nerve or a tendon. During an operation for a deeply imbedded bullet, retraction of the lips of the wound or the placing of the patient in a suitable position for operation—this being slightly different from that in which the Roentgen photograph was taken—often creates a disturbance of the straight line of known depth from the skin to the bullet. It is this disturbance of relationship which sometimes leads to failure in finding the bullet and is one of the causes of unnecessary and reckless exploration to extract the bullet at any cost. It is just in these conditions of difficulty that the telephone-probe comes to the rescue. The usefulness of Roentgen photographs terminates before starting an operation, whilst that of the telephone-probe comes in *during* the operation. Nélaton's probe, Fluhrer's probe, and other probes will surely become historical relics *as soon as the telephone-probe gets generally known.* The narration in brief of two cases will be sufficient to illustrate the particular points in which the telephone-probe becomes invaluable.

CASE 1.—Private ——, aged [illegible] years, was shot in the back

gave rise to pain during deep breathing, with rigidity and tenderness of the mass of muscle between two of the tendinous intersections of the left rectus abdominis. On July 12th, under 1 per cent. of cocaine, I opened the anterior abdominal wall until something was felt which I mistook for the bullet. The patient could not stand the pain of further exploration, so he was anæsthetised and the wound was enlarged upwards. Again I thought I had the bullet, but ordinary traction on the forceps did not displace it. I then tried the blunt-pointed probe, and Professor A. W. Hughes was listening when I touched the quasi-bullet. There was no "ring" at the telephone, but on exploring more deeply through the inner edge of the wound the bullet rang the telephone, and it was easily removed. I had applied the bullet forceps first to the cartilage of the eighth rib and then more deeply to one of the ribs, and in this case the differentiation of cartilage, bone, and bullet was quickly made out. When I started operating I felt that the removal of the bullet was an easy matter. I should have abandoned further search for the bullet if my friend Professor Hughes had not reminded me of the gift which my wife had made to the hospital. This was the first occasion on which it was unpacked. After this incident the further exploration for bullets was simplicity itself and my colleague, Mr Mills-Roberts, has also had some very interesting and instructive cases in which the probe was used.

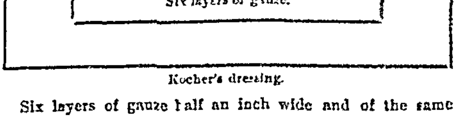
CASE 2—On August 23rd, 1900, Trooper —— was shot near Belfast by a ricochet bullet through the back immediately below the spine of the left scapula. After the wound had healed skiagrams were taken and the bullet was located on the outer anterior aspect of the surgical neck of the humerus. It gave rise to much pain round the joint and upon movement of the shoulder. On Sept. 15th, under ether, I pushed the sharp-pointed probe through the skin and very soon, before incising the skin, I found the bullet. After making an incision to the surface of the deltoid I separated the fibres of the muscle until I exposed what felt like the bullet slipping under my finger *before proceeding to incise* the encapsulated (?) bullet. The probe was used, and to my surprise there was no "ring" On exploring the outer edge of the wound the telephone rang and the bullet was extracted. The feel of the bullet, encapsulated with a little fluid around it, was most difficult to differentiate by touch from that which I mistook in the first place to be the bullet but which turned out to be the tendon of the biceps. The probe in this case saved the opening up of the sheath of the tendon of the biceps—a procedure which might in time have entailed pain about the joint owing to adhesions forming upon avoidable traumatism.

FORCEPS-TOURNIQUET.

Last February I exhibited at a clinical meeting of the Medical Society of London a long-bladed forceps which had been used instead of an ordinary tourniquet in every amputation which I had performed for the last two years, and it appeared to me that it would be of service in military surgery. The conditions in South Africa requiring the use of a tourniquet have been so few, owing to the splendid success of conservative surgery in saving limbs, that I have had but few opportunities of testing it; but as the surgery of war is practically identical with the surgery of civil life, I think that the forceps-tourniquet would be found more handy and reliable than the elastic band or Esmarch's tourniquet. India-rubber deteriorates very quickly in climates like that of India and the one we have experienced in this campaign. To sterilise an Esmarch's tourniquet is not at all a simple and quick procedure under conditions which demand economy of antiseptics and time; it is necessary to have one assistant to apply an Esmarch's tourniquet in amputation at the hip or the upper third of the thigh; whilst every surgeon should in an emergency feel that he could perform single-handed any amputation with speed and confidence. The forceps-tourniquet has none of the disadvantages of the rubber band. It can be applied to control hæmorrhage during disarticulation at the hip or any amputation of the lower limb in 15 seconds, it is under the sole control of the operator, it can be slackened and re-clamped in a second, and, as far as my own observation goes, it does not give rise to the worrying vasomotor paresis which follows upon the removal of the rubber band. At Springfontein I had the opportunity of demonstrating its use to Lieutenant-Colonel A. H. Keogh, R.A.M.C., and his staff in a case requiring amputation through the upper third of the thigh, and Lieutenant Colonel Keogh and Mr. J. E. Ker (the latter of whom performed the operation) were pleased and surprised at the small amount of blood which was lost. For field hospitals and bearer companies I think the forceps-tourniquet would be found very handy on account of its portability and asepticity. A shield filled with an antiseptic jelly can be fitted over the smooth blade which is placed under the blood-vessels, and the instrument can be clamped on to the inside of the breast of the surgeon's tunic when on the trek. I hope soon to publish some cases with illustrations on the methods of applying the tourniquet in cases of amputations of the upper and lower limbs.

ONE MOP AND TWO PAIRS OF GLOVES FOR OPERATIONS.

It is important to economise mops, or sponges, and dressings as much as possible in order to reduce the quantity of packages for transport and at the same time to maintain efficiency. All our aseptic operations were performed without the use of any antiseptic lotion and a very small steriliser was all that we required for any operation. The thread gloves were taken out of the steriliser and worn by the operator and his assistant, and the one mop did not usually leave the hands of the assistant until the operation was completed. For example, we had a radical cure of hernia and excision of long portions of both internal saphenous veins and also removal of big bunches of varices from both legs performed at one sitting on a colonial soldier with only one mop, and the same also in amputation of the thigh, &c. The most economical and efficient dressing for operation wounds that I know of is what I should call a "Kocher's dressing," having seen it at Professor Kocher's clinic about three years ago. It is generally the only dressing which is applied in cases of nephropexy, ovariotomy, radical cure of hernia, trephining, &c. It answers admirably in civil practice and it was equally satisfactory at our stationary hospital. The diagram illustrates the points of this simple dressing:—



Kocher's dressing.

Six layers of gauze half an inch wide and of the same length as the wound are placed over the line of sutures and are kept in place by a single layer of gauze extending about two inches in all directions and fixed by collodion. The advantages of Kocher's dressing are its simplicity, its cheapness, its compactness, and its non-interference with the sutures when taking it off for removing them.

THE ARMY REGULATION CASE.

I would venture to suggest the reconstruction of the present army regulation case because it is lacking in portability and contains instruments which belong to the pre-anæsthetic era and which have long been discarded in civil practice. There are patterns of operating bags in civil practice which might with advantage be copied. Instruments carried in slots, &c., in solid metal trays are very well in a surgical instrument maker's shop, but when they get bent or twisted they become extremely unsatisfactory in use; trays made of one piece of hard wood are much more reliable. The ordinary probe gives more pain to the patient than is called for; it often infects wounds; and it is a question for serious consideration whether it should not be discarded from use except during the performance of an operation. It is a reminder of the surgical age when sinuses were treated by a single slap-dash incision and plugging of the gash made.

THE ROYAL ARMY MEDICAL CORPS AND THE CIVIL MEDICAL OFFICERS.

I confess that my impression of the organisation of the Royal Army Medical Corps is much more favourable after being taught its practice and routine work by the most able and capable administrator of the Welsh Hospital, Lieutenant-Colonel A.H. Keogh, R.A.M.C., than it was. When this officer took over the charge of our hospital he said: "You will know as much about our organisation and the so-called mysteries of our specialised work in a month as I do." I confess that he over-estimated the capacity of his pupil for acquiring knowledge, but the manner in which the opinion was given and the desire to teach and explain the why and the wherefore of the many details of the work made our task a very instructive, interesting, and agreeable one.

I think it would be highly desirable for the authorities to confer a temporary rank upon all civil medical officers who hold no commission when their services are required to assist the Royal Army Medical Corps. From force of habit "Tommy" has got into the way of looking at shoulder-straps and not at the faces of individuals who enter the hospital. It is much easier to keep order in camp, to have orders promptly executed, and to have general smartness amongst convalescent patients when a civilian surgeon has stars on his shoulder-straps. Another advantage of a temporary rank would have been to prevent a few members of the Royal Army Medical Corps from treating the civil medical officers as if they did not belong to the same profession. I heard several men complain of being treated in that manner by officers of the Royal Army Medical Corps and discussing philosophically some means by which such conduct could be obviated in future. There should be no excuse for the principal medical officer of a hospital driving his civilian medical officers to mess separately, as they undoubtedly were in some hospitals. This was very fortunately not the custom in the majority of hospitals, and consequently the work was done most satisfactorily by a united and contented staff. On the whole, perhaps, it is the individual, and not the system, that is so much at fault. If that be so, the right way to improve the individual is to make the Royal Army Medical Corps more tempting to the best men by better pay and by compulsory and regular leave for study in organised schools for such work. Promotion should mean ability and not seniority alone.

ENTERIC FEVER AND DYSENTERY.

I do not know what the type of dysentery was in Bloemfontein, but judging from the sad and painful fact that three of the staff of the Welsh Hospital died from it—one at Bloemfontein and two at Springfontein soon after leaving the former place—and also bearing in mind the circumstance that they had the best nursing possible and also the advice of men of known ability and experience, one cannot but admit the probability that the germs of the disease had acquired a degree of malignancy which fortunately is quite exceptional. This took place in May when almost everyone in Bloemfontein suffered from gastro-enteritis of variable intensity due to the air being polluted by dust carrying germs from dried excreta and dead animals, &c.

An officer who was treated for enteric fever at Springfontein pointed out the way in which the water-supply of the troops of which he was in charge got contaminated and I think this worth relating. They had been encamped for some weeks about three-quarters of a mile below a railway-bridge and the water-supply was got from the river and was considered good because no houses, villages, or troops were near its banks for many miles up the river. All the trains coming down the line stopped on the bridge to get water for the engines, and it was discovered that hospital trains conveying enteric fever patients coming down the line always took advantage of the stopping on the bridge for clearing out the stools of those cases which happened to be in the train and also to clean the bed utensils. Owing to the formalities which the "regulations" required it took some weeks before the river contamination got stopped.

BULLET-WOUNDS AND THEIR SEQUELÆ.

One of the peculiar results of Lee-Metford and Mauser bullet-wounds was the comparatively small skin scar and the relatively large size of the subcutaneous scar in the soft tissues. In one case a bullet entered through the cheek and came out through the lower part of the thorax posteriorly. The patient was well when I saw him, but he had paralysis of the inferior mental nerve and the hypoglossal and sympathetic nerves on the same side, and an enormous scar-cord could be felt from the angle of the jaw for about three inches. Whether the paralysis was due to direct lesion of the nerves by the passage of the bullet or whether the nerves got subsequently involved in the scar tissue, I do not know. The large subcutaneous scars are due to the devitalisation of the matrix holding the fluids of the body all round the track of the bullet. The velocity of the bullet causes hydro-dynamical displacement of fluid so acutely and suddenly that the shock impairs the vitality of the living matrix. An experiment on a fresh turnip shows well the devitalising, bruising, or pulping effect beyond the track of the bullet. By making a section at right angles to the track made by a bullet shot through a turnip and exposing the cut surface to the air, one can watch the changes of colour between the bruised and the unbruised parts. The extent of the pulping all around the track varies according to the succulence of the turnip. It is probable that many of the immediate results as well as the sequelæ of bullet-wounds are due either to this hydro-dynamical shock, or, later, to the nipping of important structures, such as nerves, in the scar of the devitalised tissues.

ANEURYSMS.

I should think that the safest course to adopt in treating aneurysms which develop two or three weeks after traumatism, is to lay open the blood-tumour, turn out the clots, and tie the ends of the vessels.

CASE 3.—I saw an interesting case in consultation at No. 2 General Hospital, Pretoria, where two large pulsating tumours followed a wound made by a bullet passing through the opening in the adductor magnus for the passage of the femoral vessels. One tumour was on the inner side of the inner hamstrings, whilst the upper half of the popliteal space was occupied by the other tumour. It was not easy to differentiate the two tumours. An incision was made over the inside of the thigh, the blood-clot was turned out, and then the stretched opening in the adductor was enlarged sufficiently to turn out all the clots from the popliteal aneurysm, and the gaping mouths of the popliteal artery and vein were tied in the popliteal space, whilst on the inner surface of the adductor tendon—i.e, the lower portion of Hunter's canal—the other ends of the femoral artery and vein were tied. In this case the blood-vessels were injured where the femorals become popliteals, with the consequent yielding of the scar in the vessels on either side of the adductor opening. The patient was getting on well a week after the operation.

CASE 4.—In consultation at No. 3 General Hospital, Springfontein, I saw another case of popliteal aneurysm following a perforating wound through the patella. The tumour extended for the whole length of the space and down into the calf. An incision was made over the ham, the blood-clots were turned out, and the artery and the vein were found to be divided and the two had to be ligatured at both ends. The patient made a good recovery.

Now in both Cases 3 and 4 the symptoms pointed only to what is called an aneurysm, and in both of the cases the veins were also found to be opened and communicating with the blood extravasated, although they did not show any physical signs of the condition. It is much safer to treat these cases as if they were subcutaneous traumatic rupture of the blood-vessels. This, in fact, they are, the only difference being that the injured walls of the vessels give way some days or weeks after the original injury. I know of cases in which the artery was tied above by Hunter's operation—a much easier operation—but they were followed by gangrene. As long as the large blood-tumour is left it is a serious obstacle to the collateral circulation after proximal ligature of the main artery.

INJURY TO THE INTERNAL SAPHENOUS AND GREAT SCIATIC NERVES, WITH ANEURYSMAL VARIX IN HUNTER'S CANAL.

CASE 5.—A newspaper correspondent was shot through the thigh on August 21st, 1900, near Belfast. When admitted to the hospital the entrance wound and the exit wound in the front and at the back of the middle of the thigh were healing kindly with no evidence of subcutaneous extravasation of blood. There was absolute anæsthesia over the distribution of the internal saphenous nerve with anæsthesia dolorosa over the middle two thirds of the inner aspect of the leg. There was also anæsthesia, but not complete anæsthesia, over the distribution of the anterior tibial and musculo-cutaneous nerves, but there was no motor paralysis. The diagnosis arrived at was that the internal saphenous nerve had been divided in Hunter's canal, and that the outer edge of the great sciatic nerve—or, if it had already divided, the external popliteal nerve—was in a state of paresis due to the hydro-dynamical shock which I have already referred to. We were all surprised that the blood-vessels had escaped, considering the nerve lesions and the position of the wound. On Sept. 4th—i.e., a fortnight after the accident—an aneurysmal varix formed in Hunter's canal, and on the 8th I tied the femoral artery immediately above the original injury by separating the fibres of the sartorius muscle instead of displacing it, which requires a longer incision. Recovery was uneventful. The fact that a bullet can pass anteroposteriorly between the superficial femoral artery and the vein and divide its accompanying nerve without giving rise to immediate dangerous hæmorrhage is almost on a par with the surprising fact that perforations of the intestine will close without the aid of a surgeon.

EXPLOSIVE OR EXPANDING BULLETS.

I saw but few cases of wounds which had been caused by explosive or expanding bullets. In all of the cases the bone had been shattered, and the few cases which suppurated, as well as the veldt sores, were treated by the application of pure tincture of iodine.

I [illegible] arriving in Pretoria of examining [illegible] Consul-General, Colonel Stowe, [illegible] Mauser bullets south of Kroonstad, and as our train was the next to go to Pretoria with passengers after the line was repaired we naturally took a lively interest in the character of the bullet-holes in the carriage. There was one bullet-hole above the ventilator of one of the windows which before a full examination I took to be due to the effect of an explosive bullet. Between the inner and outer wall of the ventilator there was a space of about two inches The outside had one clean-punched hole which was the hole of entrance, whilst on the inside wall there were six jagged perforations covering an area of six inches by three inches. The bullet in traversing the interspace between the inner wall and the outer wall struck a thin piece of cast iron and was broken into six fragments, and it left behind in the space a piece of the outer covering. Everyone who saw the condition felt that it was undoubtedly an example of the effect of an explosive bullet. Through the courtesy and kindness of Colonel Stowe and Major Gordon, Railway Staff Officer, I was allowed thoroughly to examine the carriage and to make plain the use of what most of us had considered to be a bullet which is not permitted in civilised warfare.

THE PROTECTION OF THE HEART IN BATTLE.

Some members of our profession have for years advocated the wearing of a steel breastplate for the protection of the heart in battle, but I am afraid that the experience gained in this war with small-bore rifles is likely to damp their ardour in advocating the use of such a protective appliance. A man is as likely to be shot through the heart by a bullet entering at the shoulder, the side, the back, the loin, or even the head, as he is to be killed by a bullet entering in front of his chest. In fact, from all accounts I think that in this war the left breast was the least likely spot to reach the Boer's heart by a bullet on account of his assuming the prone position behind cover or protecting his chest in a trench. A man of Brabant's Horse had a narrow escape of being shot through his heart *viâ* his right ilium. He had just eaten a whole Maconochie ration and had started up the side of a kopje immediately afterwards. Some Boers had managed to get round the hill and were hiding in a mealie-field; they fired and the bullet entered the trooper's body at about two inches below the crest of the right ilium and came out immediately below the costal margin of the left eighth rib, probably having traversed his full stomach.

CONCLUSION.

In conclusion, I again wish to emphasise the opinion that the *vis medicatrix naturæ* of the old school will be found in a more prominent and exalted place amongst the methods and means of treatment in penetrating gunshot wounds of the abdomen than it has been since the birth of the new operative school a few years ago.

On board Royal Mail Steamer Saxon, Oct. 17th

NOTES FROM SOUTH AFRICA.

(FROM OUR TRAVELLING CORRESPONDENT.)

My last letter was written *en route* between Norval's Pont (Orange river) and Kroonstad. At Kroonstad I have been obliged to stop for a day, but I hope to leave for Pretoria to-morrow and thence to take a run down to Durban.

The small stations on the line between Bloemfontein and Kroonstad—Glen, Karee siding, Vet river, Smaldeel, and Ventersburg road—have each a civil medical officer in charge, with a small marquee hospital of from 10 to 30 beds. Here trivial cases are treated till the men are fit for duty, while serious cases, which are very few and far between, are sent down the line in ambulance trains to Bloemfontein. Winburg, some 20 miles from Smaldeel, with which it com- [illegible] hospital of 150 beds [illegible] er Major Hamilton, [illegible] has been the medical centre of a large tract of country—the Ficksburg, Bethlehem, and Senekal districts—which was for several weeks the scene of constant fighting with small marauding bands of the enemy.

The whole country between Bloemfontein and Kroonstad is inexpressibly dreary—wide stretches of sandy veldt sparsely dotted with kopjes and to all appearance unpopulated. September is the windy month in South Africa and our journey up was made in the teeth of violent sandstorms. The hot weather is now setting in, and the flies constitute a veritable plague. It is difficult to exaggerate the potentiality of these pests to spread infectious diseases, and all medical observers of the typhoid fever epidemic in Bloemfontein last spring are agreed in believing that flies were an important agency in spreading the disease. Mosquitoes are common enough in houses, but they are practically unknown in camps. I have caught several specimens, but have not yet seen the anopheles claviger or malaria-bearing variety.

Kroonstad is a miserable little town of tin-roofed houses straggling from the eastern side of the railway station to the Valsch river Streets alternate with waste plots given over to Kaffirs, empty tins, and general rubbish. Close to the station is the tiny hotel, now converted into a neat little hospital for officers, of whom there were four, who were convalescents, waiting there for a hospital train at my visit. Near the hotel is the church, a tin-roofed building with a wooden floor. Both these buildings were used for the temporary reception of sick soldiers when Kroonstad was first occupied and both were the subject of unfavourable comment by Mr. W. Burdett Coutts who appeared to think that beds should have been sent into the town for the reception of patients before our forces occupied it.

In marked contrast to the sordid, dreary little town are the camps on the western side of the station—No. 3 General Hospital, the Scottish Hospital, and the convalescent camp attached to No. 3 General Hospital. All these are close together and occupy an excellent site on a gentle eminence sloping down to the line. No. 3 General Hospital is a typical example of the best class of marquee hospital The lines are laid out with marvellous accuracy, the interiors of the marquees are neat and cheerful, and the patients appeared to have every comfort, including large double recreation and dining tents for convalescents. A grim reminder of war is the bomb-proof shelter between the hospital and the line, and it is not so long since that convalescent patients had to man the trenches in view of an expected attack by the notorious De Wet. Near to No. 3 General Hospital, but separated from it by the convalescent camp, is the Scottish Hospital, which consists of 20 tortoise tents which accommodate 200 patients, with several wooden huts used as administrative buildings. The general plan of the hospital is lacking in the symmetry and severe simplicity conspicuous in purely military hospitals, but the wards are cheerful and neatly kept, and nothing that human ingenuity could devise for the actual care and comfort of the sick has been forgotten. The services of the surgeons of this hospital have been requisitioned for an unusually large proportion of serious surgical cases, and they have been markedly successful in cases of intestinal suture and resection. I understand that this hospital has just been handed over to the Government, and I only hope that the services of some at least of its brilliant staff have been retained. Both of these hospitals have many vacant beds; in fact, the hospital arrangements all through South Africa—calculated as they are for a fighting army in an unhealthy country—are on far too lavish a scale for present circumstances, and the medical officers and the nurses everywhere report a lack of work.

Kroonstad, Sept. 28th.

WATER-SUPPLY IN SOUTH AFRICAN TOWNS.

(FROM A CORRESPONDENT.)

THE following notes, which we have received from a correspondent well situated for knowing what he is writing about, show that the question of water-supply in South Africa is still in its infancy and that drainage schemes as yet hardly exist.

CAPE COLONY.

Cape Town possesses a gravitation supply under the control of the corporation. There are two large reservoirs on Table Mountain to collect the rain, of which there are as much as 100 inches in the year. The neighbourhood of the reservoirs is jealously guarded and is free from all possibility of human contamination. This town is the only one in South Africa which is thoroughly drained.

Among the suburbs we have Wynberg, which also gets its supply from Table Mountain. Here there are two reservoirs and the authorities are considering the question of drainage. At Rondebosch and Claremont there is a spring water-supply, but it is not sufficient for the rapidly-increasing number of residents, and is recognised as being imperfect, so that a new scheme is under consideration, but there is as yet no drainage. At Kalk Bay there is a gravitation supply from reservoirs, without drainage. At Simonstown there is a water-supply from the mountain for naval and military purposes and in the town there is a storage reservoir from surface springs, but no drainage. At Burgersdorp there is a gravitation supply from springs five miles away across undulating country, while at Somerset East there is again a gravitation supply in addition to an irrigation supply, because water is collected in a catchment area in the hills and allowed to run down to the town in irrigation channels. At Caledon there is a gravitation supply, with a reservoir and a catchment area on the hill, all very good in spite of the absence of drainage. At Port Elizabeth, a town which has the distinction of being already half-drained, there is a gravitation and pumping supply of water from a catchment area situated in the hills 18 miles away from the town. Here there is a filter-bed from which the water flows in covered pipes to one of the most enterprising towns in South Africa. At East London there is a similar excellent water-supply but no attempt at drainage.

ORANGE RIVER COLONY.

The only town in this colony boasting of a water-supply is the well-known capital, Bloemfontein, where there is a pumping supply from the Modder river, 22 miles away, where the water is filtered and then pumped into the town. Now the Orange Free Staters were driven unwillingly to the expense of new waterworks because the town suffered so much every year from enteric fever. The town takes its name from Bloomfountain, a spring in the centre of the town, which though once considered to be perfect has of late years become more and more contaminated by the filthy habits of the people, by neighbouring cesspools, and by the complete absence of all drainage.

When the British so unfortunately allowed the Boers to repossess themselves of the Bloemfontein waterworks it was from the condemned springs in the middle of the town that our army was obliged to draw its drinking water. It will be remembered that the British entered Bloemfontein on March 13th, bringing with them numbers of young soldiers who were already harbouring the seeds of enteric fever contracted from the polluted water of Paardeberg and other camps. The troops were still fatigued after Cronje's surrender on Feb. 27th and the ensuing forced marches, and the bridges behind the advancing army had been destroyed by the enemy, so that it was impossible to get up a sufficiency of food, much less Berkefeld or Pasteur filters. Moreover, in the complete absence of fuel and with stringent orders not to interfere with the residents, it was impossible to boil the men's drinking water. Added to all this there came unfortunately at this time some heavy rain which must have washed much surface-dust and many typhoid bacilli into the drinking wells. To complete the picture, it must be remembered that the army had not had time to erect latrines and that the rain showers had every opportunity of washing the bacilli into the wells where everything necessary existed for the production of artificial cultures.

Assuming that these various causes aided, with others, in producing the typhoid fever epidemic the concentration of the poison at Bloemfontein was to be expected about the end of March, and allowing for two weeks' incubation and three or four weeks' illness the death-rate from disease in South Africa would presumably mount up about the middle of May. As a matter of fact, the death-rate from disease reached the high figure of 206 in the week ending April 28th and rose to 311 in the week ending May 19th, while it reached its maximum of 369 in the following week. I have gone into some detail on this point because it has always seemed to me that the chief defence of the Royal Army Medical Corps with regard to the typhoid fever epidemic at Bloemfontein might be the carelessness of the authorities who permitted the Boers to take possession of the only waterworks in the Orange Free State.

Is it too much to hope that some day a general officer while invading the enemy's territory will inform himself of the water-supply of any town which he is attacking and safeguard it at all costs? During the present war this would have been extremely easy, for the headquarters staff could have obtained all information from one or both of the two water engineers who have constructed most of the waterworks mentioned in this article.

THE TRANSVAAL.

Johannesburg possesses a water supply which comes from a farm 22 miles outside the town, shafts being sunk 18 feet into the dolomite limestone rock, and the daily yield is 1,000,000 gallons. This belongs to a private company. Johannesburg has no drainage yet, the daily removal-bucket system being in full force, worked by Kaffir coolies who are obliged to live in a special part of the town. The Johannesburg waterworks have more than once been nearly captured by the Boers since our occupation of the town.

Pretoria, although the capital, is a much smaller and less important town, and possesses a very excellent water-supply, though it is wholly dependent for drainage on buckets and Kaffirs. The water comes from a spring situated in a picturesque ravine between two of the hills commanding the town, upon the summits of which are built the empty forts which were supposed to defend the capital. There seems no possibility of pollution, for there is only one farmhouse near by and both the intake and the pipes to the town are well protected. Chemical and bacteriological analysis were very favourable in August, when examined by Dr. G. Turner, the medical officer of health of Cape Town, who has now been lent to the Transvaal. Moreover, the quantity of water is quite enough for 50,000 people and therefore it is ample for the 15 000 inhabitants of Pretoria.

Cape Town, September, 1900.

ASYLUM REPORTS.

Dorset County Asylum (Annual Report for 1899).—The average number of patients resident in the institution during the year amounted to 718 and comprised 349 males and 369 females. 115 patients were admitted during the year—viz., 54 males and 61 females. Of the 115 patients 96—viz., 48 males and 48 females—were first admissions, the remaining 19 being re-admissions. Dr. P. W. Macdonald, the medical superintendent, states in his report regarding the character of the admissions that there have been fewer cases of a melancholic type, but that those suffering from grave and organic forms of mental disease would seem to be on the increase. "Among the female admissions were numerous instances of an inexplicable mental breakdown after middle life and where at the time of the attack home comforts were not wanting. In these cases there is strong circumstantial evidence, that long-continued years of hard work under unfavourable and trying conditions had much to do with the subsequent illness." Cases of genuine epilepsy have been fewer among the admissions, and this is attributable to the increased efforts, mainly of a private and philanthropic nature, to treat and deal with epileptics in special homes. Of the juvenile admissions it is stated that in addition to the idiotic and epileptic there were also present general paralytics. "This dreaded and typical form of degenerative changes in the nervous system is, I regret to say, on the increase in this district." Almost 50 per cent. of the total admissions fell within the two decades of life from 20 to 30 years and from 40 to 50 years. Special interest is attached to the fact of this large proportion of cases drawn from the periods covering early manhood and the prime of life. "In the one case it reveals the strain on the mental faculties incidental to the start in life, and in the other the too oft-told tale of a breakdown after a prolonged struggle in the field of competition." An analysis of the ascertained causes of insanity among the patients admitted during the year gave the very large percentage of 37 as due to hereditary predisposition. "Each year brings fresh facts and further proofs of the widespread influence of heredity as a predisposing cause among the patients in this district." Mental anxiety and worry account for about 10 per cent. of the admissions and senile brain decay accounts for a similar proportion. In a large number of cases the actual attack was often brought on by a prolonged combination of causes. During the year 39 cases—viz., 18 males and 21 females—were discharged as recovered, or 5·4 per cent. of the average number resident The deaths during the year amounted to 41 cases—viz., 25 males and 16 females, or 5·7 per cent. of the average number resident. Among the deaths two were due to cardiac disease, three to chronic or acute renal disease, three to general paralysis, four to bronchitis, four to tuberculosis, pulmonary [illegible] and six to dysenteric and allie[illegible] unusual proportion of deaths f[illegible] referred to, it is pointed out that these deaths occurred at a time when the asylum was overcrowded, and rightly or wrongly this was looked upon as the most probable cause of intestinal complaints ranking so high. "In the annual report of the Commissioners in Lunacy for 1898–99 every asylum in which ulcerative diarrhœa, or so-called colitis or dysentery, had appeared has been bracketed insanitary." After a careful test of the drains of the asylum no defect, however, is said to have been found so that the cause of the prevalence of this disease remains unaccounted for. The proportion of tuberculous cases ending in death is regarded as small and is attributed to the good situation and the open air Bovine tuberculosis is also said to be comparatively rare in the south-west of England. The applications for the admission of private patients are greatly on the increase, and "it is much to be desired that no great delay will take place in providing separate accommodation for private patients." Electric light is now used in the building and the entire plant has continued to give satisfaction, the cost for the year ending March, 1900, being 1½*d* per unit The Lunacy Commissioners' report is not appended

Down District Asylum, Downpatrick (Annual Report for 1899).—The average population of the asylum during the year was 567 and consisted of 297 males and 270 females. The admissions throughout the year numbered 128—viz., 67 males and 61 females. Mr M J Nolan, the medical superintendent, states in his report that the admissions for the year were only two in excess of the number admitted in 1898. Of the admissions 19 presented no prospect of amelioration. As noted in the reports of previous years many of those admitted were advanced in years and broken down in health. "Such cases," adds Mr. Nolan, "are most unfavourable and cause much anxiety, as they require very special care in the hospital departments which, though accommodating over 100 patients, are barely able to meet the demands made upon them by the yearly increasing increment of senile and practically incurable cases." A history of heredity was ascertained in 34 per cent. and of alcoholism in 8 per cent. of those admitted. "The most remarkable feature of the admissions was the great frequency of heart disease with mental disorders, no less than 34 of the 128 cases admitted showing this association, and of those 34 18 were upwards of 60 years of age." During the year 60 patients were discharged as recovered, or 10 per cent. of the average number resident. A considerable number of those discharged as recovered were, in the first instance, handed over when convalescent to the care of their friends, and on the expiration of a probationary term of six weeks their names were finally removed from the asylum books. The deaths during the year amounted to 47—viz., 31 males and 16 females, or 8·3 per cent. of the average number in residence. Of the deaths four were due to apoplexy and paralysis, five to general paralysis, five to epilepsy, five to dysentery and diarrhœa, 10 to pulmonary phthisis, and 12 to cardiac disease. In no case was death due to suicide or misadventure. Mr. Nolan points out the value and importance of pathological investigation and urges that some coöperative scheme should be set on foot by the united Irish asylums to promote such research. Precautions are taken to guard against the contamination or spread of tuberculosis. Cattle on the farm discovered to be diseased were destroyed and the animals in which the tuberculin test gave rise to a suspicious reaction were isolated. "The milk-supply was recently specially analysed and found to be free from taint, so that the process of sterilisation is no longer necessary. The other prophylactic precautions reported last year have been continued and have been extended as far as possible." Dysentery and colitis still continue to make their appearance from time to time, though no local, hygienic, or dietetic cause can be found to account for its presence. "It is worthy of note that some of those who were attacked by the disorder had already suffered from one or more attacks of it in their own homes." The necessity for new buildings to accommodate the increasing number of patients is being steadily felt Mr. Nolan points out that the future development of building should not take the form of large featureless detention-wards, but that small, properly-equipped, classified, and self-contained blocks should take their place, and that the older portions of the existing building could be set aside for the accommodation of the chronic class. The farm department has been worked with benefit and with profit

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6139 births and 3860 deaths were registered during the week ending Oct. 27th. The annual rate of mortality in these towns, which had been 17·1 per 1000 in each of the two preceding weeks, rose to 17·3 last week. In London the death-rate was 15·9 per 1000, while it averaged 19·2 in the 32 provincial towns The lowest death-rates in these towns were 11·8 in Cardiff, 12·2 in Plymouth, 12·9 in Bradford, and 13·2 in Norwich; the highest rates were 20·8 in Swansea, 21·9 in Liverpool, 23·7 in Manchester, and 29·0 in Salford The 3860 deaths in these towns included 485 which were referred to the principal zymotic diseases, against numbers decreasing from 776 to 463 in the four preceding weeks; of these, 181 resulted from diarrhœa. 97 from diphtheria, 78 from "fever" (principally enteric), 45 from measles, 45 from whooping-cough, and 39 from scarlet fever No death from any of these diseases occurred last week in Plymouth; in the other towns they caused the lowest death rates in Norwich, Birkenhead, Halifax, and Newcastle; and the highest rates in Swansea, Wolverhampton, Salford, and Blackburn. The greatest often thought to be a date stone which had fallen into the pouch.

Those who know me never regard me as a "*laudator temporis acti*," and therefore, without any such feeling in the matter, I unhesitatingly state that no new fact or any development whatever with respect to appendicitis has been brought to light since the description of the disease more than half a century ago. The only novelties are a new name and a new treatment by the surgeon's knife. The name I dislike, as I have always considered that the nomenclature of disease should be clinical and not pathological. I trust that Mr. Littlewood will not view my remarks in the light of a criticism on his admirable essay but only as adding further to the history of a very interesting and important complaint. I am, Sirs, yours faithfully,

Grosvenor-street, W, Oct. 27th, 1900. SAMUEL WILKS.

THE ALLEGED EXISTENCE OF A "FOURTH DISEASE."

To the Editors of THE LANCET.

SIRS,—My attention has been called to an article by Dr. Clement Dukes, "On the Confusion of Two Different Diseases under the Name of Rubella (Rose-rash)."[1] In this article the writer claims to have established the proposition "on definite and analysed grounds that two clearly distinguishable diseases exist." The great importance of such a proposition demands much fuller criticism than the article in question appears to have received. None of your correspondents challenge Dr. Dukes's deductions and Sir William Broadbent even goes so far as to say that he accepts them "without hesitation." I venture, however, to think that the profession in general will require very much fuller investigation into such an admittedly difficult subject before it will be equally prepared to commit itself.

If we analyse Dr. Dukes's paper we find that he records three series of cases—(1) supposed "fourth disease" alone (16 cases); (2) scarlet fever concurrent with supposed "fourth disease" (31 cases); and (3) supposed "fourth disease" alone (19 cases), in which nine of the cases had had rose-rash on some previous occasion. On these three series Dr. Dukes bases his claim to have discovered a new disease. Let us take them separately. The first series of cases occurred in 1892. Dr. Dukes's diagnosis at the time was rose-rash of the scarlet fever variety. Eight years later he modifies his diagnosis and describes them as being the "fourth disease." No reasons for this are given, so for the sake of argument let us consider his original diagnosis as correct and regard them as having really been rose-rash.

The second series is the one to which Dr. Dukes attaches chief importance, and he considers that it alone is sufficient to establish the existence of the new disease. He says of it: "This epidemic proves incontestably that, besides scarlet fever, there is another malady, which I have provisionally named the 'fourth disease,' and that the one affords no protection against the other" This is a series of 31 cases in which seven boys had scarlet fever alone, 14 boys had supposed "fourth disease" alone, nine boys had scarlet fever shortly following supposed "fourth disease," and one boy had supposed "fourth disease" shortly following scarlet fever. Now, unfortunately, Dr. Dukes gives us very little information as to the clinical features of the supposed cases of "fourth disease" in this outbreak. He merely informs us that he was "summoned to a consultation on account of an epidemic which was regarded as the scarlatina variety of rose-rash (rubella)" No evidence whatever is adduced to prove that the cases were not rose-rash beyond Dr. Dukes's opinion to the contrary. Yet, although there is nothing at all inconsistent with the view that the epidemic was merely rose-rash concurrent with scarlet fever, we are expected to admit the existence of a new and hitherto unrecognised disease.

We now come to the third and last series of cases and here Dr. Dukes would strain our credulity to the uttermost This was an outbreak affecting 19 boys, beginning on March 19th, 1900, and ending on April 1st. According to Dr. Dukes this was "clearly an epidemic of the 'fourth disease' alone" He describes it as follows: "The illness resembled scarlet fever more closely than any other series of cases I have yet seen, due not only to the marvellous resemblance between the rash and that of scarlet fever, but also to the copious desquamation of the skin which in some instances succeeded."

In a *résumé* of the cases in this series we are told that the eruption "in nearly every case was very full and quite characteristic of scarlet fever. In fact, if ten experts had inspected the skin and made no other investigation all would have diagnosed the eruption as that of scarlet fever." The fauces were red and swollen. The temperature ranged from 99·4° to 104·2° F. The desquamation in some cases was very profuse, in one case the skin actually peeling off in sheets. The incubation period, one of the very few characteristics in which (according to the table given by Dr. Dukes) the "fourth disease" differs markedly from scarlet fever, *could not be ascertained in this series*. Lastly, not one of the 19 cases had previously had scarlet fever. Of the remaining points noted in connexion with this series there is not one at all inconsistent with the view, which I think most unbiased men will hold, that the outbreak was nothing more or less than simple scarlet fever. Dr. Dukes attaches importance to the fact that although the cases were sent home on April 3rd, the parents being informed that the epidemic was not scarlet fever, only one case came to his knowledge during the holidays which was diagnosed as scarlet fever. So far as this is positive evidence it supports the view that the cases were only scarlet fever, whilst in so far as it is negative evidence it proves nothing. This much is certain—that if this last series of cases is "fourth disease" there is not the least danger of the new malady being confused either with rose-rash or with measles. And yet Dr. Dukes tells us that it is what has hitherto been regarded as merely a variety of rose-rash and that children who are supposed to have had measles three times have really had English measles, German measles, and "fourth disease" Could anyone possibly mistake for measles or rose-rash such a disease as the one just described? Moreover, this last series of cases so closely resembling scarlet fever clearly differs very considerably from the first two series which resembled rose-rash; hence we can only conclude that there are two varieties of the new disease, differing from each other at least as much as the two varieties of rose-rash which Dr. Dukes has tried to split up.

There remains Dr. Dukes's table in which he sets forth the specific differences, as he sees them, between rose-rash, "the fourth disease," and scarlet fever. As regards the differentiation of the "fourth disease" from scarlet fever the principal point of distinction would appear to be that the incubation period in the former is from nine to 21 days, the same as in rose-rash, yet, as already pointed out, this important point of distinction was not ascertained in the last series of cases which so closely resembled scarlet fever. Another alleged distinction is that the duration of infectiousness in the "fourth disease" is only from 10 to 21 days. We may reasonably ask how Dr. Dukes has ascertained this with such a short experience of the disease. So, also, as regards the statement that its season is "spring and summer." Some stress is laid on the fact that the tongue, though it may be furred, is never a typical "strawberry" tongue. I think that most will agree with me that the typical "strawberry" tongue is too often absent in scarlet fever for much importance to be attached to its absence in a short series of cases. The alleged enlargement of the glands would at first appear of some importance, yet in another part of the paper Dr. Dukes says that in his experience "the lymphatic glands are always enlarged and tender whenever a copious eruption occurs on the skin *from any* disease." It would take too long, however, to criticise the various points seriatim. Most of them on examination will be found to be distinctions without any real difference; and, after all, the total number of cases of the supposed new disease on which the table must have been based is far too small for it to have much value. The first series, which occurred eight years ago and was diagnosed at the time as rose-rash, may fairly be excluded from the case, and the second series was so complicated with scarlet fever that many of the cases must have been valueless.

To briefly summarise, the weak points in Dr. Dukes's thesis are: 1. There is no proof that the first series of cases of supposed "fourth disease," diagnosed eight years ago as rose-rash, included anything other than rose-rash 2. There is no proof that the second series of cases of supposed "fourth disease," running concurrently with scarlet fever, included anything other than rose-rash concurrent with scarlet fever. 3. There is no proof that the third and last series of cases of supposed "fourth disease" included anything other than simple scarlet fever. Indeed, the evidence given points to its being so.

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[1] THE LANCET, July 14th, 1900, p. 89.

It would be rash to deny the possibility of an unrecognised disease existing and closely resembling scarlet fever though distinct from rose-rash; but very much stronger proof must be forthcoming than any yet adduced by Dr. Dukes before it can be admitted that he has discovered and identified such a disease. I am, Sirs, yours faithfully,

C. Killick Millard, M.D., D.Sc. Edin.,
Late Medical Superintendent, Birmingham Fever Hospital.
Town Hall, Burton-on-Trent, Oct. 27th, 1900.

"MEDICAL SERVICE IN THE HIGHLANDS AND ISLANDS OF SCOTLAND."

To the Editors of The Lancet.

Sirs,—Poor-law medical officers in the highlands and islands of Scotland are again greatly indebted to you for your able and outspoken leading article in The Lancet of Oct. 20th (p. 1144). Could such an exposition find its way to our legislators our condition would probably soon be remedied. Our thanks are none the less due to Dr. William Bruce, than whom none knows our condition better, for his letter in The Lancet of the same date (p. 1163). He states the remedies clearly and practically, but with all respect to his wide experience and matured judgment I would like to comment on the following points. Regarding his second proposal there are no objections but the difficulty of getting the Government to pass a Bill in our favour, and to endeavour to obtain this is precisely our intention. Of course, parish councils will object, hence the futility of consulting them. One half of them [illegible] other half cannot see [illegible] unite to prevent us by [illegible] our rights. Poor-law medical officers have not been under the heel of parochial boards and parish councils all these years without fully estimating the latent possibilities of these gentlemen. The other and graver difficulty is the fact that only two or three men amongst us will have the whole fighting to do and have a host of parish councils against us, then the question arises, which will the Government believe?

Dr. Bruce says: "Seeing that the public at large really helps to pay for medical attendance to all and sundry in these parishes it ought to have its say in making and unmaking these appointments" Given an average parish of from 2000 to 3000 inhabitants with a pauper roll of, say, 70 and the payment to the medical officer *from the parish funds alone* on an average of £20 to £25 (which is only sufficient to keep his horse), ought these to have a say in the making and unmaking of appointments? A medical man receiving such a trifle is practically giving his services to that parish. I admit that he gets the other half of his salary from the medical relief grant and a precarious income from private practice, but with these the public at large (I mean the ratepayers of this said parishes) have nothing whatever to do. Even in private practice in these parishes a humane doctor cannot possibly charge what would remunerate him for his services. That trifling amount from the parish funds, besides partly remunerating him for attendance on paupers, has to cover attendance and medicine to all and sundry non-pauper—poor folk who cannot pay him. He has also to visit the different districts periodically, so that his services may be at the disposal of everyone. The above facts form the basis of our argument for an increased salary.

Regarding the suggestion that the Local Government inspecting officer would see justice done to the parish medical officer, I am afraid that during his summer trip to the highlands and islands he would be unable to settle disputes between parish councils and their medical officer; but how he could be constituted a judge of the professional competence or incompetence of a medical man either before or after his appointment by the parish is a question which, I think, admits of an obvious answer. I again offer my thanks to you and also to Dr Bruce for your ready sympathy and interest in our cause.—I am, Sirs, yours faithfully,

Henry Pearson Taylor, M.B., C.M Aberd.
Reafirth, Mid Yell, Shetland, Oct. 25th, 1900.

"AUTO-INFECTION THROUGH THE MOUTH A POSSIBLE CAUSE OF RELAPSES IN ENTERIC FEVER."

To the Editors of The Lancet.

Sirs,—I was much interested by Mr. G. W. Ord's letter on this subject in The Lancet of Oct. 13th (p. 1097). I not only agree with his views in this particular connexion but I am satisfied that physicians may trace many cases of self-poisoning in various infective diseases to the same source. Nay, more, I would go further, and add that I am satisfied, from experience, that an unhealthy state of the mouth is a fertile and very common cause of ill health. We are all agreed upon the importance of wholesome fresh air in contending with tuberculous and other cachexias from the poisonous effect of re-breathed air, sewer-gas, and the like. What, then, are we to anticipate when every breath which a patient draws is infected, more or less, by an unhealthy state of the mouth? Of latter years I have made it a habit to examine the mouths of all patients, and in a large proportion of cases I find quite enough there to account for bad health.

To give a single instance in illustration I will quote the case of a young man who was sent to me last year from the county of Wexford for advice about apprehended phthisis. This youth was in a very low and markedly marasmic state. On examining his chest I failed to detect any morbid change On bringing him over to the window to examine his mouth I found 14 carious teeth in the upper jaw, exhaling a fearful odour, which he was breathing day and night, and the secretion from which, with accompanying gumboils, he was constantly swallowing. I advised the removal of the teeth for the complete hygienic restoration of the mouth and I was not disappointed by the result which followed. The diseased teeth having been removed—painlessly under ether—the mouth was restored to a healthy condition, a set of artificial teeth replaced the diseased ones, and satisfactory mastication became possible. Within six months this youth was restored to health. This case is one of countless similar ones. Besides bad teeth we find many other morbid conditions of the mouth, the gums, ill-adjusted and non-removeable false teeth, suppurating alveolar abscesses, often painless, unhealthy conditions of the nasal and pharyngeal mucous membranes, a gross neglect of cleanliness, and so on, which mean, in fine, that the patient is breathing an infective atmosphere and swallowing poisonous secretions. If a lack of fresh air and the presence of sewer-gas and foul air in a dwelling-room are sufficient to poison a patient, what shall we say of such a condition as I described above? I am under the strong impression that this source of bad health is not sufficiently attended to in ever [illegible] re- fore I trespass on [illegible] to it I believe all [illegible] t I fear we are not sufficiently energetic in urging them on our patients. Others, younger than I am, may, I believe, with great advantage to the public health, work out the problem to which I now briefly allude.

I am, Sirs, yours faithfully,

F. R. Cruise, M.D. Dub.,
Consulting Physician to the Mater Misericordiæ Hospital, Dublin, and to the National Hospital for Consumption in Ireland.
Dublin, Oct. 24th, 1900.

AN ANOMALOUS SITUATION CREATED BY SECTION 4 OF THE INFECTIOUS DISEASE (PREVENTION) ACT, 1890.

To the Editors of The Lancet.

Sirs,—I venture to address you on a subject which I think may possess some interest for my brother medical officers of health—viz, the anomalous situation created by Section 4 of the Infectious Disease (Prevention) Act, 1890. This was brought prominently to my notice by an incident which occurred recently in my district. It came to my knowledge that a case of infectious disease (diphtheria) was existent at a dairy just outside the borough boundary. I immediately visited this dairy and upon inquiry I found that milk from it was being supplied in fair quantities to a retail milkseller as well as to private persons resident in this town; in fact, had it not been for my visit eight gallons of milk and 18 lb. of butter would have been sent into the town within an hour. I also found that the person in charge of the dairy was in direct contact with the sick person. I thus had every reason to suspect this milk as being likely to cause infectious disease within my district.

But by the Infectious Disease (Prevention) Act, although we as medical officers of health are empowered (on the order of a magistrate) to inspect any dairy if we are of opinion that infectious disease is caused, or is likely to be caused, in our district by milk supplied from such dairy, we can take no action, legally, to prevent the sale of this milk until infectious disease is (actually) caused.

Now, Sirs, this is where the anomalous situation is apparent: that we, who are appointed by law medical officers of health for the express purpose of preventing, as far as possible, the occurrence of disease are debarred, forsooth (by this same law) from taking any action until it has actually occurred! Surely this is the most perfect example of "locking the stable door after the horse has been stolen." I say nothing of the cumbersome and tardy method of procedure permitted us under this section, as I feel sure that every medical officer of health has his own system for overcoming this difficulty.

I am, Sirs, yours faithfully,
CHARLES H. RUSSELL,
Great Yarmouth, Oct. 28th, 1900. Medical Officer of Health.

"THE 'ANÆMIA OF DYSPEPSIA CONSEQUENT ON DIRT-EATING.'

To the Editors of THE LANCET.

SIRS,—Mr. A. J. B. Duprey's remarks on the above subject in THE LANCET of Oct. 27th (p. 1192) are most interesting. Dirt-eating, or geophagy, is a subject which has been mentioned by many travellers, but the dire results of this filthy habit have not been investigated with care by medical men. St. Lager is the only author to my knowledge who has attempted to collect any information on this matter and a short *résumé* of his remarks may be of interest to your readers. First, then, geophagy was observed by Humboldt to be prevalent amongst many Indian tribes, notably the Ottomacos, the women employed in potteries being the chief offenders. Auguste de Saint-Hilaire observed dirt-eaters in the interior of Brazil and also along the coast-line. De Castelnau noticed geophagy in the eastern portion of Bolivia. Cotting saw children eating dirt in the canton of Richmond, between Augusta and Savannah. He goes on to say that "they become pale, sicken, and die."

Geophagy has also been observed in the Antilles, in Jamaica, Hayti, Puerto Rico, St. Thomas, St. Martin, Guadaloupe, Martinique, St. Domingo, Guiana, Peru, Louisiana, Alabama, Georgia, Florida, and South Carolina. In Africa the habit has been observed among the deltas of the Senegal, in the islands of Los Idolos, and at Sierra Leone, and in other parts of the world, in Java, New Caledonia, New Zealand, and Siam. This pernicious habit, according to various observers, has frequently resulted in anæmia, marasmus, and ultimate death. The dirt consumed in most cases seems to be some kind of clay or marl; in several instances the earth forming the habitation of termites has been preferred. The habit became such a passion in certain victims that one observer records seeing muzzled slaves grovelling on the ground and attempting to inhale particles of dust. Hindoo and Chinese women have been known to eat meerschaum (*écume de mer*). In Guinea the negroes used to eat a yellow earth called *caouac* and became ill in consequence. In Java a ferruginous clay was sold in the public markets and consumed by purchasers. The clay used in New Zealand was a species of talcous schist in which copper was found. Another substance commonly partaken of in certain localities was native alum (*beurre de roche*); gypsum by others was used as an ingredient of bread—a custom not unknown to the modern baker! Geophagy is interesting also in connexion with endemic goitre. The drinking of certain muddy waters is associated with the incidence of goitre; for instance, Richardson, a companion of the unfortunate Franklin, noticed at Fort Edmonson, on the north branch of the Saskatchewan, that those who drank the muddy water of this river became goitrous. In other instances the drinking of mud-laden waters is not associated with goitre, which seems to prove that some particular earth or mineral causes goitre. It would be interesting if Mr. Duprey can tell us if goitre is found in any cases of dirt-eating that he has had to deal with.—I am, Sirs, yours faithfully,

LOUIS E. STEVENSON, M.B. Cantab., F.G.S.
Temple Sowerby, Penrith, Oct. 29th, 1900.

"THE ETIOLOGY OF RHEUMATIC FEVER."

To the Editors of THE LANCET.

SIRS,—We have read with care some letters published in THE LANCET of Sept. 29th (p. 970), Oct. 13th (p. 1098), and Oct. 27th (p. 1235), written by Mr. Lennox Browne, Mr. E. F. Grün, and Dr. Alfred Mantle respectively. These three letters dealt with points in our paper upon the Etiology of Rheumatic Fever, which was published in THE LANCET of Sept. 22nd (p. 861) and 29th (p. 932). To the letters of Mr. Lennox Browne and Mr. E. F. Grün we saw no reason to make reply except by private letters. To Dr. Mantle's letter in THE LANCET of Oct. 27th (p. 1235) we are compelled to reply in justice to him and in justice to ourselves. The tenour of each of the letters is the same—we have hardly done due credit to the writer's work upon this subject. In replying to Dr. Mantle we take the opportunity to acknowledge also the letters of Mr. Lennox Browne and Mr. Grün. In the first place it will be wise to state what claims we made for ourselves. They were two—the first, that as a result of an investigation, clinical, pathological, and bacteriological, supported by experiments made for us by Mr. H. G. Plimmer, we demonstrated that certain diplococci were *a* cause of rheumatic fever; the second, that we were, to the best of our knowledge, the first to demonstrate these diplococci in a rheumatic nodule. We are thus, fortunately, absolved from any errors of commission, though not from those of omission. Further we wrote as follows: "But we have started upon the assumption that it (i.e., rheumatic fever) is an infection, being led to this conclusion by the results of clinical and pathological experience and teaching," implying by these words that English teaching had led us to this assumption.

Mr. Lennox Browne claimed in his letter priority among "the moderns" for his insistence upon the association of rheumatic fever and tonsillitis. We do not intend to enter upon questions of priority, but it is clear from his published writings that he fully recognised the importance of this association. The recognition of this is, in our opinion, an important step in the history of the theory that rheumatic fever is due to an infection of microbic origin. Mr. E. F. Grün claimed that we had corroborated his observations as to the invariable presence of a specific organism in the blood of patients suffering from rheumatic fever. We entirely fail to see the truth of this. Diplococci were present, it is true, in the *cultures* made from the blood of two patients suffering from rheumatic pericarditis and we discovered them growing in chains in the media after incubation. We did not demonstrate them in blood films as Mr. Grün claims that he did. This point is, however, but a small one. Clearly, before we can give Mr. Grün any credit for his observations we must either see his preparations, or ourselves confirm his statements, or see a confirmation of them. One slide he kindly sent us certainly showed numerous diplococci and other organisms. It was, however, a sputum preparation, not a blood film, and therefore has no bearing upon this question.

To Dr. Mantle we owe an apology which we freely give. We were, to our regret, unaware of his researches and we briefly allude to them now. Dr. Mantle in the *British Medical Journal*, June 25th, 1887, wrote a paper upon the Etiology of Rheumatism considered from a bacterial point of view. From seven cases of this disease he obtained, with due precautions, fluid from the knee-joints and obtained growths upon gelatinised meat infusions. He also demonstrated bacteria in the blood in 16 more acute cases, some subacute cases, and 10 cases of rheumatism in childhood. The bacteria were a micrococcus occurring sometimes as a diplococcus and a small bacillus. Dr. Mantle demonstrated these organisms at the time of the reading of the paper and figured them in his paper. They throve best in an acid medium and their growth on the solid media gave "a pretty reticulated brown appearance." He also obtained each organism in pure culture. No experiments were made with animals, and Dr. Mantle expressly stated that these alone could decide the question of their specificity. There can be no doubt that in 1887 Dr. Mantle fully recognised the likelihood of rheumatic fever being due to an infection, and that he further carried out some important and laborious investigations in support of his contention. Most of our references to foreign workers were chosen because of the experimental work they had carried out, but had we been aware of Dr. Mantle's paper we should certainly have alluded to his researches.

One sentence in Dr. Mantle's letter we should like to interpret carefully. Dr. Mantle writes: "I am thankful to find that it has been now clearly demonstrated by the experiments of Dr. Poynton and Dr. Paine that the diplococci alone or with other micro-organisms are the cause of rheumatic fever and its complications." We believe we have demonstrated that a certain micro organism in the form of a diplococcus is *a* cause of rheumatic fever. Valvulitis, pericarditis, arthritis, tonsillitis, probably pleuritis and chorea, are manifestations, not complications, of rheumatic fever, and results of this diplococcal infection. Whether right or wrong the view has the merit of being definite and not complicated by the *question of secondary infections*, and it is the outcome of our investigation. We concluded that such bacilli as were present were not a cause of the disease. Whether or not the diplococci are the *only* cause of rheumatic fever we are not as yet in a position to state

We are, Sirs, yours faithfully,
F. JOHN POYNTON, M.D., M.R C P. Lond.,
Assistant Physician to the Hospital for Sick Children, Great Ormond-street,
ALEXANDER PAINE, M.D. Lond.,
Assistant Bacteriologist to St. Mary's Hospital, London.
Oct. 29th, 1900

THE DIAGNOSIS BETWEEN PERICARDIAL EFFUSION AND ENLARGED HEART.

To the Editors of THE LANCET.

SIRS,—Altho[illegible] r corrections to make to the [illegible] in 1896,[1] the importance of [illegible] may be obviated which are alw[illegible] as in the case of fatal punc[illegible]y Dr. Norman Moore,[2] disast[illegible] for re-stating facts not yet generally utilised. Independently of skiagraphy, any expert percussor can rapidly and safely identify an uncomplicated enlargement of the heart, or, on the other hand, a considerable effusion with or without [illegible]

over the right fifth interspace which was first insisted upon by Rotch, but is not in itself diagnostic. It consists in the sharp contrast between the outlines of dulness of a pericardial effusion and of the right border of the heart. The *posterior test* is even more reliable, as it is independent of the influence of partial agglutinations which sometimes exclude the fluid from the anterior corners of the pericardium. It is therefore essential that this test should not be misunderstood. The familiar infra-scapular patch of tubular breathing and ægophony to which Sir William Broadbent refers in his third edition[4] in connexion with my name is often set up, particularly in small chests, by a simple enlargement of the heart with compression and engorgement at the left base. This sign was put forward as merely confirmatory and not distinctive, and as "occurring also in pleural effusions." It is the other sign, the "lower dorsal dull patch," which is of practical use in difficult cases "The value of this sign is that, unlike many others, it is very sharply defined and does not fit any other diagnosis."[5] The almost median position of this dulness below the tenth rib, that is, below the vault of the diaphragm, its quadrilateral shape, and its extension to the spine and beyond it for one or two inches into the right chest render it quite unmistakable, unless it should be merged into the dulness of a double pleural effusion. I do not remember that any of the pupils to whom it has been demonstrated failed to recognise it; the failure of some of their first attempts to elicit it does not, of course, invalidate the test. I have examined for this characteristic dulness numerous cases of excessive enlargement of the heart, but always in vain, and I am satisfied that it cannot be produced by the latter. An actual demonstration to the contrary would therefore possess much value. As a fact, however, the dulness in question is not the dulness of the heart or of the fluid effusion, but is a dulness merely induced by the presence of fluid higher up The patch c[illegible] evel of the floor of the [illegible] by an enlarged heart.

Curzon street, W., Oct. 26th, 1900 WILLIAM EWART.

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[1] Cf. "Practical Aids in the Diagnosis of Pericardial Effusion in Connexion with the Question as to Surgical Treatment," Brit Med. Jour., March 21st, 1896, p 717 "Remarks on the Dorsal Test for Pericardial Effusion"—An Addendum, Brit. Med. Jour, Jan 23rd, 1897, p. 185

[2] Cf. Hunterian Lecture, THE [illegible]

[3] "On Latent and Transient [illegible] Nov 21st, 1896, p. 1446 "Cases [illegible] Effusion," Transactions of the Cl[illegible] p 97

[4] Cf "Heart Disease with Special Reference to Prognosis and Treatment," third edition, 1900

[5] Cf. Brit. Med Jour, loc. cit.

"THE CAUSE OF CARIES OF THE TEETH."

To the Editors of THE LANCET.

SIRS,—Mr. A. Berlyn's statement in THE LANCET of August 25th, 1900, p. 629, regarding the majority of South African natives, that "their only method of cleansing their teeth is to fill the mouth with water and rub the teeth with the finger," may be very true as applied to those natives who live in the towns. The typical "Red Kaffir" at home invariably after each meal rubs his teeth with a little of the cold wood-ash from [illegible] his mouth with water, a[illegible] account for the absence o[illegible] teeth. As to food, the "Red Kaffir" does not often eat "mealie meal" which, as a rule, he is obliged to buy, and "mealie meal" of his own manufacture bears little resemblance to th[illegible] ary food consists of [illegible] the "stamped mealie, [illegible] by means of pounding in a wooden mortar. In either case when cooked the resulting "porridge" is certainly soft to handle, but one finds it extremely glutinous and somewhat tough to masticate. During the "mealie" season the "green mealie"—the unripened "cob"—is greatly relished. These "cobs" are, as a rule, roasted at the side of the fire and though undoubtedly palatable are decidedly tough and require considerable mastication. In this portion of the country and in the native territories, too, I have often noticed a flattening and often actual cupping—caries apart—of the crown surfaces of the teeth, more particularly of the molars, and this not only in the Kaffir but also in those colonial born whites whose food has consisted mostly of "mealies." How long the native has cultivated the mealie seems somewhat uncertain. It is not mentioned by travellers in Africa before the sixteenth century, and though probably first imported from America I can find no mention of its introduction to this country. In 1687 a shipwrecked crew in Natal victualled a ship of their own construction with provisions purchased from the natives, and though Kaffir corn, salted and smoked meat, goats, fowls, and pumpkins are mentioned, the "mealie" is conspicuous by its absence Before civilisation overwhelmed him the "Red" rejoiced not only in his own flocks but in the risks and excitement of the chase, and skilled as he was in the use of his own weapons his larder was accordingly always well stocked with meat His love for meat still exists, but the inevitable "mealie" forms his staple food, and as long as there are "mealies" and Kaffirs the latter will continue to consume the former and maintain his fine teeth and well-formed jaw in the best of condition

I am, Sirs, yours faithfully,
THOMAS QUIRNEY M.R C S Eng, L R C.P. Lond.
Komgha, Cape Colony, Oct 6th, 1900.

THE DANGERS OF "TICKLERS."

To the Editors of THE LANCET.

SIRS,—Passing along the Strand yesterday (C I.V. day) I saw a peacock-feather-tip thrust into the eye of a person obviously suffering from purulent ophthalmia. Almost immediately thereafter the same feather tip was sent perilously near the healthy eyes of another person. Comment is needless; other diseases may possibly be conveyed in similar manner. Can nothing be done to suppress this dangerous nuisance?

I am, Sirs, yours faithfully,
ARTHUR J. HARRIES, M.D. Brux.

Adam-street, W.C., Oct. 30th, 1900

TENDER FOR CONTRACT BY MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—I enclose copy of letter received from the Castleford Urban District Council about attendance on cases at the infectious hospital, and I should be grateful for your opinion on the matter. Hitherto it has been the custom for each medical man to attend his own patients at the hospital and to make his own charges to the council. Personally, I feel it would be an unprofessional act to "tender" for an appointment in this way, and I propose to write to the council to this effect. I am, Sirs, yours faithfully,

Castleford, Oct. 30th, 1900. W. KEMP, M.B. Edin.

[COPY.]

Urban District Council Offices, Castleford, Yorks,
Oct. 29th, 1900

Re Cases at the Infectious Hospital

DEAR SIR,—I am instructed by this council to state that, in their opinion, the attendance of different medical practitioners at the hospital is, on several grounds, inadvisable, and that it would be better if one medical gentleman alone had the case [illegible] responsible for the payment of fees [illegible] patients desire to retain the services [illegible] they will be at liberty to do so, they [illegible] you if you will kindly give us your terms, including medicine and attendance, for cases of infectious diseases at the hospital.—Yours faithfully. H. H. BROADBENT (Clerk).

Dr. W. Kemp, Castleford.

*** The medical men of the district should meet and agree upon the course to be pursued. In this way a decision will be arrived at that is best for the community. We do not think it well that medical men should tender for contracts, and we are certain that where this method is employed the public will be badly served.—ED. L.

"ORTHOPTIC TREATMENT OF CONVERGENT SQUINT IN YOUNG CHILDREN": A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to correct one or two errors in your notice of the paper read by me at the last meeting of the Ophthalmological Society?[1] The report says: "Mr. Worth ...... commonly commenced treatment as follows." This should be: "Treatment adopted by most surgeons was as follows." Again, "The visual acuity of the child's squinting eye was obtained." It will naturally occur to anyone that these small children cannot read Snellen's types. It should have been mentioned that I described a method by which the visual acuity might be ascertained. The report says: "Mr. Worth had found that this treatment in some hundreds of cases caused a disappearance of the squint, &c." What I said was that I had carried out the treatment in some hundreds of cases and in a considerable proportion it had caused a disappearance of the squint, &c.

I am, Sirs, yours faithfully,

Harley-street, W. CLAUD WORTH.

*** We regret the inaccuracy of the report.—ED. L.

THE MEDICAL DIRECTORY FOR 1901.

To the Editors of THE LANCET.

SIRS,—You have frequently been good enough to refer in your columns to the accuracy of the Medical Directory. As you are aware the Directory cannot be up to-date unless all the members of the profession and the secretaries of medical institutions respond to the editors' requests for information. All persons interested must now communicate with the editors at once, for in a few days it will be too late to attend to any further alterations.

We are, Sirs, your obedient servants,
J. & A. CHURCHILL.

Great Marlborough-street, W., Oct. 22nd, 1900.

THE TEACHING OF HISTOLOGY, ETC., AT ST. ANDREWS UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—I would like to point out a slight inaccuracy, or rather omission, which occurs in your table of classes on page 689 of THE LANCET of Sept. 1st, 1900, which has been brought under my notice. It would appear from this list that I only teach in summer and do not teach histology. I give in winter (1) a full junior course of 100 meetings, (2) a senior (lecture) course of 40 to 50 meetings, and (3) a senior practical course of 50 meetings; and in summer (1) a course of 50 meetings of histology and physiological chemistry and (2) lectures on development and reproduction (see pages 164–166, Calendar, 1900–1901, St. Andrews University). I think your otherwise excellent list hardly represents my classes correctly. I am, Sirs, yours faithfully,

D. FRASER HARRIS.

University of St Andrews, Oct. 23rd, 1900.

"THE SPAS OF CENTRAL WALES."

To the Editors of THE LANCET.

SIRS,—I am sure that much real good would be done and much valuable instruction gained in the field of hydrotherapeutics if the excellent suggestion of Mr. T. Garrett Horder in THE LANCET of Oct. 20th (p. 1176) could be carried out. I am pretty certain that the majority of our profession are quite ignorant of the sound inducements which are offered by our spas at home. These spas would become better known to the profession and their merits could be sifted therapeutically if the Balneological Society would adopt the suggestion of Mr. Garrett Horder and visit the various spas in this country. He speaks of the beauties of Central Wales and the remarkably bracing effects of the beautiful elevations of that district. He did not speak of the medicinal value of the waters found there. Yet if he will refer to the analyses of these waters and to the clinical records concerning them he will find that we possess near at hand means not excelled by those of any Continental resort of treating patients by a course of waters internally and externally. In the district of which he speaks there are three more or less well-known spas—namely, Llandrindod, Llangammarch, and Llanwrtyd. The first has its sulphur and saline springs, the second its barium and saline waters, and the third its waters like Harrogate. Llangammarch is right in the centre of this beautiful elevated district; it is charmingly situated and enjoys most invigorating air. The hotel is high up and just under the imposing shelter of the Eppynt range (1800 feet). In the *British Medical Journal* of Oct. 20th Dr. Robert Saundby, speaking of Llandrindod, which is close to Llangammarch but not so prettily situated, says that it owes more to its altitude and climate than to the waters, and on this account is so satisfactory in the treatment of nervous exhaustion, dyspepsia, and gout. Quite recently you, Sirs, drew our attention to[1] the iron waters of Shanklin Spa, and at the risk of trespassing on your space I cannot help repeating the valuable opening remarks you made in that article. "In spite of representations to the contrary English people still visit the various spas of the continent, whatever may be the advantages which may be had at similar places in this country. Fashion is doubtless the chief factor which has hitherto been unfavourable to enterprise in regard to the development of English spas. Yet if a list of the natural springs of Great Britain be consulted it will be found that almost all kinds of mineral waters occur in this country. We have thermal baths at Bath, sulphur waters at Harrogate and Llanwrtyd in Wales, and saline springs and barium springs in Wales, not to speak of the chalybeate springs at Tunbridge Wells, Brighton, and elsewhere. In some instances, of course, great efforts have been made to equip these places on a scale similar to Homburg, Wiesbaden, and Schwalbach on the continent, but our home resorts do not possess the renown of the foreign spas. Individual enterprise has done what it could but patronage has failed." I venture to think that the Balneological Society would earn the gratitude of the whole profession by bringing before it the undoubted merits of our own spas in the way Mr. Garrett Horder has wisely suggested. I inclose my card

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[1] THE LANCET, Oct 27th, 1900, p 1205

[1] THE LANCET, Oct. 6th, 1900, p 1029.

I am Sirs, yours faithfully,

Oct 30th, 1900. VERAX.

"THE ROYAL ARMY MEDICAL CORPS: 'THE REASON WHY.'"

To the Editors of THE LANCET.

SIRS,—"Deadly Seniority's" letter in THE LANCET of Oct. 27th will hardly commend itself at the present moment to officers of the above overworked corps Is this an opportune moment, when every officer of the corps has been working at high pressure and conspicuous zeal, for "Deadly Seniority" to advocate increased burdens being laid on their shoulders? Rather, I should think, it is time for the authorities to look about them for some means of making the corps more popular among the rising young medical men of the day. It is all very well to advocate extra examinations and increased "special instruction" classes, but when men are laying down their lives on the battle field [illegible] will last them the remainder of [illegible] home at ease" like "Deadly Seniority" would serve a better purpose and do more for the well-being of their military *confrères* if they tried to lessen, instead of augmenting, a burden which has proved a great deal too much as it is at present for a great number of officers. The classing of lieutenants of the Royal Army Medical Corps with the subalterns of a line or cavalry regiment as regards their knowledge of the special duties of their corps shows how little "Deadly Seniority" can know of the actual working of the Royal Army Medical Corps, where the knowledge of their professional work is the first and the routine of military work the second point to be considered.

I am, Sirs, yours faithfully,

ONE OF YOUR LATE CORRESPONDENTS IN SOUTH AFRICA.

Oct. 30th, 1900

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Great Increase of Plague in India.—Cholera in Kashmir.—Decrease in the Famine.—The Success of the Pasteur Institute.—Famine and Vitality: A Problem

A FURTHER serious rise has occurred in the mortality from plague throughout India—viz, from 1442 deaths for last week to 2136 deaths for the past seven days. The Bombay Presidency reports 1215 deaths, Bombay city 87, Bengal Presidency 33, Calcutta 104, and the Mysore State 696. The increase seems to be pretty general. Poona is once again in the throes of a severe outbreak, and is having from 60 to 80 deaths from plague every day. Up to a recent date the disease was confined to the city, but within the last few days indigenous cases have been discovered in the cantonment. It will be remembered that the first outbreak in Poona occurred in the first three months of 1897, the second occurred in the last four months of the same year, the third occurred in the monsoon months of 1899, and now the fourth is developing at about the same period of the year as the second in 1897. All seasons have thus been represented with the exception of the hottest months. Plague seems to be rising in Calcutta, while the returns for Bombay city show an ominous fluctuation In Mysore city there are over 100 cases daily. This general increase is very ominous Just as a local outbreak develops slowly for some time before the almost sudden explosion of virulence [illegible] or trebles the mortality, so this [illegible] from plague in so many different [illegible] howing a concurrent development of the disease at several centres, may be expected to assume alarming proportions at a later period. The present recrudescence commenced in Mysore and some of the towns in the Southern Mahratta country, and while the local outbreaks were reaching their height it has been commencing in Poona Presently renewed activity in Calcutta and Bombay may be looked for There are already indications in both cities of a recrudescence of the disease. The general mortality in Bombay city keeps inordinately high. Last week 1026 deaths were returned, and there has been a slight rise to 1043 for the past seven days. Of these 86 were plague and 54 were cholera, so that the excess of over 300 has to be accounted for. Diseases of the digestive system are abnormally prevalent and there are large excesses in the deaths from phthisis and other lung diseases. The situation is unsatisfactory.

The sudden increase in the mortality in Calcutta which has followed the floods (of Sept 19th to 22nd) which I reported last week still continues and the daily death-roll is about double in size While cholera, diarrhœa, and dysentery explain a large proportion of these deaths there are others which remain [illegible] The cases returned in the [illegible] have increased, but there a [illegible] tily accounted for. Relapses of malaria from exposure, &c, may explain many deaths, as it is hardly likely that plague would take on such a sudden development. So few natives are really seen during their illness that the diagnosis from reports after death is exceedingly difficult. The increased mortality occurred at first in the suburban districts, but it has since taken place all over the city. The worst-drained and the most malarious districts suffered most.

Cholera still continues severe in Kashmir, where up to Sept 30th there have been 4634 cases and 2379 deaths.

A drop of nearly another 500,000 is reported this week in the numbers under famine relief, the total for the whole of India being now just over 3 000,000, of whom 693,000 are on relief works and the remainder are receiving gratuitous relief.

The Pasteur Institute at Kasauli under Major Semple, R A M.C., is being sought after by all classes. The total number of patients to date is 52—viz., British officers, 7; soldiers, 22; native officers, 1; sepoys, 3; European civilians, 5; and natives, 14 Two Brahmins have commenced the treatment, which may be taken as an indication that high-caste natives are not averse to taking advantage of the institute.

Some curious results are brought out by a comparison of the vital statistics of the North-west Provinces and Central Provinces for the year following the last famine Both provinces suffered severely from the famine in 1897, but with returning prosperity the increase of births was remarkable. The year ending in 1899 showed a still higher birth-rate. It is said that the districts which suffered most show the rise above the mean rate. This increased birth-rate after famine times has been observed before. The question is whether the cause is physical or social It may mean that large numbers of marriages which had been temporarily postponed took place with the earliest signs of returning prosperity. On the other hand, the cause may be physiological and may be an effort of nature, so to speak, to replace the loss caused by the famine This has its analogy in the animal and vegetable kingdoms. Increase of food-supply does not necessarily increase the population and many plants are known to seed better on a poor soil than on a rich one. The increased birth-rate of these two provinces was accompanied by a great rise in infantile mortality Notwithstanding the famine and the high infantile mortality the population has increased by 700,000, whereas in ordinary years the deaths almost equal the births and the population has been nearly stationary According to this generalisation next year ought to see a great increase of population (by a great number of births) in all those districts affected by the terrible famine of the present year.

Oct. 4th

BLACK-BEETLES AND LODGINGS.—At the Paignton (Devon) County-court on Oct 22nd a lodging-house keeper sued a gentleman for £9 for rent of furnished apartments. Evidence showed that the defendant had engaged the rooms for three weeks from July 14th, but that owing to the prevalence of black-beetles in the bedroom he left after three days. He, however, offered to pay for the three days' use of the rooms The plaintiff's case was that the rooms were reasonably fit for habitation His Honour (Judge Edge) held that any person taking a lodging and finding black-beetles there would be justified in leaving and gave judgment for the defendant with costs

THE UNIVERSAL EXHIBITION OF PARIS.

(FROM OUR SPECIAL CORRESPONDENT.)

(Continued from p. 1239.)

THE FOREIGN AND BRITISH SANITARY SECTIONS.

The British Sanitary Section.

IN the British section there is only one stove, that of Messrs. Musgrave, the well-known Belfast firm. In view of the numerous accidents that have happened this firm will not consent to manufacture a portable stove, and further they have now a special air inlet so that fresh air may be mixed with the products of combustion and thus help to oxidise them. It is in the artistic decoration of the stoves rather than in any very recent improvement of construction that this exhibit has made its mark. Further, it is satisfactory to note that these British stoves are much appreciated and largely sold in France, where the method of economic warming by means of stoves instead of open fires has been much more studied and utilised than in England. The largest of all the exhibits is that of Messrs. Doulton and Co. who as members of the jury are *hors concours* They have two very artistic fire-places made of Doulton ware with slow combustion grates. So much has already been done in respect to the construction of closets and urinals that it is difficult to improve upon the models that are almost perfect, yet in respect to urinals there is a new method of draining them in an open glazed channel which is only covered over with brass grating. There are, therefore, no small pipes and pipe fittings. This means less labour and less chance of a stoppage and consequent nuisance. The water travels in the open till it reaches the gully or trap at the end of the row of urinals. Everything can thus be readily cleaned and those bugbears of urinals, cigar ends, can be dealt with in a summary fashion. Also, instead of the water being delivered all round the top of the urinal it is now discharged in the centre of a spreader or disc placed in front of the pipe. The water is equally and well distributed and this is a simplification in regard to fittings An asylum closet is shown where there is no sharp edge, angle, or hook, and no chain or string, by which the patient might injure himself. Then there is a bath with a rim around it so contrived that water cannot splash out of it. The outside also as well as the inside is enamelled, and this preserves the metal which is apt to be injured by the action of the atmosphere, especially at the seaside. For a hospital washstand and to prevent the risk of overflow the water is turned on by pressing a pedal with the foot, but after a moment a self-regulating valve shuts off the water. If more is required the pedal must be pressed again. Then to a hospital bottle and pan-washer a glass lid is affixed, which when raised produces a flush that automatically washes out the pan. Also there is a gulley which can be opened for cleansing purposes by removing only two screws and access is then gained to the top of the trap

Opposite Messrs. Doulton's exhibits there are Blackman's well-known ventilating screw fans and Boyle's equally well-known exhaust cowls. Close by Jeyes's Perfect Purifier is the only disinfectant shown in this section.

Mr. George Jennings who has received the highest award—namely, the "Grand Prix"—also makes a very large display of his well-known and excellent sanitary apparatus. He has likewise public urinals with no piping but open channels instead. Then there is a very ingenious urinal for domestic purposes which is closed over by a door; when the door is opened it causes a flush of water, and when closed it looks like an ornamental cupboard. There are some special closets for asylums and railway stations, so contrived that the flushing gear cannot be injured by mischievous or rough treatment. Close by there is a closet pan the porcelain part of which rises about a foot above the back of the seat. The latter has a counter-weight so that it is always raised unless purposely pressed down. When the seat is raised the pan forms at once a urinal and a receptacle for slops. Of course, the same may be said of any closet where the seat can be raised, but in this case the risk of spilling water on the floor is less likely to occur as the back of the pan rises considerably above the level of the seat. There are also some washstands which on tilting the basin disclose a urinal underneath and at the same time the raising of the basin flushes the urinal. Finally, I noticed a closet pump for yachts and other ships, where the force of the pump is arranged so that the contents drawn from the pan of the closet are propelled to some distance from the ship.

Another large exhibit is that of the Établissements Porcher which have the monopoly for the sale in France of the sanitary hardware manufactured by Messrs. Brown, Westhead, Moore, and Co. This exhibit is interesting because it shows us that some 20 years ago there were practically no French manufacturers who produced sanitary closets. Nothing that was then made could prevent the passage of sewer air or automatically insure anything approaching to cleanliness. Such closet pans as existed had to be cleaned with the aid of a brush; an effective flush was unknown. Therefore, the few really sanitary closets that were placed in French houses had at first to be imported from England. Hence to this day the French Porcher Company import largely English goods and therefore exhibit their closets in the British section, for in the main they are of British manufacture though some of the fittings are of French make. The chief feature in the latter is that they have contrived to attach the wooden seat and even the wooden lid to the hardware pan instead of being fixed to the wall behind the pan. One pan is provided with a double syphon and this when the water is discharged produces a momentary vacuum between the two syphons, so that the water is drawn by suction instead of being merely propelled out of the pan. It would require a lengthy series of experiments to judge whether this is an advantage.

The Dutch and Austrian Sections.

Leaving the British section there is a small compartment close to the German section where the Dutch give some information as to the sanitary administration of Holland. For instance, there are photographs of all the sanitary offices at Amsterdam, of the system of disinfecting, and showing how a house is declared to be infected by a notice affixed to the door so that no one can enter unaware of the danger incurred. Then comes the Austrian section which though very small attracts some attention because there is a wax model, life-size, of a calf during the process of collecting vaccine lymph. The precautions taken and the sterilised dressing to protect the vaccinated parts are all displayed in a manner that should dispel whatever apprehension may still remain in regard to vaccination. Very fine coloured maps indicate the distribution of diseases in different parts of the Austrian Empire and there are the exhibits of various institutions and sanatoria, especially for children, but there is nothing in regard to drainage, ventilation, or sanitary engineering.

The Russian Section and the Jenner Memorial.

The Russian sanitary section occupies a very large space, a great portion of which is taken up by wax models. Some of these come from the St. Petersburg Museum of First Help. They are life-size models of accidents to various parts of the body and they show how hæmorrhage may be stopped and temporary dressings made in the absence of, or while waiting for, surgical aid. This is a somewhat ghastly display; it does not fail to attract a large crowd and calls forth many expressions of commiseration. The question is whether many people try to engrave upon their minds the indications given and will remember what to do under similar emergencies. Under the auspices of the Russian Society for the Protection of Public Health, which is patronised by the Government, a public culinary school has been formed and it exhibits wax models of various sorts of meat and of vegetables in both healthy and unhealthy conditions. There are also many other articles, such as coffee and every substitute used for coffee, torrefied maize, wheat, chicory, &c.; in fact, there is here a complete museum of domestic economy. Close by there is a large exhibit of the Russian Red Cross Society. It consists of a field ambulance which has not only a hospital tent, an operating tent, a portable pharmacy, and sterilisers for bandages and instruments, but also a kitchen with all the cooking utensils and all the tools necessary for mending any object belonging to the ambulance. Only a very small compartment of the Russian section is reserved to private exhibitors. Here there is a sort of cupboard with wire arrangements for keeping books open so that they may be disinfected. Then there is a domestic filter, just a simple sandstone to clarify the water, but below inside the pedestal on which the filter is placed is an electric pile, the electrolytic gases produced thereby being said to exert a purifying action on the water.

What, however, will interest English visitors most is a handsomely decorated compartment which may be described as the Jenner exhibit. This has been the work of Professor Hubert, physician for the children of the poor and secretary of the Russian Society for the Protection of Public Health. This exhibit is a veritable history of vaccination, especially in so far as Jenner himself was concerned. In the centre there is a picture of one of Jenner's first experiments in vaccination; then there are several manuscript letters written by Jenner and four of his own coloured drawings of vaccine pustules. One wall is covered with all manner of caricatures and other prints published when first the question of vaccination began to agitate the public mind In one case there is the brevet by which Alexander Aspénny was promoted to the rank of sub-lieutenant because he was the first to consent to be vaccinated. This original document bears the signature of Catherine II. and the date of 1768. Jenner's answer, written in 1802, to a letter which he had received from the Empress Maria Feodorowa is likewise shown, as is a collection of medals struck in commemoration of important events in regard to vaccination. There are many drawings and wax models of healthy and of abnormal pustules, and though most of these things are purely historical the latest innovations are also exhibited. Thus what constitutes an entire room is devoted in the main to relics recalling the great work done by Jenner, and these, which have been collected by a Russian, form part of the Russian section. Nowhere in the British sanitary section is any sort of honour rendered to any one of the many Englishmen who, like Jenner, have largely contributed to benefit humanity by initiating some important sanitary reform.

Paris, Oct. 29th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Hospital Sunday Fund.

FOR more than 40 years a special appeal has been made annually at the various places of worship in Birmingham and its suburbs on behalf of the hospitals and allied institutions for the relief of suffering. It has been customary since the movement was started to present the full amount collected to the General Hospital one year, the next year to the Queen's Hospital, and the third to the amalgamated charities, some 16 in number. Sunday, Oct 28th, gave an opportunity of repeating this valuable effort. In spite of adverse weather and so many outside calls upon the pockets of the benevolent it is satisfactory to record a ready response to the appeals made. Up to the present time the amount collected has reached the sum of £4000 odd.

The Hospital Saturday Fund.

A worthy sister of the above movement, one which has exceeded it considerably in dimensions and to some extent in interest also, is the Hospital Saturday Fund. A meeting of the delegates was held on Oct 23rd when cheques were distributed by the Lord Mayor to the various medical charities participating in the proceeds. It was announced that the collections up to date amounted to £18 204 12*s* 8*d*., beating the record of last year by £73 The chairman stated that they would like to increase the amount of the cheques to the various institutions, but that they had other liabilities which had to be met. They had made improvements alone costing £4000 at the Tyn-y-Coed Convalescent Home. The systematic collections made from the manufactories enabled this method to assume large proportions and to be so successful. Cheques amounting to £10,000 were then distributed to different medical charities in proportion to their size and needs and votes of thanks were passed to those who had given so much time and labour to the details connected with the scheme.

The Midland Medical Society.

The inaugural meeting of this society for the session 1900–1901 was held at the Grand Hotel on Oct 26th. A large number of members and visitors assembled to hear an address given by Professor Alexander R. Simpson on the Invention and Evolution of the Midwifery Forceps. As professor of midwifery in the University of Edinburgh and as one having exercised much care to, and shown ingenuity in, the perfection of the axis traction forceps Dr. Simpson spoke as an authority upon the subject. Many of his former pupils joined in the thanks accorded to him at the close of the address, testifying to the interesting and clear manner in which the subject had been placed before them.

The Consultative Medical and Surgical Institution.

No doubt the memory of the formation of this movement and the criticisms connected with it are still fresh in the minds of many of the profession. The first report of the committee was presented at the annual meeting held on Oct. 29th. The institution, it was stated, was established to lessen the strain on hospital charity by providing on terms within, and under conditions suitable to, their pecuniary means and position medical and surgical aid to those who would otherwise seek it gratuitously, or be unduly taxed by paying the usual consultation fees. The committee state that during the 21 weeks which had elapsed since the opening of the consulting rooms in May 222 patients consulted the consulting physician, Dr. H. Ward Irvine, 148 being men and 74 women. The various occupations of the patients are given and the committee go on to say that they consider this result very satisfactory notwithstanding the organised hostility of certain members of the medical profession. They moreover consider that the need for such an institution was both real and widespread. They look forward sanguinely to increased results for the future. When we read further we read that the financial result can hardly be regarded with the same amount of satisfaction, for the income and expenditure account shows a deficiency of £343 13*s* 6*d*. on the working of the institution to date—that is, 21 weeks. The committee, however, believe that before long the debit balance will disappear and that the institution will become self-supporting.

Oct. 30th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Black Smoke.

A STEP forward on suitable lines is being taken by the Salford Corporation in dealing with the smoke nuisance. Everyone knows that manufacturers all over the country pose as martyrs in a good cause—i.e., their own—if any attempt is made to lessen the nuisance which so many of them are busily engaged in producing. But Mr. C. H. Tattersall, the medical officer of health, thinks that there is no necessity for any black smoke, and that the conditions which lead to its prevention are advantageous to the manufacturers. The Health Committee of the corporation have therefore instructed him to issue a circular warning manufacturers and advising them as regards the prevention of black smoke. Deficient boiler accommodation is one of the chief causes of its occurrence, and bad stoking is another In the former case the Health Committee recommend the use of mechanical appliances which they say are necessary, and state that "if the boiler accommodation is adequate the firemen and not the manufacturers will be prosecuted." The committee wish it to be clearly understood by the manufacturers that "they must either provide adequate boiler accommodation or be responsible for the emission of black smoke." It is stated that in an ordinary Lancashire boiler, 30 feet by seven and a half feet, with a proper draught, the amount of coal used ought not to exceed 20 tons per week where hand-firing obtains. Where this quantity is exceeded mechanical appliances are considered to be necessary It is also stated that sufficient boiler accommodation together with firing by competent men give the most satisfactory results. The committee will prosecute the firemen, and not their employers, should an offence take place where the boiler accommodation is sufficient. The medical officer of health will be glad to confer with owners or managers of works in the borough as to the abatement of the smoke nuisance. It is quite fair to make the firemen bear their share of responsibility, for in many cases the masters have been at their mercy as regards emission of smoke. These men have thought it less troublesome to throw a quantity of coal occasionally into the furnace and thus to cause black smoke than to feed the furnace more frequently with less at a time.

The Milk-supply of Manchester.

An interesting and important letter from Dr. H. Ashby on the Manchester milk-supply appeared in the *Manchester Guardian* of Oct. 24th. He says that milk contaminated in the cowshed, in the shop, or in the household, is largely responsible for the infantile diarrhœa and other wasting diseases which swell the high death-rate of infants under a year old in this and other cities, but that condensed or preserved milk is often contaminated in the household and is as likely to give rise to diarrhœa as so-called fresh milk. He does not, however, altogether advocate the use of sterilised milk. The sterilising process destroys the bacteria of the infectious diseases (such as tuberculosis) and the many micro-organisms which get into the milk from the cowsheds and dairies, but it injures the milk as to its nutrient qualities and sterilised milk is not to be compared as a food with clean and pure fresh milk. He is, therefore, in favour of preventing the contamination of milk with bacteria rather than their destruction after they have entered the milk. He cites the experience of the Walker-Gordon Company of New York and London, the Copenhagen Milk Supply Company, and the Manchester Pure Milk Supply Company to show that this can be done. "By the inspection and care of the cows, the most rigid precautions in the handling of the milk in the cowshed and dairy by maintaining the milk at a low temperature, and supplying it ...... in sealed bottles contaminations are avoided and a more wholesome and safer milk can be supplied to the infant than by any sterilising process." A supply of such fresh milk as this in bottles sold at a reasonable rate and, as he significantly adds, "a levelling up of the habits of some of our fellow-citizens," would rapidly lower the infantile mortality. Perhaps the next generation of mothers now being educated in our schools may know that pure milk is more desirable than dirty milk, and that bread-and-butter, potatoes, meat, tea, and gin, are not suitable articles of diet for children under 12 months old. Or is this too much to expect? In a report to be presented to the Lancashire County Council on Nov. 1st Mr. Edward Sergeant, medical officer of health for the county, enforces the necessity of a pure milk-supply, especially with reference to tuberculosis, and he states that 50 per cent. of the cows in the ordinary farmer's shippon suffer from tuberculosis, while "from 1 to 2 per cent. have tuberculous udders secreting milk capable of rendering actively infectious the milk from the healthy cows when mixed with it."

Proposed Hospital for Infectious Diseases.

On Oct. 12th a town's meeting was held to consider the proposal of the Manchester Corporation to erect a hospital for infectious diseases on Carrington Moss, when a vote adverse to the scheme was given. A poll of the ratepayers has been demanded and in the meantime letters are appearing in the local press advocating or opposing the project. Exception is taken in one of the weekly papers to the proposed provision of 240 beds as excessive. It is based on the fact that of late years the cases of small-pox in Manchester have been few, and then follows a fallacious argument as to the effect of improved general sanitation: "Every year the sanitary condition of the city is improving, thanks to Alderman Walton Smith and his colleagues, and the *chief causes of small pox*—filth, bad air, and crowded dwellings in slum districts in proximity to polluted streams—are in process of being removed." As if filth, bad air, and over-crowding would produce small-pox in the absence of the specific cause. Objection is also taken to the estimate of £60,000 as being much too low, and £100,000 is considered as nearer the sum that would be required. No doubt 240 beds for small-pox cases may be nearer the theoretical standard for the population of Manchester than a smaller number, yet if we bear in mind the rate of spread of small-pox when all possible means of isolation are adopted, as will be the case in Manchester, and the eager way in which even anti-vaccinationists—as long as the disease is at a distance—flock to the medical man on its approach, there is some force in the plea for a smaller permanent hospital. This is all the stronger when it is remembered how rapidly temporary accommodation can be provided when required, if the ground is available and the requisite administrative facilities are ready and sufficiently elastic. As regards the site, it will puzzle the ratepayers or any of their leaders to find a better one than that at Carrington Moss. The neighbourhood of Manchester is so thickly populated that within an equal distance from the centre of the city it is more than doubtful if a piece of land can be acquired, at any cost, presenting so many advantages and so few disadvantages. Carrington Moss already belongs to the corporation, it has very few houses on it, and it fulfils the requirements of the Local Government Board more completely than any other suggested site. Nor does the objection that it has been used as a place of deposit for excreta and refuse apply more strongly than to agricultural land generally. Dr. Dixon Mann went over it some months ago and found no ground for objection; "the air was free from odour and the ground showed no signs of offensive matter." My own experience entirely confirms this. When I last visited the Moss vegetation was luxuriant, the air was sweet, fresh, and bracing, and the whole sweep of about 1200 acres showed the wonderful change that can be effected by energetic and skilful farming which, by the way, has not been unprofitable. The objectors on this score should read Dr. Vivian Poore's experiments.

Christmas Beer in the Workhouse.

As the day approaches on which we commemorate the announcement of the message of peace and goodwill the various boards of guardians have a contention as to whether those under their care are or are not to have any Christmas beer. The house visiting committee of the Chorlton Board of Guardians at their meeting on Oct. 26th recommended that beer should be supplied as usual to the inmates of the Withington workhouse with their Christmas dinner. An amendment, proposed by one lady guardian and seconded by another, that the question should be referred back to the committee was rejected. At the meeting of the Prestwich Board of Guardians on Oct. 25th a long discussion was introduced by a lady guardian who moved that the practice of giving beer on Christmas Day should be discontinued. This was seconded but lost, so that the Prestwich inmates will have their beer if they wish. But they have the choice of beer or milk, and many are said to prefer the latter Reason and moral considerations, arising chiefly from alcoholic abuse and its consequences, point in one direction, while sentimental regard for old-time customs, when some form of alcohol was thought an absolute necessary of life and the essence of good cheer, points in the other and is generally followed.

Appointments.

Dr. Robert B. Wild has been elected an honorary physician to the Cancer Pavilion and Home in succession to the late Professor D. J. Leech —On Oct. 22nd at the meeting of the special-committee of the trustees of the Manchester Infirmary for the appointment of honorary surgeons, Mr. W. P. Montgomery, M.A. Oxon., B.S., M.B. Lond., F.R.C.S. Eng., was appointed honorary assistant surgeon to fill the vacancy caused by the appointment of Mr. W. Thorburn as full surgeon.

Oct. 30th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Opening of the Diamond Jubilee Pavilion of the Edinburgh Royal Infirmary by Princess Henry of Battenberg.

ON the afternoon of Oct. 26th the ceremony of opening the new pavilion of the Edinburgh Royal Infirmary was performed by H.R.H. Princess Henry of Battenberg. The Princess, who was the guest of the Duke and Duchess of Buccleuch at Dalkeith Palace, drove into Edinburgh by the Cameron Toll, the old Dalkeith-road, Preston-street, and Nicholson-street. After lunching with the Lord Provost in Charlotte square Her Royal Highness proceeded to the infirmary by way of Princes-street and the Mound, all traffic being stopped along the route. A large number of tickets of admission to the infirmary had been distributed, so that the corridors along which the Princess was to pass were lined by persons anxious to see Her Royal Highness, while in the middle ward of the new pavilion sitting accommodation had been provided for holders of special tickets. After performing the ceremony of opening the outer door of this ward with a gold key, the Princess, attended by the managers and senior members of the hospital staff, walked through the ward to the south end, where a small platform had been erected. The Rev. Dr. Archibald Scott then opened the proceedings with prayer, after which the Lord Provost made an appropriate speech referring to the history of the Edinburgh Royal Infirmary and the principles on which it was worked, as well as to the persons by whose generosity it had been made possible for the managers to erect the new pavilion. The Lord Provost subsequently presented the key to Her Royal Highness, who then declared the building open. Professor Rankine in a short speech proposed a hearty tribute of thanks to the Princess for her services in having opened the pavilion, after which Her Royal Highness left the ward. After spending a short time in the institution the Princess and party drove back to Dalkeith, where Her Royal Highness spent the night, leaving for the north early on the morning of Oct. 27th.

The Diamond Jubilee Pavilion is to be especially devoted to the treatment of gynæcological cases. About half of the cost of the pavilion will be defrayed from the Diamond Jubilee Fund raised by the citizens of Edinburgh in 1897. Nine-tenths of the fund, amounting to £19,178 7*s.* 11*d.*, were given to the treasurer of the Royal Infirmary for this purpose. The whole cost of the p [illegible] £40,000, the additional £20,000 [illegible] reserved for purposes of extens [illegible] ıds immediately to the west of the medical pavilions on ground purchased by the managers from the directors of the Edinburgh Royal Hospital for Sick Children. The style of architecture is similar to that of the previously existing pavilions. The new pavilion, however, is larger than these, and being built of red stone has quite a distinctive character. The building is five storeys high, containing a basement floor, three floors of wards, and attics. At the south end are octagonal turrets rising to the height of 95 feet. Between the turrets are open balconies, and on one of these balconies is a granite memorial stone with an inscription as follows:—"Dedicated to the glory of God and the healing of human suffering in commemoration of the sixtieth anniversary of the accession to the Throne of Her Most Gracious Majesty Queen Victoria: the thank-offering of many for great benefits bestowed upon the realm during her reign." At the north east angle of the pavilion there is a large square tower within which is the staircase which measures 20 feet by 30 feet, and in the upper part there are electric fans for the ventilation of the building. The basement floor contains the new bathing establishment. This contains a Turkish bath with three hot rooms graduated in temperature, a douche room, and vapour, needle, sulphur, electric, and other medicated baths. The cooling room measures 70 feet by 10 feet, and there is ample provision for dressing-rooms, lavatories, and attendants' rooms. All the rooms connected with the bathing department are tiled both as to the floor and the walls, while between this department and the wards above there is a strong double concrete floor with intermediate ventilated air space which is intended to prevent the heat from the baths penetrating to the wards above. The new pavilion is connected with the main buildings of the infirmary by a covered corridor on the ground floor and by an open gallery on the first floor. The pavilion is provided with three lifts—for patients, food, and coals respectively.

The ward on the ground floor is intended for a reserve medical ward, to be used when any other ward in the medical hospital is being cleaned. The wards on the first floor and second floor are for gynæcological cases and will be under the care respectively of Professor A. R. Simpson and Dr. J. Halliday Croom. On these floors, in addition to the main ward, are an operating room, two special wards of two beds each, a demonstration or lecture room, an out-patients' room, and a physicians' room, as well as the ward kitchen, bathroom, lavatories, an isolation ward with one bed, nurses' bedrooms and parlour, linen stores, &c. The operating rooms have been tiled throughout. The walls of the pavilions are not strapped and lathed, but the plaster is laid on a brick lining separated from the outer wall by an air space. The floors are of iron and concrete and the floor boards are nailed to a layer of asphalt laid on concrete. The attic floor contains 14 single rooms for 14 nurses and seven rooms for servants, besides ample lavatory, bathroom, and boxroom accommodation. For heating the pavilion steam pipes and radiators will be used and in each ward there will be an open fireplace. The ventilation will be by means of electric fans placed in the tower in the north-east corner. Between this pavilion and the new laundry on the north there are being erected two buildings of smaller size—one for the treatment of diseases of the ear and throat, the other for diseases of the eye. The kitchen is also at present being much enlarged and improved at a cost of about £6000. Several storerooms have been taken into the old kitchen and the building has been doubled in height. It is tiled from floor to ceiling and is lined with new kitchen "plant" in the shape of boilers and ovens, from the size of which one feels assured that [illegible] the inmates of the infirmar [illegible]. It is 30 years ago since t [illegible] foundation-stone of the present buildings of the Edinburgh Royal Infirmary, and by this time not far short of half a million of money has been spent on the land, buildings, equipment, and enlargement of the institution which is now one of the largest hospitals in the country.

Dr. J. O. Affleck's Retirement from the Edinburgh Royal Infirmary.

A few weeks ago Dr. J. O. Affleck's term of office as an ordinary physician came to an end, the vacancy on the staff of the full physicians being filled by the promotion of Dr. G. A. Gibson to be a full physician. The managers of the infirmary at a meeting held recently adopted the following minute:—

Dr Muirhead, convener of the medical managers' committee, directed the attention of the board to the recent expiry of Dr J. O. [illegible]

[illegible] devotion he has ever bestowed upon the health and welfare of the patients as well as of the [illegible]

[illegible] infirmary.

Oct. 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal University of Ireland.

THE meeting of Convocation of the Royal University of Ireland which was held in Dublin on Oct. 25th has, I regret to say, given rise to the utmost dissatisfaction to the great majority of graduates who were present. The principal business at the meeting was the election of a clerk of Convocation (at a salary of £100 per annum) and for this post there were five candidates: (1) Mr. W. H. Brown, M.A., LL.B.; (2) Mr. John Donaldson, M.A.; (3) Mr. Charles F. Doyle, M.A.; (4) Mr. James C. Meredith, M.A.; and (5) Mr. W. J. White, M.A. Lord Morris (Vice Chancellor) presided, and the small room in which the meeting was held was crowded with the supporters of the candidates who had come great distances to vote, as personal, not proxy, voting alone is allowed. The first point to be discussed was as to the mode of election, but most unfortunately a show of hands was allowed and this indicated very ea [illegible] following of the various candidate [illegible] Honour Judge Shaw, M.A., that [illegible] voting should be employed with [illegible] the choice of the majority pre [illegible] adopted. In other words, his advice was to put up all the candidates (each voter to record his vote for one) and after every time of voting to cut off the lowest on the poll until eventually the choice would lie between two. The Roman Catholic Bishop of Limerick urged that the proper plan was simply to take a show of hands and to declare the candidate with the largest number of votes elected. Serjeant Dodd, Q.C., suggested the method adopted by the Benchers of King's Inn, which would, in the end, practically give the majority of those present of tuberculosis to the extent that they are only notifiable when occurring in educational institutions, boarding schools, asylums, and hospitals, unless they are cases which terminate fatally, when they must be notified wherever they occur.

Oct. 29th.

NEW YORK.

(From our own Correspondent.)

The Massachusetts Arsenic Law.

The Massachusetts State Board of Health has secured an Act fixing severe penalties with regard to the use of arsenic in fabrics. The law as approved on May 18th becomes operative on Jan. 1st, 1901, and places the power in the hands of the State Board of Health. The Act provides that any corporation, firm, or agent, who directly or by an agent manufactures, sells, exchanges, or has in his custody or possession with intent to sell or exchange any woven fabric or paper containing arsenic in any form or any article of dress or of household use composed wholly or in part of such woven fabric or paper, shall on conviction thereof be punished by a fine of not less than $50 or more than $200; provided, however, that the section shall not apply to dress goods or articles of dress containing not more than $\frac{1}{100}$th of a grain, or to other articles or materials containing not more than $\frac{1}{10}$th of a grain of arsenic per square yard of the material. The State Board of Health shall make all necessary investigations as to the existence of arsenic in the material and articles mentioned in Section 1 of the Act and may employ inspectors and chemists for that purpose, and shall adopt such measures as they may deem necessary to carry out the provisions and to facilitate the enforcement of the Act.

Visual Defect and Railroad Service.

In order to ascertain what is being done in railroad circles in matters of this nature Professor Allport sent a letter of inquiry and a question blank to every railroad company in the United States, Canada, and Mexico, operating over 100 miles of road. 244 railroad companies were thus addressed, whose operations covered 205,386 miles of road. Professor Allport received replies from 64 companies whose operations extended over 90,950 miles of road, and he found that 53 of these exacted a systematic eye and ear examination of some kind. These examinations are undoubtedly not at all ideal in many instances, but they show that interest is taken in the matter. As to what men are subjected to such examinations the replies are differently couched, but it is evident that at least 50 of the companies require such examinations of all men directly engaged in moving and operating trains and in giving and receiving signals, such as engineers firemen, conductors, brakesmen, yardmen, signalmen, switchmen, &c. These examinations are made exclusively by the surgeons of the companies in 19 cases; 18 companies entrust the work to an employé, such as a division superintendent, train master, &c. Six companies send doubtful cases to an eye and ear surgeon; nine companies entrust the whole matter to a regularly employed eye and ear surgeon; and three companies first have the men examined by their surgeons who then send doubtful cases to the eye and ear surgeons. Three of these companies cause examinations to be made in all cases by surgeons of relief associations. One company has re-examinations every six months, four every year, 14 every two years, four every three years, and two every four years. Eight re examine whenever it seems advisable, as after severe illness or injury, or after a railway accident, or when certain incidents bring into question the reliability of the eyes or ears of an employé. One company requires re examinations only at times of promotion, and another when a man arrives at the age of 50 years. On 23 railroads it is claimed that perfect eyes and ears are required of new men, and that no concessions whatever are made to old employés On 16 of the railroads, while perfect sight and hearing are required of new men, various reasonable concessions are made to old employés. On one railroad the following requirements are made: engineers and firemen shall possess a vision of $\frac{20}{20}$ in one eye, and $\frac{20}{30}$ in the other. Conductors, flagmen, brakesmen, and switchmen must have a vision of $\frac{20}{30}$ in one eye and $\frac{20}{40}$ in the other; other employés must have a vision equalling $\frac{20}{40}$ in both eyes. On one railroad the applicant must possess eyes and ears the functions of which shall equal 75 per cent. of the normal function. One company requires perfect eyes and ears for firemen and all the employés to possess vision equalling $\frac{20}{20}$ in one eye and $\frac{20}{30}$ in the other. Another company sets the standard of vision at $\frac{20}{30}$ and declares that a whisper must be heard at a distance of 12 feet. One company requires a combined vision of $\frac{20}{20}$ and that neither eye shall drop below $\frac{20}{70}$, while another requires of engineers, firemen, signal-tower men, and switchmen vision of $\frac{20}{20}$ in one eye and $\frac{20}{30}$ in the other. Upon two railroads employés are retained who still possess vision equalling $\frac{20}{40}$ in both eyes and when the hearing is half lost in one ear, provided the other ear be perfect. Seven companies specifically state that old employés may wear distance glasses, if these will enable them to reach the proper standard; seven others especially state that they do not allow distance glasses during train duty when such glasses are necessary to bring vision up to the proper standard. It appears that on all points bearing upon the visual and aural capacity of railroad employés there is much diversity of opinion on the part of the employer and the employed and also on the part of railroad surgeons and eye and ear surgeons themselves. This is unfortunate, as it precludes the probability of meeting on mutual ground and formulating rules that shall be safe and yet not extreme or Quixotic.

Charitable Hospitals not Liable.

The United States Circuit Court lays down the rule that a beneficiary of a charitable corporation—as, for example, a patient in a hospital which is chartered or must be legally classed as a charitable institution—must take its bounty for what it is worth. It is inconsistent with the underlying idea of charities, as recognised by law, to hold that the same rule that applies to a person or an institution employed for compensation to do a certain service applies to the distribution of charity. The person who enters a charitable hospital is not a contractor; neither is the hospital a contractor with that person. The person who enters is a mere licensee, like a guest who enters a person's house and who must take the service as he finds it. He cannot have higher rights than members of the household of which he has for the time being become as it were a part. All he is entitled to is not to be led into a danger known to his host and not known or not reasonably apparent to himself. That, the court holds, is the precise rule that applies to a public charity, and in this respect it holds that private charity and public charity rest on exactly the same ground and there is no basis in either case to hold that the person who receives the bounty is a contractor, a person contracting for service as he engages service when he ordinarily employs a surgeon. He is in law only a licensee. Nor does the court consider that the reception—the frequent reception—of money from patients changes the nature of the institution; and the following out of this proposition, it says, necessarily leads to the conclusion that the reception of money from any particular patient does not change the nature of the service rendered to that patient, so far as anything said here is concerned. It looks at the money paid in such a case as a proper contribution to a charity on the part of the person who makes the payment and who receives the benefit of the charity. It is not compensation in the eye of the law. Furthermore, the court holds that the officers of a charitable institution have no power by contract to impose any liability beyond that which the law raises. If it is unsuitably or carelessly managed the remedy is in the hands of the State. So, for the reasons adduced, it holds the hospital in the case in which the above judgment was delivered not liable for an injury alleged to have occurred to a patient through the neglect of a nurse even in the case of a "pay patient," it being in law a charitable corporation.

The Health of the Army.

From the report of Surgeon-General Sternberg it appears that during the calendar year 1899 there were 229,885 admissions to sick report recorded in a mean strength of 105,546 regulars and volunteers. This is equivalent to a rate of 2187 06 per 1000 of strength, as compared with 2146 18 per 1000 during the year 1898, and with 1237 24, the mean annual rate for the decade 1888-1897. The deaths in 1899 amounted to 1945, equal to a rate of 18 43 per 1000, as contrasted with 27·99 during the year 1898, and with 6 69, the mean of the preceding decade. The principal causes of death and the rates per 1000 men contributed by them were: gunshot wounds, 5·10; other injuries, 1·57;

diseases, 0 99; pneumonia, 0 94; and variola, 0 80. The troops serving in Cuba had the highest rate of admission—2949 74 per 1000, as against 3113 54 per 1000 in 1898, the result of exposures during the active service of the Santiago campaign. The lowest admission-rate during the last year, 1677·51 United States. 58 per 1000 me ne-half of this being respons 1000 of strength The highest death-rate in 1898 per 1000 was reported from Cuba; of this rate 67·94 deaths were caused by disease and 26 61 by injury, gunshot wounds being responsible for the deaths of 21·69 men per 1000 of strength. Surgeon-General Sternberg in his annual report gives authoritative data which controvert the statements made as to an alarming condition of health among the soldiers on nd excitements of or the large sick among the troops prevalent among medical officers that in time of peace, when only garrison duty would be performed, the sick-rate of the army in these islands would be no higher than it ordinarily is in the United States.

Pan-American Congress.

The third Pan-American Congress will be held in Havana, Cuba, on Dec. 26th, 27th, 28th, and 29th, 1900. The Executive Committee is constituted as follows:—President: Dr. Juan Santos Fernandez. Vice-President: Dr. Gustavo Lopez. Treasurer: Dr. Enrique Acosta. Secretary: Dr. Tomasso V. Coronalo. Members of Committee: Dr. Vincente B Valdes, Dr. Jose J. Torralbas, and Dr. Eduardo F. Pla. The official languages of the Congress will be English, French, Spanish, and Portuguese. The sections will be as follows: (1) General Medicine; (2) General Surgery; (3) Military Medicine and Surgery; (4) Obstetrics; (5) Gynæcology and Abdominal Surgery; (6) Therapeutics; (7) Anatomy; (8) Physiology; (9) Pediatrics; (10) Pathology; (11) Ophthalmology; (12) Laryngology and Rhinology; (13) Otology; (14) Dermatology and Syphilography; (15 and 16) General Hygiene and Quarantine; (17) Orthopædic Surgery; (18) Mental and Nervous Diseases; (19) Mental and Buccal Surgery; (20) Medical Pedagogy; (21) Medical Jurisprudence; and (22) Railway Surgery.

Oct. 18th.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Athens:* Dr. Alivisatos has been appointed Assistant Professor of External Pathology.—*Berlin:* Dr Moritz Litten has been appointed Extraordinary Professor of Internal Medicine.—*Bologna:* Dr. B. Nigrisoli has been recognised as *privat-docent* of Surgery.—*Breslau:* Dr Alfred Schaper has been appointed Extraordinary Professor of Anatomy in succession to the late Professor Born He was formerly Professor of Microscopical Anatomy and Embryology in Harvard University. He is to have charge of the Embryological Department of the Anatomical Institute. Dr. Thiemich has been recognised as *privat-docent* of Children's Diseases.—*Brussels:* Dr. de Boeck has been appointed Extraordinary Professor of Psychiatry.—*Budapest:* Dr. von Korányi has been appointed Extraordinary Professor of Internal Medicine and Dr E von Grósz Extraordinary Professor of Ophthalmology — *Buffalo, U.S A.:* Dr. Frederick Bush has been appointed to the chair of Physiology in succession to Dr. Pohlman.—*Christiania:* Dr. Harbitz has been appointed to the chair of Physiology.—*Copenhagen:* Dr. Bock has been appointed to the chair of Pharmacology —*Florence:* Dr. Angelo Nannotti of Sienna has been recognised as *privat docent* of Surgical Pathology.—*Freiburg (Baden):* Dr Autenrieth has been appointed Extraordinary Professor of Medical Chemistry.—*Freiburg (Switzerland):* Dr. Charles Dhéré has been appointed Professor of Physiology —*Gottingen:* Dr. Meissner, Director of the Physiological Institute, has intimated his intention of retiring at the end of the current session. The and Dr. Rudolph Beneke, *privat-docenten* of Pathological Anatomy.—*Halle:* Dr. Paul Eisler has been appointed Extraordinary Professor of Anatomy and Dr. von Herff Extraordinary Professor of Mi

Albrecht Kossel

Moscow has been appointed to the chair of Surgical Pathology.—*Naples:* Dr. C Addario of Catania has been recognised as *privat-docent* of Ophthalmology.—*Parma:* Dr. Vittorio Mibelli, Extraordinary Professor of Dermatology, has been appointed Ordinary Professor.—*Pisa:* Dr. Cesare Paderi has been recognised as *privat-docent* of Materia Medica and Pharmacology.—*Prague (German University):* Dr. Friedrich Weleminsky has been recognised as *privat docent* of Hygiene.—*Rio de Janeiro:* Dr. A. Bittencoust has been appointed Professor of Medical Physics and Organic Chemistry.—*Vienna:* Dr. Julius von Hochenegg has been entrusted with the duties of the late Professor Albert's chair of Surgery until a new appointment can be made; Dr. Jakob Pal has been appointed Extraordinary Professor of Internal Medicine; Dr. Emil Redlich, Extraordinary Professor of Neurology; Dr. Salomon Ehrmann Extraordinary Professor of Dermatology; and Dr. A. Elsching and Dr. L. Königstein Extraordinary Professors of Ophthalmology.

VACCINATION IN GLOUCESTER.—At the meeting of the Gloucester Board of Guardians held on Oct. 23rd it was decided to forward to the Local Government Board full particulars respecting the continued neglect of the vaccination officers to carry out the order of the Local Government Board. It was stated that in 1898 out of 1600 births there were between 200 and 300 vaccinations, and in 1899 there were 700 vaccinations, but since then, owing to the loose manner in which the Act was administered, the number had greatly diminished.

VIBRONA ART SERIES.—We have received copies of Nos. 5 and 6 of this series. The pictures selected for reproduction are Rosa Bonheur's "Horse Fair" and Constable's "Hay Wain," both of which magnificent works hang in the National Gallery. The reproductions are issued at the nominal price of 2*s.* 6*d.*, and, as we have already observed when referring to two previous pictures of the series in our issue of May 26th, are free from any advertisement. Messrs. Fletcher, Fletcher, and Co. in giving the public a chance of securing these really artistic reproductions in sepia of some of the finest national pictures are doing a practical service to art.

UNIVERSITY OF CAMBRIDGE.—The Vice-Chancellor announces that he has received from Mr. W. W. Astor the munificent donation of £10,000 for the University Benefaction Fund. This will greatly aid in the erection of the building for botany and for pathology and medicine, the plans of which have already been approved by the Senate Dr. Haddon, F R.S., has been appointed university lecturer in ethnology and Mr. J. J. Lister, F.R.S., university demonstrator in comparative anatomy. A university lectureship in physics is vacant by the resignation of Professor Wilberforce, now of Liverpool. The Mater Misericordiæ Hospital, Dublin, has been recognised by the Special Board for Medicine as a place of clinical study. At the congregation on Oct. 25th Mr. A. C. Rendle, B.A., Christ's, was admitted to the degree of M.D.; and Mr. E. Talbot, M.A. Trinity, and Mr. G. H. Hunt, M A. Clare, were admitted to the degrees of M.B. and B.C.

THE LOCAL GOVERNMENT BOARD AND THE SMOKE OF BRENTFORD.—The Brentford District Council lately received a communication from the Local Government Board inclosing a report from the Coal Smoke Abatement Society. The report of the society contained particulars of the times during which nuisance had been caused by the Waterworks Company. A member of the Brentford District Council gave it as his opinion that this matter had already received sufficient attention at their hands as they had already received a report from their own inspector and had already stated that they were exercising a constant supervision. The clerk to the council suggested that the council should assume a firm attitude. They should state that the town was essentially a manufacturing town and that they were not disposed to enforce the Act strictly. "The Local Government Board," he suggested, "might do what they liked." We can hardly suppose that the Local Government Board will be intimidated by the clerk of the Brentford District Council. Time will show.

Bristol Municipal Elections.—Mr. Colston Wintle, L.R.C.P. Lond., M.R.C.S. Eng., has been returned unopposed for the Horfield Ward of the Bristol Town Council.

The Sanitary Inspectors' Examination Board.—The next examination for certificates of qualification for appointment of sanitary inspector or inspector of nuisances, under Section 108 (2) (d) of the Public Health (London) Act, 1891, will be held in London on Tuesday, Jan. 15th, 1901, and the four following days. Particulars will be forwarded on application to the honorary secretary, Mr. W. R. E. Coles, 1, Adelaide-buildings, London Bridge, E.C.

Deaths of Eminent Foreign Medical Men.—The deaths of the following eminent foreign medical men are announced:—Dr. Tomashevski, who was for 40 years director of the Nicholas Children's Hospital in St. Petersburg.—Dr. William Webb Browning, Professor of Anatomy in Long Island College Hospital, Brooklyn.—Dr. Maximino Teijeiro, Professor of Clinical Surgery in the University of Santiago, Spain.—Dr. H. H. McGuire, former Professor of Surgery in Richmond, U.S.A.—Dr. A. Stillé formerly Professor of Medicine in the University of Pennsylvania.

Free Home for the Dying.—The dedication of the new and permanent building for the Free Home for the Dying, 29, North-side, Clapham-common, took place on Oct. 26th. The building, which was formerly the residence of the late Sir Charles Barry, has been transformed by Mr A. E. Street, who has himself made a donation of £100 towards the building fund. The purchase of the freehold and the cost of the alterations and repairs have involved an outlay of more than £10,000, and of this amount a sum of £3000 has still to be collected. It is hoped that the public will shortly relieve the institution of this debt. The Bishop of Southwark, who performed the dedication ceremony, in the course of his address stated that a munificent donation of £1000 had been given that day to endow permanently one of the beds. The building is well adapted for its purpose; it contains 25 beds, of which 12 are in the women's ward, eight in the men's ward, and the remainder in separate rooms.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to The Lancet *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

Anderson, J., M.B., C.M. Glasg., has been appointed District Medical Officer for the No. 5 Sanitary District, Sunderland Union.

Bathe, Allan Arthur, M.A., M.B. Oxon., has been appointed an Honorary Medical Referee by the Board of the Royal National Hospital for Consumption and Diseases of the Chest, Ventnor, Isle of Wight.

Brown, H. C., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Dudley Union, vice J. Brown, deceased.

Buick, James, M.B., Ch.M. Glasg., has been appointed Certifying Medical Officer for the purposes of the Factories and Shops Acts, Melbourne, Australia.

Corbet, L. F., L.R.C.P., L.R.C.S. Irel., has been appointed Certifying Surgeon under the Factory Acts for the Killoughey Dispensary District in the Union of Tullamore.

Gillies, Sinclair, M.D. Lond., L.R.C.P., M.R.C.S., D.P.H. Camb., has been appointed Official Visitor to the Hospital for the Insane, Parramatta, and the Licensed House for the Insane at Cook's River, Sydney, New South Wales.

Grannum, W. B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed District Medical Officer, Luton Union, vice D. R. McArthur, resigned.

Haworth, James, M.B., Ch.B., has been appointed House Surgeon to the Sunderland Infirmary.

Hill, Alfred W., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Assistant Specialist to the Ear and Throat Department of the Adelaide Hospital, South Australia.

Hobbs, Geoffrey C., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Hampstead Hospital, N.W.

Huey, J. J., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Mexborough Sanitary District.

Hunt, J. S., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Superintendent to the Dunwich Benevolent Asylum and Medical Officer for the Care, Supervision, and Inspection of Lepers at Stradbroke Island, Queensland.

Jaques, A. S., L.R.C.P. Lond., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed District Medical Officer, Gateshead Union, vice A. Green, resigned.

Kennedy, R. C. H., B.A., M.B., B.Ch. Dub., has been appointed House Surgeon to the Royal Isle of Wight County Hospital, Ryde.

Kyle, H. G., B.A., M.B., B.Ch. Oxon., has been appointed House Surgeon to the General Hospital, Bristol.

MacDougall, R., L.K.Q.C.P. Irel., L.R.C.S. Irel., has been appointed Public Vaccinator for Rokewood, Victoria, Australia.

McKee, F. C., B.A., M.B., B.Ch., B.A.O. R.U.I., has been appointed House Physician to the Sunderland Infirmary.

McSweeny, M. S., M.B., Ch.B. Melb., has been appointed Public Vaccinator for Milawa, Victoria, Australia.

Merryweather, S. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed District Medical Officer, Horncastle Union, vice W. P. Simpson, resigned.

Neill, Channing, M.B., Ch.M. Irel., L.R.C.S. Edin., has been appointed Medical Officer at Eidsvold, Queensland.

Pitts-Tucker, F. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator to the Sutton Sanitary District, Ely Union.

Platt, J. E., M.S. Lond., F.R.C.S., has been appointed Assistant to the Professor of Surgery in the Owens College, Manchester.

Scott, H. J. H., L.R.C.P. Lond., M.R.C.S., has been appointed a Member of the Licensing Court for the District of Scone, New South Wales.

Thorowgood, John C., M.D. Lond., F.R.C.P., has been appointed Consulting Physician to the Royal National Hospital for Consumption at Ventnor, Isle of Wight.

Todd, D. B., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Westbury and Whorwellsdown Union, vice G. G. Parsons, resigned.

Wassell, Jas. L., M.B., M.Ch. Syd., has been appointed Medical and Health Officer at Thursday Island, Visiting Surgeon to the Prison at that place, and Medical Officer for the Care, Inspection, and Supervision of Lepers detained in the Lazaret at Friday Island, Queensland.

Willson, Rivers, Ph.D., L.S.A. Lond., has been appointed Surgeon to the Oxford Medical Dispensary and Lying-in Charity, vice Chas. Ballard, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Bagthorpe Isolation Hospital, Nottingham.—Resident Medical Officer for twelve months. Salary £100 per annum, with board and residence. Apply to the Medical Officer of Health, Guildhall, Nottingham.

Birkenhead and Wirral Children's Hospital, Woodchurch-road, Birkenhead.—House Surgeon for twelve months. Salary £100 per annum, with board, residence, and laundry.

Birmingham and Midland Hospital for Skin and Urinary Diseases, John Bright street, Birmingham.—Clinical Assistant.

British Hospital, Oporto, Portugal.—Medical Officer. Salary £15 per annum, with liberty to engage in private practice. Apply to the Treasurer, Mr. R. Coverley, 55, Rua da Reboleira, Oporto.

Cardiff Infirmary.—Assistant House Surgeon for six months. Salary at the rate of £75 per annum, with board, washing, and apartments.

Cornwall County Asylum, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £120, rising to £150 by £10 annually, with board, furnished apartments, &c.

Dundee Royal Lunatic Asylum.—Medical Assistant.

French Hospital and Dispensary, 172, Shaftesbury-avenue, London.—Resident Medical Officer (not a female), speaking French, and unmarried. Salary £80 a year, with full board.

Guest Hospital, Dudley.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, residence, board, and washing.

Holloway Sanatorium Hospital for the Insane, Virginia Water, Surrey.—Junior Assistant Medical Officer for the male side. Salary £150 per annum, rising to £200, with board, lodging, washing, and attendance.

Hospital for Diseases of the Throat, Golden-square, London.—Four vacancies for the office of Senior Clinical.

Hospital for Sick Children, Great Ormond-street, London.—Ophthalmic Surgeon.

Jenner Institute of Preventive Medicine, Chelsea Gardens, London.—Assistant in the Department of Pathological Chemistry. Salary £300.

Kent and Canterbury Hospital.—Assistant House Surgeon, unmarried. Salary £60 a year, with board and lodging.

Kent County Asylum, Chartham, near Canterbury.—Second Assistant Medical Officer, unmarried. Salary begins at £175 per annum, with board, quarters, washing, and attendance. Also Third Assistant Medical Officer required in January next. Salary begins at £125, with emoluments as above.

Leeds General Infirmary.—Two House Physicians for six months. Board, lodging, and washing provided.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST —Resident Medical Officer for the In patient [illegible] ith board, [illegible] it for one [illegible] —Medical [illegible] of medi [illegible] Inspector of Poor, Scalloway, Shetland

ROYAL DEVON AND EXETER HOSPITAL, Exeter —Assistant House Surgeon for six months Salary at the rate of £80 per annum, with board, lodging, and washing

SALISBURY INFIRMARY —House Physician, unmarried Salary £75 per annum, with board, lodging, and washing

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone-road, London —Surgeon to the Out Department.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth —Assistant House Surgeon for six months Salary at the rate of £50 per annum, with board and residence

SOUTHPORT CONVALESCENT HOSPITAL AND SEA BATHING INFIRMARY —Resident Medical Officer, unmarried Salary to commence at £150 per annum

SUSSEX COUNTY [illegible] Salary £60 pe [illegible] Pathologist

VICTORIA HOSPIT [illegible] House Physic [illegible] lodging in the Hospital

WOLVERHAMPTON EYE INFIRMARY —House Surgeon for twelve months Salary £7 [illegible]

WOOLWICH [illegible] at the Infirmar [illegible] annum, rising £10 yearly to a maximum of £100 with apartments, rations, and washing The appointment subject to statutory deduction Apply to the Clerk to the Board, Dispensary, Rectory place, Woolwich

Births, Marriages, and Deaths.

BIRTHS

BURNS —On Oct 29th at Wimpole-street, W., the wife of Theodore G A Burns, M A Oxon , M R C S., of a son

GASH —On Oct 22nd, at Auburn, Snodland, Kent, the wife of Thomas Gash, M B , B Ch , B A.O , of a daughter

HINDS —On Oct. 26th, at Bexley House, Crayford, Kent, the wife of Thomas W. Hinds, M D , of a son

HANCOCK —On Oct 27th, at Hurst Green, Sussex, the wife of J E Hancock, L R.C P Lond , M R C S , of a son.

PATERSON —On Oct. 24th at Manchester square, the wife of William Bromfield Paterson, F R C S , L D S , of a son

RAW —On Oct. 21st, the wife of Nathan Raw, M D , Liverpool, of a daughter

ROBERTS [illegible] Roberts, L R C P , M R C S , [illegible] idstone, the wife of Sidney [illegible] a son

MARRIAGES.

COL[illegible] [illegible] h Hornsey, N , of Thorn-croft, Orton, Crouch end, N

SCOTT—JEFFREY —At St Enoch's Station Hotel, Glasgow, on the 29th inst., by the Rev Robert Pollok, M A., B Sc., West U P Church, Irvine, Joseph Scott M B , C M , Assistant Medical [illegible] ent Indo-European Telegraph Department [illegible] Sarah McKinnon, second daughter of [illegible] Chestercourt, Heathfield road, [illegible]

DEATHS

ANDERSON —On Oct 27th, at Harley-street, William Anderson, F R.C S , [illegible] aged 57 [illegible] d Jessie, daughter [illegible] iths. [illegible] Stirling George [illegible] ral of Hospitals, in [illegible] Norman Hamper, [illegible] ed 32 years (By [illegible]

LAMPREY.—On Oct 29th, at his residence, Portland terrace, Southsea, Jones Lamprey, Surgeon General (late) Army Medical Staff, aged 77 years.

N B —A fee of 5s is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE CHESTER HOSPITAL SCANDAL.

A GREAT to-do has been made at an inquest recently held at the Chester Infirmary concerning the death of a man named John Williams. He was admitted to the infirmary on Oct. 1st with an impacted fracture of the neck of the femur. He remained in the infirmary until Oct 12th when he was removed to the workhouse where he died. The reason for his removal was that he was very noisy and dirty in his habits and disturbed the other patients He could not be put into a ward by himself, as the Chester Infirmary has no separate accommodation for such cases. This narrative of events has been made the text for diatribes by the Chester coroner and by the *Manchester Evening Chronicle* of Oct 23rd The coroner is reported to have said that "If the man had been *in a good position of life he would not have been sent to the* workhouse It was, in his opinion simply due to the fact that he was a poor man and unable to pay for his board and lodgings at the infirmary that he was sent to the workhouse" The *Manchester Evening Chronicle* adds: "Surely further comment is superfluous" We do not think so The same journal talks about the callous way in which the aged poor are handled in our hospitals This charge, as anyone knows who is conversant with hospitals, is absolutely unfounded As to the coroner's remarks (if they are correctly reported) they are foolish If Williams had been well to-do he would have been treated neither at the infirmary nor at the workhouse but at his own home by his own medical man Every medical man knows that an impacted fracture of the neck of the femur in an old person (and Williams was over 70 years of age) should not be treated by keeping the limb rigid or the patient lying down The house surgeon of the infirmary informs us that Williams was removed in a cab to the workhouse comfortably wrapped up, lying on pillows and a fracture-board He was admitted to the workhouse on Oct 12th and died on Oct 19th In our opinion the authorities of the infirmary did the best in their power both for Williams and for the other patients by removing him to the workhouse

A QUESTION OF ETIQUETTE

To the Editors of THE LANCET

SIRS,—I shall feel greatly obliged if you will kindly give me your opinion as to the conduct of B in the following case A, on receiving a message from people he had previously attended, visited the house and found a boy with symptoms of scarlet fever There was no rash but he had been ill only a few hours. The following day A was unable to see the boy, who lived two miles away B was passing through the village and was called in After examining the boy B was informed that A was attending, but in spite of this B notified the case as scarlet fever The next day A made a special journey, and on arriving at the house was told that the boy had been removed that morning to the isolation hospital A wrote to B for an explanation and received the following reply "I much regret that the case of —— should have caused you any annoyance, but as I was called in to see the boy and the mother was anxious to have him removed as soon as possible I felt myself bound under the Act to notify the case and to ask the inspector to remove him without delay The mother of the child did not tell me you were in attendance till after I had examined him"

I am, Sirs, yours faithfully,

Oct 29th 1900 MEDICUS

*** B was asked for an opinion upon the case and gave it. He was not [illegible] till after he had [illegible] we cannot see how anything of an unpleasant nature can arise in the matter between two gentlemen of the same profession —ED L.

"MOTOR CARS FOR MEDICAL MEN"

To the Editors of THE LANCET

SIRS,—Your correspondent Mr Claude A. P Truman (*vide* THE LANCET, Oct. 20th, p. 1176 wisely refrains from giving his experience of motors *since* beginning with his "trike", besides I do not consider a "trike" worthy of discussion as of use to a medical man by reason of its unsuitability and discomfort in wet or cold weather. If I have given myself away I am quite willing to restore myself to my own bosom by saying that I *do* deplore the condition of humanity as evidenced by full hospitals as I do full motor hospitals, but the two subjects are scarcely comparable the one being an ancient and unavoidable evil, the other a modern question of practical utility If the population of this country were reduced to 1000 and 800 were in hospital I should say that life would be scarcely worth living Mr Truman admits that cars *do* break down, and compares them with the vagaries of horses, but taking into consideration the enormous number of horses used for all purposes I maintain that the number of breakdowns due to them bears but a microscopic proportion to those due to motor cars. I kept for nearly 30 years two horses and can honestly say that my accidents were infinitesimal. It is because perfection in motors is still so far off that I advised medical men to ponder—that is, if they want a machine for *honest work* If they want it only for pleasure and possess a deep pocket, then by all means let them try any number of cars and shout when they succeed. Your correspondent "Motist" speaks the truth in saying "what a medical man wants in a motor is one that can be as easily controlled and managed in going from house to house as an ordinary horse and trap and not one made for speed." When this is on the market the utopian stage will set in. "Benz Car" seems to have been more fortunate in his experience, but it would be interesting to know how often his worries with tyres, chains, and wheels occurred, and what the "&c." implied? It also appears to me a pretty large order for the upkeep of one small car, between £30 and £40 annually. After all the question is one of cost and efficiency and I repeat my opinion that the motor up to the present time does not fulfil the requirements of a medical man for all-round work.

I am, Sirs, yours faithfully,

Oct. 22nd, 1900. MOTOR-CAR.

WANTED—A HOME.

DR. HERBERT HART, 101, Queen Victoria-street, E.C., is anxious to know of a comfortable home or an institution for a girl of weak intellect. Her father is willing to contribute 7*s.* 6*d.* per week towards her maintenance. She is 15 years of age and when young she suffered from hydrocephalus. She has always been a dull child and although not exactly an imbecile requires to be under careful management.

THE DANGERS OF STRYCHNINE.

To the Editors of THE LANCET.

SIRS,—A young man, aged 27 years, was suffering from cardiac dropsy. He had, *inter alia*, considerable ascites, which had been tapped the day previous to Sept. 6th. On the morning of the 6th I gave him a hypodermic injection of strychnine, dissolving a tablet of one sixtieth of a grain of sulphate of strychnine. My patient derived a great deal of benefit from the hypodermic injection. On the following morning at exactly the same time (10 A.M.) I repeated the injection. Half an hour afterwards I was sent for. I went immediately to find my patient in undoubted convulsions from strychnine poisoning. The muscles of the back and arms were chiefly involved. The terror-struck face, the prominent eyeballs, the dilated pupils, and cyanotic complexion formed a picture I shall not readily forget. I at once administered 10 grains each of bromide of potassium and chloral hydrate, with the result that the convulsions wore away into twitchings and finally ceased within an hour. The patient died seven hours afterwards, but, as far as one could tell, solely from his cardiac condition, for his death had been expected daily. Call it idiosyncrasy or what you will, I shall hesitate to use strychnine again in a similar case. The only medicine the patient was taking was five minims of tincture of digitalis every four hours in a teaspoonful of water.

I am, Sirs, yours faithfully,

Oct. 30th, 1900. M.R.C.S.

P.S.—The wholesale chemists from whom the tablets were obtained have examined the tablets remaining in the tube and find the quantity of strychnine contained in each correct.

HOSPITAL ABUSE: A SIDE THAT IS SOMETIMES OVERLOOKED.

To the Editors of THE LANCET.

SIRS,—One cannot be a regular reader of your correspondence columns without seeing numerous complaints from the general practitioner about hard times and the ready explanation of this by the competition of general and special hospitals. Who is to blame for this? If the practitioner sends to hospitals every case from a tied tongue to a whitlow that cannot be met with the usual bottle of medicine he can scarcely grumble at other and more remunerative cases going to hospitals on their own initiative. I have recently had under my care at a hospital two instructive cases. One was a case requiring an abdominal section in a patient, sent in by her medical attendant, who told the matron very innocently that she had not wished to pay for her operation because she had just purchased an 80-guinea piano and desired to avoid more expense. Her daughter obtained reduced terms from another special practitioner because of the expense her mother's operation had entailed on the family. The second case was a urethral caruncle in a woman who lived in a superior street. In accordance with our rule a circular was sent to her last medical attendant stating that she had applied for treatment and inviting him to say whether the patient was a fit person to receive charity. This gentleman replied that he saw no reason to doubt her suitability. When the woman was dismissed from hospital her friends offered to pay any sum if we would retain her till it suited her convenience to return home. Such cases are constantly arising. Others occur where a practitioner sends patients into hospital and receives fees of five guineas and upwards, as we subsequently learn, for being present ("assisting") at the operation. Most hospital surgeons could furnish many similar instances of hospital abuse encouraged or instigated by general practitioners. I gladly acknowledge that it is the exception, but while such things occur it scarcely lies with the general practitioner to rail at hospitals for depriving him of a livelihood. I have yet to meet with the surgeon, hospital or otherwise, who is anxious to work for nothing or who would not be glad to receive patients before they have been drained of their fee-paying capacity by a long course of useless medical treatment. Let us be fair and face the facts. I submit that hospital abuse is as much caused by the general practitioner as by either the consultant or the public, and that, though it is heresy to say so, the hospital surgeon has as much right to a living as the general practitioner and as much right to the rewards of his work and reputation. Neither is he called upon to ask that gentleman's permission to exist at all, nor to do so on anything but the refuse of his practice or generous doles of patients of whom he is weary or who are weary of him.

I am, Sirs, yours faithfully,

Oct. 28th, 1900. A HOSPITAL SURGEON.

"CHRONIC INERTIA."

IN the Local Government Board report just issued Mr. Preston Thomas relates an amusing instance of laziness and vagrancy. A sturdy loafer repeatedly applied for relief on the ground of his inability to work, but he had not been able to induce a medical man to support his plea. He came, however, triumphantly at last with a medical certificate which testified to his being affected with "chronic inertia." He was surprised, not to say disappointed, that his application was again refused.

THE FEET OF CHINESE WOMEN.

DR. R. SMYTH of Ningpo writes as follows in *Mercy and Truth* with regard to the Chinese practice of foot-binding:—

> "It is a remarkable fact that over 90 per cent. of the leg compound fractures we meet with occur in women. This must be attributed to the almost universal practice of foot-binding. The little Chinese girl's feet are perfectly natural in shape and size until the time of binding—usually the seventh year. Distortion then begins. A long bandage of cotton cloth, a few inches wide, is firmly applied in figure-of-eight form, and the tightness of the bandage is increased at intervals until the desired size is attained. The resulting distortion is as follows:—The tarsus or instep is bent upon itself, the heel bone is thrown out of the horizontal, its previously posterior surface becoming inferior, and the four smaller toes are pressed down under the sole, until, finally crushed and attenuated, they lie folded under the great toe. The process of footbinding—never a painless one as the native proverb testifies, 'For every pair of bound feet there is a rain-tubful of tears'—is excessively painful when the professional bandager does her work badly. In such cases caries, necrosis, or deep ulcer may follow, especially when the little victim inherits a strumous constitution. If, on the other hand, the binding is done evenly and well, pain soon subsides, and sensation in the foot becomes partially or wholly lost."

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 1st, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain-fall	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8 30 A M
Oct. 26	29·35	S.	0·06	56	61	47	47	50	Overcast
„ 27	29·34	S W.	0·18	87	54	40	45	48	Cloudy
„ 28	29·75	W.	—	79	55	40	45	48	Cloudy
„ 29	29·64	WSW	0·24	86	55	45	50	52	Cloudy
„ 30	29·84	W.	0·64	62	56	47	48	49	Raining
„ 31	29·97	S.	0·07	99	65	49	56	56	Cloudy
Nov. 1	29·80	S.	0·02	74	61	56	57	58	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (6th).—London [illegible] P.M.), Guy's (1.30 P.M.), St. Thomas [illegible] P.M.), Westminster (2 P.M.), Wes [illegible]rsity College (2 P.M.), St. George's [illegible]), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (7th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

[illegible]

SOCIETIES.

TUESDAY (6th).—PATHOLOGICAL SOCIETY OF LONDON (Laboratories of of the Royal Colleges of Physicians and Surgeons).—8 P.M. Laboratory Meeting. Dr. F. W. Pavy, Dr. R. L. Sian, and Dr. T. G. Brodie: Phloridzin Glycosuria. Dr. A. E. Russell and Dr. T. G. Brodie: On Cardiac Reflexes.—Mr. W. Edmunds: On the Results [illegible] ton and Dr. [illegible] -Dr. W. E. [illegible] upon the [illegible] The Action [illegible]

[illegible] N.—8 P.M. [illegible] Dr. Hinds [illegible] Papers:— [illegible], probably [illegible] tion in the [illegible]

TH[illegible] ETY OF THE UNITED [illegible] 8.30 P.M. Papers.— [illegible] of the Influence of [illegible] by Experiments on [illegible] tiology of Lamellar [illegible] ution of the Colour Sense.

[illegible] in the Female.

FRIDAY (9th).—BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND [illegible]

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (5th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Pringle: Consultation. (Skin.)

TUESDAY (6th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. A. Garrod: The Urinary Pigments in their Pathological Aspects. (Bradshaw Lecture.)

MEDICAL GR[illegible] W.C.).—4 P.[illegible]

THE HOSPITA[illegible] friars).—5 P[illegible]

WEDNESDAY [illegible] (22, Chenies[illegible]

LONDON THRO[illegible] Dr. Cathcar[illegible] Course.)

[illegible] AND DISEASES OF THE CHEST [illegible] Mackenzie: Hæmoptysis.

[illegible] RADUATES' COLLEGE AND POLYCLINIC [illegible] P.M. Mr. Hutchinson: Consultation. (Surgical.)

THE H[illegible] (Gt. Ormond street, W.C.).—4 P.M. [illegible]

[illegible] HOSPITAL (Gray's Inn- [illegible] of Diseases causing Hoarseness or other Disturbance of Voice.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Green: Cases in the Wards. (Post-graduate Course.)

FRIDAY (9th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Tilley: Consultation. (Nose and Throat.)

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

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The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND LONDON, ENGLAND

During the week marked copies of the following newspapers have been received: *South Wales News, Evening Times (Glasgow), Science Siftings (London), Alliance News, Birmingham Daily Post, West Morning News, Daily Mail (London), Daily Express (London), Liverpool Daily Post, Blackburn Daily Telegraph, Bristol Times, Leicester Daily Post, Western Mail (Cardiff), Dublin Daily Express, Nottingham Daily Journal, East Anglian Daily Times, Redditch Indicator, Leeds Mercury, Oxford Chronicle, Sheffield Daily Telegraph, Dundee Advertiser, Manchester Guardian, Times of India, Pioneer Mail, Citizen, Scotsman, Rural World, Cambrian Times, Builder, Architect, Bristol Mercury, Mining Journal, City Press, Yorkshire Post, Local Government Journal, Reading Mercury, Surrey Advertiser, Hertfordshire Mercury, Australasian Medical Gazette, Sanitary Record, Chatham News, Brisbane Courier, Rangoon Times,* [illegible] *Examiner, Windsor Chronicle, Enfield Observer, Church Family Newspaper, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. J. Adam, West Malling; Dr. J. H. Aston, Guatemala City; Mr. W. H. Arsell, Messingham; Messrs. Arnold and Sons, Lond.; Dr. H. de M. Alexander, Perth; Dr. Frank Arnold, Geelong, Rhodesia; Association for Pure Vaccine Lymph, Lond., Secretary of.

B.—Mr. E E. Bennett, Margate; Dr. C. L. Birmingham, Westport; Mr. J. Bardsley, Manchester; Mr. B. R. Balfour, Drogheda; Messrs. Boulton and Paul, Norwich; Dr. E. Boix, Paris; Boscombe Hospital, Secretary of; Messrs. Burroughs, Wellcome and Co., Lond.

C.—Miss A. R. Cooper, Paignton; Miss E. M. Cuffe, Woodhall Spa; Dr. Harry Campbell, Lond.; Messrs. Cassell and Co., Lond.; Cardiff Infirmary, Secretary of; Mr. J. A. Coleclough, Hindhead; Mr. E. A. Clarke, Dukinfield; Mr. W. R E. Coles, Lond.; Messrs. Cuxson, Gerrard, and Co., Oldbury; Messrs. J. B. Clarke and Co., Birmingham; Messrs. J. and A. Churchill, Lond.; Clarke Co. (The), Lond.

D.—Mr. A. Duke, Cheltenham; Professor Delépine, Manchester, Mr. E. R. Dawson, Lond.; Messrs. H. Dawson and Co., Lond.; Derby County Asylum, Clerk of; D. P., Lond.

E.—Dr. C. R. Elgood, Windsor; Evelina Hospital, Secretary of; Dr. W. Ewart, Lond.; Dr. John Ellerton, Leamington; Dr. Hoggan Ewart, Folkestone.

F.—Dr. F. D. Fisher, Little Sutton; Messrs. Ferris and Co., Bristol, Mr. J. Fry, Aldeburgh.

G.—Dr. J. Galloway, Lond.; Dr. Stanley Green; Surgeon-Captain J. Gallagher, Lond.; Dr. S. A. Gill, Formby; Mr. W. Griffiths, Llanfair Talhaiarn; Dr. Wardrop Griffith, Leeds; Mr. John Gay, Lond.; General Infirmary, Leeds, Secretary of.

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I.—International Sleeping Car Co., Lond.

J.—Dr. J. Johnston, Bolton; Jenner Institute for Calf Lymph, Lond., Secretary of.

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The Bradshaw Lecture

ON

THE URINARY PIGMENTS IN THEIR PATHOLOGICAL ASPECTS

Delivered before the Royal College of Physicians of London on Nov 6th, 1900,

By ARCHIBALD E GARROD, M D Oxon, F.R C P Lond,

PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN GREAT ORMOND STREET MEDICAL REGISTRAR AND DEMONSTRATOR OF MORBID ANATOMY AT ST BARTHOLOMEW'S HOSPITAL.

MR PRESIDENT AND GENTLEMEN,—The invitation to deliver a lecture before such an audience as this at the same time confers a great honour and imposes a heavy responsibility For the honour I beg to offer my sincere thanks, and to the distinguished men who have preceded me in the position which I for the moment occupy I desire to apologise in advance for any failure on my part to attain to the high standard which they have set up

THE CLASSIFICATION OF URINARY PIGMENTS

The grouping together, under the collective name of "urinary pigments," of a number of substances which need have nothing in common beyond the facts that they are met with in the urine and are possessed of colour, can only be looked upon as a temporary expedient, although it may be justified on grounds of convenience, and is even rendered necessary by the incompleteness of our knowledge It may confidently be predicted that in the course of time this will share the common fate of such elementary classifications and that the group will undergo a gradual disintegration, as one by one its individual members can be referred to their true places in the chemical scheme Some of the substances usually included do not even fulfil the above two conditions, but are merely coloured products formed by the action of reagents upon constituents of urine which are themselves colourless Among these are urorosein and the indigo pigments, although of these latter indigo blue is occasionally met with as a sediment or in impalpable suspension in urine in which it has been formed by the decomposition of indoxyl glycuronic acid, the less stable of its parent substances

Even of the urinary pigments more correctly so called not a few are excreted, either wholly or in part, as colourless or faintly coloured parent substances, which quickly become converted into their coloured derivatives when the urine is exposed to light and air These very unstable precursors are known as "chromogens" a convenient term which makes no assumption as to their true nature When once the chromogen has been isolated and sufficiently studied we no longer speak of it as such Thus it is not customary to describe indoxyl sulphuric acid as the chromogen of indigo blue and red, or homogentisic acid as the chromogen of the alkapton pigment

Coloured substances may enter the alimentary canal in articles of food, in sweetmeats or in medicines, and may be thence absorbed and excreted either altered or unaltered by the kidneys With these may be included pigments formed during the passage through the body of constituents of food or drugs which are not themselves coloured, such as the oxidation products of the dioxybenzenes present in carboluria, and the yellow santonin pigment It is important that one should have [illegible] in order that one [illegible] in themselves they [illegible]

In yet a third [illegible] nts which are normal constituents of [illegible] body, but [illegible] only find their way into the urine under morbid conditions Such are hæmoglobin, bilirubin, biliverdin, and melanin, which last may appear in abundance in the urine, mainly as a chromogen, in cases of disseminated melanotic sarcoma The excretion of such pigments by the kidneys affords diagnostic indications of great value, but these indications are, for the most part, well recognised, and their interpretation forms part of the daily routine of clinical practice

special cause, seeing that they may all be present, if only in traces, in the urine of persons who may fairly be considered to be in normal health I refer to urochrome, urobilin, hæmatoporphyrin, and uroerythrin, and it is to the consideration of these four pigments that I propose to devote the time at my disposal this afternoon Urochrome is the most abundant of the urinary pigments, and to it the familiar yellow colour of normal urine is probably entirely due Urobilin, which only occurs in very small amount in normal urine and wholly in the form of chromogen, has no influence upon its colour, but in many morbid conditions it appears in greatly increased quantity and to a large extent as the formed pigment Under such circumstances it has a distinct effect upon the colour of the liquid and its single dark absorption band is conspicuously visible on direct spectroscopic examination without the addition of any reagent Hæmatoporphyrin is present in mere traces in normal urine and often in increased quantity in disease, but only very seldom does it occur in sufficient abundance to have any material effect upon the colour Uroerythrin, if not strictly a normal urinary constituent, may appear in small amounts as the result of very trifling deviations from perfect health In morbid urines it is often abundantly present, and it is chiefly conspicuous as the colouring matter of pink urate sediments

UROBILIN

Since its discovery by Jaffe,[1] in 1868, urobilin has attracted far more attention than the other members of the group, and there has grown up around it a literature which far exceeds in bulk that of all the other urinary pigments put together On this account it will be more convenient to consider it first The interest which it has awakened has been largely due to Maly's[2] observation that by the action of sodium amalgam upon bilirubin a product is obtained which in its main properties resembles urobilin very closely, so closely, indeed, that the identity of the two has been widely assumed, and the name of hydrobilirubin is not infrequently applied to the urobilin of urine, as also to the stercobilin obtained from fæces by Vanlair and Masius[3] However, there have always been some who have questioned the identity, although not the similarity, of urobilin and Maly's hydrobilirubin, which differ not a little in their minor properties and some combustion analyses of urobilin carried out by Mr F G Hopkins and myself[4] show that whereas the urobilin of urine and the stercobilin of fæces are identical in composition as also in properties they differ conspicuously from hydrobilirubin, especially in the much smaller percentage of nitrogen which they contain

—	Hydrobilirubin (Maly)	Urobilin (Hopkins and Garrod)
C	64·68	[illegible]
H	6·93	[illegible]
N	9·22	4·11
O	19·17	[illegible]·47
—	100·00	100·00

It would seem, indeed, that there is a group of substances which agree in showing the absorption band of urobilin and in exhibiting a brilliant green fluorescence with zinc chloride and ammonia but which differ in stability and other minor respects and are not chemically identical Such urobilinoid products have been obtained from bilirubin hæmatin hæmatoporphyrin and urochrome by the action of reducing agents and from some of these by what appear to be processes of oxidation That they have something in common seems evident and we are surely justified in regarding them as affording important evidence of the chemical relationship of the substances from which they are obtained

Of the chromogen of urobilin we know very little as yet, increased excretion in the urine is connected with increased production in the intestine, as evidenced by the presence of unusual quantities in the fæces.

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[1] Centralblatt für die medicinischen Wissenschaften [illegible], Band vi, p. 243 Virchow's Archiv Band xlvii, [illegible] p 4

[2] [illegible] ix, p. [illegible]

[3] [illegible] ix, p [illegible]

[4] Journal of Physiology 1898, vol. xxii, p 451

The effect of constipation upon the excretion of indican, the parent substance of which, indol, is formed by bacterial action in the intestine, is so marked that it is natural to expect that it will have a similar effect upon the excretion of urobilin in urine, the stagnation of the contents of the colon allowing more time for absorption. George Hoppe-Seyler states that retention of the contents of the colon does increase the urobilin of urine, but that obstruction of the small intestine has no such effect. Dietrich Gerhardt, on the other hand, attaches little importance to constipation in this connexion and quotes cases of perityphlitis treated by opium in which when the temperature fell there was an enormous decrease of the urinary urobilin, although the intestines were still kept at rest. He also gives a series of observations upon a convalescent patient whose bowels were only moved every fourth or fifth day. Here, it is true, the maximum of urobilin in the urine was reached on the day following an action of the bowels, but if we admit (as I think we must, from what is seen when occlusion of the common bile duct occurs) that the absorbed urobilin is only slowly excreted, his figures point to a distinct increase of excretion under the influence of constipation, the full effect of the evacuation being seen only on the third day after its occurrence. Bargellini,[26] who made an elaborate series of observations bearing upon this point, arrived at the conclusion that in simple atony of the bowel the degree of constipation is without influence upon the amount of urinary urobilin, but that in cases of typhoid fever it causes an obvious increase, whereas disinfection or emptying of the lower bowel caused a noticeable decrease in the amount. If we study Bargellini's tables we find that a similar explanation may be given of many of his results. In several typhoid fever cases a continuous series of daily observations were made, whereas in none of the other cases were observations carried on to the second and third day after the evacuation of the bowel. Further observations upon this point, bearing in mind the slowness of the excretion of the absorbed urobilin, would be of much interest.

The most serious objection which has been raised to the intestinal theory is based upon the connexion which undoubtedly exists between urobilinuria and liver diseases. It is by no means the case that marked excess of urinary urobilin is always associated with obvious hepatic derangements, but there can be no question that conspicuous urobilinuria usually accompanies such diseases as cirrhosis and carcinoma hepatis. This fact, coupled with the presence of urobilin in the bile, formed the basis of the hepatic theory of Hayem and Tessier. However, the theory that the liver itself, and especially the disordered liver, manufactures urobilin, whilst it will explain the association under discussion entirely fails to explain the disappearance of this pigment from the bile and urine alike when the bile duct is occluded and its reappearance in both when bile is introduced into the stomach.

There are two different ways in which the influence of the liver may be reconciled with the intestinal origin of the urobilin of urine. We may suppose either that the condition of the liver exerts its influence at the beginning of the cycle by affecting the quantity and quality of the bile entering the intestine, and so indirectly the amount of urobilin formed, or that the liver lays hold upon the urobilin after its absorption and excretes it in part in the bile and in part converts it into some other substance. There can be little doubt that the state of the liver exerts an influence upon the *quantity* of bile-pigment formed and Riva and Vitali have shown that in phosphorus poisoning and acute yellow atrophy respectively the destruction of the liver cells practically puts an end to the formation of bile-pigment and that as a consequence urobilin may disappear from the fæces and urine. We should, indeed, expect that such quantitative influences would tell in the direction of diminution rather than increase. On the other hand, the hepato-intestinal theory of Riva,[27] which he has worked out with the aid of L. Zoja[28] and other members of the school of Parma, attributes to the condition of the liver an important influence upon the *quality* of the bile-pigment formed. The differences of quality are evidenced by the colour of the bile, of which the reddish-brown variety yields urobilin much more readily than the greenish. According to Zoja[29] the essential difference lies in the relative amounts of bilirubin and biliverdin present. These authors, together with Cavalli[30] and Chiodera,[31] have clearly shown that different biles exhibit marked differences in respect to the ease with which their contained pigment is converted into urobilin and that the bile of different animals differs widely in this respect, the green bile of vegetable feeders yielding urobilin less readily than that of carnivora. Cavalli also found that the bile obtained from the bodies of human patients agreed in its characters with what might be inferred from the excretion of urobilin during life. It is evident that this theory involves the formation from bile-pigment of other products besides urobilin, for if under normal conditions it is all converted into urobilin in the intestine increased convertibility can obviously lead to no increase of the yield. It also [illegible] of the quantity of urobilin i[illegible] intestine, unless, as Riva hi[illegible] pigment be not all excreted [illegible] is most probable, urobilin is [illegible] from the bile-pigment it seem[illegible] bile must have a material effect upon the quantity of urobilin produced in the intestine, and the question is rather whether the qualitative changes in the bile formed by disordered livers are so great as this theory demands—in a word, whether it is capable of explaining all the facts.

An alternative theory, origi[illegible] and independently by Beck, has [illegible] a pupil of the former. Vitali [illegible] cells have a strong affinity for urobilin, which they pick out from the blood, after it has been absorbed from the intestine, and re-convert into bilirubin. He further supposes that these cells have a still greater affinity for hæmoglobin and bilirubin, and that if they are called upon to deal with these latter pigments the urobilin brought to them may escape conversion. Thus when excessive hæmolysis is going on the liver cells may be so occupied that the urobilin passes them unchanged, or more urobilin may be brought to them than they are able to cope with, whereas disease of the liver may be supposed to lead to the same result by impairing the power of the cells to deal with the pigment. Morfaux,[33] who was evidently unacquainted with Vitali's writings, propounded a similar theory in his thesis, but offered no suggestion as to the nature of the change which the pigment undergoes in the liver. It may be pointed out that this theory includes two distinct hypotheses, and even if we doubt the re-conversion of urobilin into bilirubin we may still accept the first proposition that the liver cells are capable of laying hold upon the urobilin in the circulation. That they do so is indeed shown by the presence of urobilin in the bile whenever this pigment is being formed in the intestine. Some at least of the urobilin waylaid by the liver is excreted unchanged by that organ. If urobilin were merely a reduction product of bilirubin its re-conversion into that substance would be comparatively simple, but no one has yet obtained bilirubin by the oxidation of urobilin, and, as has been pointed out, the change involved is of a much more radical nature. To this objection Vitali replies by dismissing the urobilin analyses made by Hopkins and myself as proving nothing, because the material analysed was in his opinion obviously contaminated by an organic iron compound, since some of the products yielded a trifling ash in which iron could be detected. In so doing he ignores the close agreement of the results obtained from both fæces and urine by three different processes and also the fact that the figures obtained from the products with ash agreed with those got from wholly ash-free specimens.

He made some interesting experiments upon dogs and obtained evidence of increased formation of bile pigment during the circulation of blood containing urobilin. The bile formed appeared more highly coloured and caused more absorption of the violet end of the spectrum, but the quantity of bile was not increased. No such results were obtained when a saline solution containing urobilin was substituted for blood. The obscuration of the violet end of the spectrum, upon which Vitali chiefly relied as evidence of an increased formation of bile-pigment, was shown not to be due to an excess of urobilin as such. Moreover, he could obtain no evidence that the presence of urobilin caused hæmolysis or had a cholagogue effect. It is, however, clear [illegible] ed before so remarkable a [illegible] urobilin into bilirubin in [illegible] stablished fact. Riva[31] objects to this theory that in cases of cirrhosis and carcinoma hepatis the intestinal as well as the urinary urobilin is conspicuously increased, a fact of which the theory takes no account. To this Vitali replies that the increase of intestinal urobilin in such cases is not constant, and when present may be *ascribed to excessive hæmolysis and increased excretion* of urobilin in the bile [illegible]

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[26] Lo Sperimentale, 1892, vol. xlvi., p. 119.

[27] La Scuola Italiane di Clinica Medica, Milan, 1894; Lo Sperimentale, 189[illegible]; Gazzetta Medica di Torino, 1897, vol. xlvii., No. 12.

[28] Archivio Italiano di Clinica Medica, 1895; Conferenze Cliniche Italiane, [illegible] i., p. 261; La Clinica Medica Italiana, 1898, vol. xxxvii., p. 5[illegible]

[29] Bollettino dell' [illegible] 1897.

[30] Archivio Ital[illegible] p. 394.

[31] Gazzetta [illegible] 9.

[32] Il Morgagni, 189[illegible], vol. xxxix., p. [illegible]; La Clinica Medica Italiana, 1899, vol. xxxviii., p. 674.

[33] Recherches sur l'Urobiline, Paris, 1899.

These two hepato-intestinal theories embody the only attempts yet made to explain what is a very real difficulty in connexion with the intestinal theory. It is, of course, possible that both are to some [illegible] the liver is felt both [illegible] cycle. As has been [illegible] ed, urobilin is changed in [illegible] suggests that it may be [illegible] uggestion will be again referred to when we come to speak of that pigment.

One more objection must be mentioned. Urobilinuria is not infrequently [illegible] obstructed and th [illegible] diminishing. In [illegible] antecedent urobil [illegible] sidered. However, Vitali records a case in which this could be excluded and explains the facts by supposing that the [illegible] other hand, suggests that the partial removal of the antiseptic influence of the bile encourages bacterial activity, and that in spite of a diminishe [illegible] yield of urobilin is increased. [illegible] in such cases would supply [illegible] point [illegible]

There remains [illegible] are sources of uro [illegible] Its disappearanc [illegible] occluded shows that no such second process is usually at work and disposes of *the theory that urobilin is formed* from bilirubin in the tissues a [illegible] stances although the tissues [illegible] the excretion of urobilin is [illegible] some, and notably Gerhardt, [illegible] formation of urobilin from hæmoglobin cannot be excluded, although the urobilinuria which accompanies hæmolysis and *the absorption of extravasated blood may be explained* by the increased formation of bile-pigment which is known to take place under such circumstances. If it can be shown that in some cases of occlusion of the common bile-duct of sufficient standing to allow of the excretion of all absorbed urobilin urobilinuria is still observed, there is no alternative but to admit the existence of a second source. I have never met with such a case, and the only recorded instance of the kind with which I am acquainted is one referred to by Gerhardt of a patient the complete occlusion of whose bile-duct by carcinoma was verified post mortem, who developed hæmorrhagic ascites, and whose urine showed a pronounced urobilin band. It is not stated how long the intestinal contents had been practically urobilin-free at the time of observation. Beck injected blood under the skin of a dog with ligatured common duct and a biliary fistula and found a little urobilin in the bile, very little in the urine, and none in the fæces. Hence he concluded that the possibility of hæmatogenous urobilinuria could not be dismissed offhand, and it is evident that further observations are necessary before the question can be regarded as definitely settled.

Lastly, it is necessary to say something of the clinical aspects of urobilinuria. Increased excretion of the pigment, evidenced by a dark absorption band seen when the urine is examined with the spectroscope, is a very common phenomenon in disease, and we may distinguish between cases in which the band is seen for only a few days in succession and those in which it is present over a long period. A distinction may also be drawn between cases of what may be called "pure urobilinuria" in which a markedly increased urobilin excretion is the only obvious pigmentary abnormality and those in which uroerythrin and hæmatoporphyrin are also present in excess. In febrile disorders of almost every kind temporary urobilinuria may be met with, the duration of which usually corresponds with that of the pyrexia. In diseases of the liver the urobilinuria is usually persistent, as is well seen in cases of cirrhosis, malignant disease, or passive congestion secondary to cardiac or pulmonary troubles. In such cases the urobilin band is apt to be masked to some extent by a general absorption of the violet end of the spectrum due to other pigments. In diseases attended by excessive hæmolysis, and during the absorption of extravasated blood, there is apt to be conspicuous urobilinuria, and unless complications are present there is no corresponding increase of uroerythrin or hæmatoporphyrin. Such urines have a warm orange colour, which is readily recognised by a trained eye, and at the apex of a conical glass a pinkish tinge is usually seen. The occurrence [illegible] stent urobilinuria in pernicious anæmia was first [illegible] by Dr. F. W. Mott[35] and Dr. William Hunter,[36] and [illegible] es a diagnostic sign of real value and affords an indication of the progress of the case. In association with it I have observed a marked excess of urobilin in the fæces. When blood extravasations are being absorbed a temporary urobilinuria is apt to occur in a day or two after the occurrence of the hæmorrhage, and this again [illegible] y prove of service in the diagnosis of deep-seated [illegible] morrhages, such as pelvic hæmatoceles. Diminished [illegible] cretion or absence of urobilin from the urine may be due [illegible] diminished formation of bile-pigment, as in chlorosis, phosphorus poisoning, or acute yellow atrophy of the liver; to suspension of *urobilin formation in the intestine*, as in typhoid *fever* with green stools; as well as to occlusion of the common bile duct. Viglezio[37] suggested that renal permeability has an important influence upon the excretion of this pigment, and it is a clinical fact that albuminuria and urobilinuria very seldom co-exist. There is, moreover, experimental evidence in support of this view. As might be expected *all diseased kidneys do not hold back urobilin to* the same extent, and Zoja thinks that a parallelism may be traced between its excretion and that of urea. Morfaux,[38] who, with Achard, has recently worked at this subject, states that a kidney which is impermeable to methylene blue is impermeable to urobilin also, and that the more diffusible chromogen may pass through a kidney which does not allow the passage of the formed pigment.

HÆMATOPORPHYRIN.

When we pass to the consideration of urinary hæmatoporphyrin and of the pathological significance of its presence in excess we enter upon comparatively little-trodden ground. Hæmatoporphyrin has been found by MacMunn in the integuments of certain invertebrata, some of which have no hæmoglobin in their blood. *Krukenberg and Sorby* have shown that it is one of the colouring matters of the shells of birds' eggs, and Tappeiner found it in the bones of certain diseased swine. Pigments very closely resembling it have been obtained by the action of reagents upon substances other tha [illegible] Such are the turacoporphyri [illegible] the copper-containing pigment [illegible] prepared by Schunck and Marchlewski from chlorophyll. In normal human urine hæmatoporphyrin is present in minimal quantity, as can readily be demonstrated by appropriate methods. In many morbid urines it is found in larger but still small amounts, and under exceptional circumstances, and especially as a result of the administration of sulphonal, it is much more abundantly present in urines which have a deep port wine tint. However, such urines owe but little of their peculiar colour to this pigment. In the fæces it is also present, as Stokvis[39] has recently pointed out, and its presence may be demonstrated by a method employed by Saillet[40] for its detection in urine, the basis of which is extraction with acetic ether after the addition of acetic acid. I have recently made a number of examinations of the solid excreta rich orange-yellow. With zinc chloride and ammonia a brilliant green fluorescence appears, and the band is shifted towards red, as that of urobilin is under like conditions. The process can be stopped at this point by the simple addition of water, for aldehyde has no such action upon aqueous solutions of urochrome. If, however, the action be allowed to continue a further change ensues; the liquid reddens and a second band appears in the violet. The fluorescence can still be obtained with zinc chloride and ammonia, and both bands are shifted towards red and are closer together than before. This reaction with aldehyde affords a very delicate test for the presence of urochrome in alcoholic solutions. The product of the earlier stage, although it is not identical with urobilin, resembles that pigment quite as closely as the products obtained from bilirubin and hæmatin by the action of reducing agents; but no second band is developed when aldehyde is added to an alcoholic solution of urobilin. On the other hand, by the action of potassium permanganate upon urobilin Riva and Chiodera[56] obtained a substance closely resembling urochrome, and a similar product is formed when an aqueous solution of urobilin containing ether is evaporated upon a water bath. Neither product shows any absorption band and both behave as urochrome does when it is acted upon by aldehyde. Riva and Chiodera also detected the presence of urochrome in fæces and in serous effusions, and its presence in both may readily be demonstrated. I have found that the most satisfactory method for its detection in fæces is to extract with a saturated solution of ammonium sulphate, which takes up neither urobilin nor its chromogen. From the yellow extract so obtained the urochrome can be separated with alcohol in the ordinary way,[57] and precipitated from alcoholic solution by ether. Its identity can be established by means of the aldehyde reaction. As judged by the colour the quantity obtained is small and there is no relative excess in the intestine, as in the case of urobilin.

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[31] La Clinica Medica Italiana, 1898, vol. xxxvii., p. 214.

[35] THE LANCET, 1890, vol. i., p. 500.

[36] Practitioner, 1889, vol. xliii., p. 101.

[37] Lo Sperimentale, 1891, vol. xlv., p. 225.

[38] Loc. cit.; Comptes Rendus de la Société de Biologie, 1899, dixième série, tome vi., p. 50.

[39] Nederl. Natuur- en Geneeskundig Congres, 1899, p. 373.

[40] Revue de Médecine, 1896, tome xvi., p. 542.

When ascitic fluid is saturated with ammonium sulphate the serum pigment is all thrown down with the last of the proteid precipitate, and from the almost colourless filtrate alcohol extracts a minute amount of a yellow pigment, which yields the aldehyde reaction of urochrome. Riva's[58] suggestion that some of the urobilin absorbed from the intestine may be converted into urochrome in the tissues is in part based upon the scanty pigmentation of the urine of young infants and in part upon the almost complete decolourisation of the urine of a patient with obstructed bile duct, when the bile-pigment was removed by means of baryta mixture. The case or cases which he observed were certainly exceptional in this respect, for in the urine of several patients with occlusion of the bile duct, which I have examined I have never failed to find abundance of urochrome present after similar treatment. Vitali has had the same experience, and it is a well-known fact that in cases of biliary fistula, with occluded duct, the urine is not decolourised even after it ceases to contain bile-pigment. Moreover, urochrome is present in the urobilin-free fæces and even in those of infants with congenital atresia of the ducts. One is, therefore, driven to conclude that the formation of urochrome is quite independent of that urobilin, and although it is probably a derivative of hæmoglobin there is as yet no evidence to show how or where it is formed. It may be mentioned as a negative point that the excretion of urochrome is not obviously affected by removal of the spleen.

Clinical evidence bearing upon this question is at present wholly wanting, and although there can be little doubt that the excretion of urochrome is subject to wide fluctuations apart from the apparent variations due to concentration or dilution of the urine, we know nothing of the conditions under which they occur. The pigment has no characteristic spectrum and the want of a satisfactory method for its estimation makes it difficult to form even a rough notion of the quantity present in morbid urines, in which its colour is so often masked by that due to other pigments.

UROERYTHRIN.

Of the mode of origin and the relationships of uroerythrin we know even less, notwithstanding that its power of imparting a pink colour to urate sediments renders its detection extremely easy and caused it to be the first of all the urinary pigments to attract individual attention. Uroerythrin is a potent colouring matter, far excelling urochrome and urobilin in this respect, so that the presence of even a small amount has a conspicuous effect upon the tint of the urine in which it is contained. The peculiar reddish-orange colour of the pigment in solution contrasts strongly with that of the pink urate sediments, in which it probably exists in combination, for they show a characteristic spectrum of their own.[59] In its properties uroerythrin differs widely from the pigments which we have hitherto been considering. The most conspicuous of these is its extreme instability, and compared with it urobilin and hæmatoporphyrin are quite stable compounds. Its solutions in alcohol or chloroform are very rapidly decolourised by light, and even when kept in the dark quickly undergo change. Alkalies destroy the pigment readily, with the production of a green tint. Neutralisation of the alkali does not restore the original colour or bring back the absorption spectrum, which is characteristic though ill-defined, consisting of two feeble bands in green and blue united by a feebler shading. One of these bands has the position of the urobilin band, but both alike disappear when the solutions are decolourised by light. These properties suggest that uroerythrin is a pigment of a different order from those which we have hitherto considered and that it is probably not a member of the family of hæmoglobin derivatives. There is, however, little to guide us in this matter and C. E. Simon[60] quotes an estimation of the carbon and hydrogen in uroerythrin which is suggestive of a relationship to bilirubin, but he gives no particulars. Hitherto this pigment has only been found in urine and there is no evidence that it is excreted in the form of a chromogen. On the other hand, it may fairly be doubted whether a substance so readily destroyed by alkalies can exist as such in the alkaline body fluids. I have sought for it in the fæces of patients in whose urine it was abundantly present by several methods, such as extraction with amylic alcohol and acetic ether, both excellent solvents of uroerythrin; by shaking water extracts, acidified with acetic acid, with amylic alcohol, and by precipitation of crystalline uric acid in watery extracts. All of these methods have failed to reveal its presence and although some method as yet untried may reveal traces it can hardly be present in any considerable amount in the solid excreta.

Although uroerythrin is probably not a strictly normal constituent of urine it may appear in connexion with most trifling deviations from the standard of health. Heller[61] regarded it as the commonest of all abnormal ingredients of urine, and uratic sediments are not often entirely free from a pink tint which may, however, only be visible after their removal by filtration. Such knowledge as we possess of its pathological significance is entirely derived from clinical observation and points to disturbances of the hepatic functions as the prime causes of the increased excretion of uroerythrin. Urines which throw down intensely pink uratic sediments or have the fiery orange colour indicative of much uroerythrin in solution are most frequently passed by patients with definite hepatic diseases such as cirrhosis, carcinoma, or the passive congestion resulting from cardiac lesions. It is true that this pigment is often excreted in large amount in certain febrile disorders, such as acute rheumatism and pneumonia and also in gout, and when associated with an undue excretion of hæmatoporphyrin it affords additional evidence of the implication of the liver. In typhoid fever a large excretion of uroerythrin is exceptional and its occurrence has been connected with pulmonary complications. Riva has made the interesting observation that in such diseases as cirrhosis hepatis the excretion of uroerythrin, as also of urobilin, is much diminished when the patient is put upon a milk diet In nephritis uroerythrin is seldom found in the urine, but I have seen in a case of pneumonia an abundant excretion of this substance accompanying conspicuous albuminuria.

If uroerythrin in urine is always indicative of hepatic disorder it is clear that not only actual disease of the liver, but even functional disturbances of the slightest description, such as may be supposed to result from trifling errors of diet or may accompany a dyspeptic attack, suffice to bring about its appearance.

Although, as we have seen, the liver plays so important a part in connexion with the pigmentation of the urine, the various morbid changes to which that organ is liable have somewhat different effects upon the excretion of the several pigments, and it is probable that a more detailed study of these effects would supply further diagnostic indications. However, in this review of a somewhat obscure branch of chemical pathology nothing has been further from my desire than to claim for my subject an exaggerated practical importance or to suggest that the investigation of the urinary pigments should form part of the routine of clinical examination. Such importance as the subject possesses is derived from the light which it throws upon processes which are at work in the body both in health and in disease, and especially upon those which are concerned with the disposal of effete blood pigment. Nevertheless, in certain cases the examination of the colouring matters of the urine may afford information of real diagnostic value and which is not readily obtained in other ways. It may therefore be fairly claimed that their study is one which is not simply and solely of academic interest.

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[56] Archivio Italiano di Clinica Medica, 1896, vol. xxxv., p. 505.

[57] Proceedings of the Royal Society, 1894, vol. lv., p. 394.

[58] Gazzetta Medica di Torino, 1896, vol. xlvii., No. 12.

[59] Journ[illegible] [illegible] vii., p. 439.

[60] Clinical [illegible] 1900, p. 426.

[61] Archiv für [illegible], 1853–54, p. 361.

A Clinical Lecture

ON

EMPYEMA FOLLOWING LOBAR PNEUMONIA

Delivered at Guy' Hospital on June 27th 1900,

BY W. HALE WHITE, M.D., F.R.C.P. LOND.,

PHYSICIAN TO, AND LECTURER ON MEDICINE AT, THE HOSPITAL

GENTLEMEN,—Most patients suffering from lobar pneumonia either recover or die without any complications, but among those few in whom complications follow there are none for whom you can do more than for those who suffer from empyema. A few years ago Dr. Chaning Pearce helped me to abstract several cases from our medical reports; lately my clinical assistants, Mr. F W. Goble and Mr. B. W. Moss, kindly abstracted some more, and I have abstracted some myself. Altogether there are 45 15 of these were under my care and for permission to refer to the others I am indebted to my colleagues. The results are shown in the following table:—

—	1898	1897	1896	1895	1894	1893	1892	1891
Total number of cases of lobar pneumonia in Guy's Hospital ..	122	115	114	100	67	182	88	108
Number of cases of pneumonia complicated by empyema	3	7	3	6	2	9	2	6
Percentage complicated by empyema	2·46	6·08	2·63	6·0	3·0	4·94	2·27	5·5

—	1890	1889	1888	1887	1886	1885	1884	1883
Total number of cases of lobar pneumonia in Guy's Hospital ..	83	60	43	72	48	39	26	69
Number of cases of pneumonia complicated by empyema	1	1	1	2	—	—	1	1
Percentage complicated by empyema	1·13	1·6	2·3	2·9	—	—	3·8	1·4

If we divide this period of 16 years into two equal periods we find that in the eight years 1891–98 there were 896 cases of lobar pneumonia, of which 38, or 4·24 per cent, had empyema, while in the eight years 1883 to 1890 the total number of cases of pneumonia was 445, among which there were seven cases, or 1·57 per cent, of empyema. Thus we see that both relatively and actually the number of cases of empyema due to pneumonia has increased of late years, and the rarity of this complication a few years ago explains the fact that in many text-books published then it was not mentioned that empyema was a complication of pneumonia, and it also goes to confirm what I think experience tells us—namely, that pneumonia is a more severe disease than it was

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have been very great during the last eight years, but the frequency of empyema has increased. There is very little doubt that these figures understate the number of cases of empyema following lobar pneumonia, for it is almost certain that some of the patients who are admitted for pus in the chest have had pneumonia shortly before they came into the hospital Only recently a man was under my care for empyema which was opened. He died very shortly after the operation and pneumonia was found at the post-mortem examination. Had he recovered we should not have known that his empyema was consecutive to pneumonia. Another reason which makes it impossible to give precisely the proportion of cases of pneumonia which are followed by empyema is that the pneumococcus may be the means of setting up an empyema, even although it does not induce pneumonia, and in such a case the general symptoms and physical signs may be such that it is very difficult to deny certainly the presence of pneumonia. I have seen three or four cases illustrating this point; perhaps the best is that of a man who was under my care but whose case is recorded by Dr. J. W. Washbourn in the Transactions of the Royal Medical and Chirurgical Society, vol. lxxvii. The patient was aged 36 years; his illness was ushered in by a rigor, he had persistent high temperature, rapid breathing, cough, herpes, and delirium. His general aspect was so like that of a patient suffering from pneumonia that both the medical registrar and I pointed him out to the students as having the exact appearances of a patient suffering from pneumonia. The physical signs were until the day before death those of solid lung—viz., loud bronchial breathing, bronchophony, dulness, and consonating râles. Not until the day before death did signs of fluid appear at the base of the lung. At the necropsy the lung was normal both to the naked eye and the microscope, 54 ounces of pus were found in the chest, and this was proved by microscopical examination, by cultivations, and by inoculations to contain no micro-organisms but pneumococci It is of great interest to notice that such cases as these remind us that although the pneumonia due to the pneumococcus does lead to a pulmonary abscess, yet the same micro-organism may do so when it invades other parts of the body.

We see, therefore, that it is impossible to state with accuracy the percentage of cases in which pneumonia is followed by empyema, but it

of 325 consecutive cases of

of Guy's Hospital there were

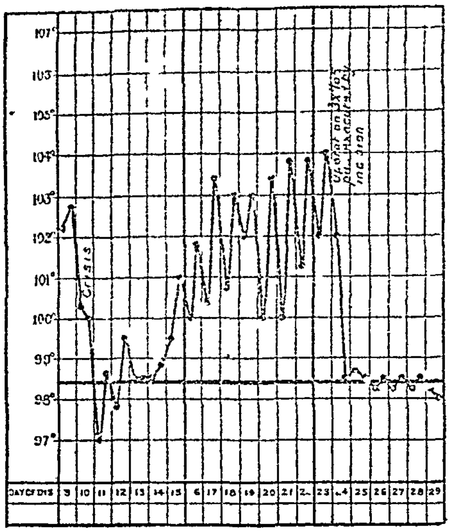
it appeared that the empyem

But although this is so, it is easy by systematic examination of the pus to find out the proportion of cases of empyema due to the pneumococcus I have not searched through all our records to find the exact proportion, for several authors have published results from which it appears that the pneumococcus is a very common cause of empyema, probably the commonest, that it is especially common as a cause in children, some considering that 75 per cent. of all empyemata in children are due to it.

Perhaps the best way to consider the subject is to see what we can learn from the 45 cases of empyema following upon lobar pneumonia which occurred in Guy's Hospital from 1883 to 1898 and to check the knowledge thus gained by the patients now in the hospital and one who has recently died.

By far the most important aid to diagnosing that empyema has followed pneumonia is the temperature. The usual thing, if empyema follow, is for the temperature to fall when the crisis takes place, for it to remain down two or three days, for it then to rise again, so that it soon becomes from 2° to 4° or 5° above normal in the evening and about 1° or 2° in the morning; this continues until the pus is evacuated. Chart 1, taken from a patient under the care of Dr. Frederick Taylor, shows this admirably Sometimes the apyrexial interval is only one day, sometimes it is four or five days, and sometimes there is not strictly an apyrexial interval, for the temperature does not fall at the crisis to normal, but only to nearly normal, and then soon begins to rise again, so that instead of an apyrexial interval we have an interval of lower temperature There is a fall of temperature at the pneumonic crisis with a subsequent rise in about a third of all the cases in which empyema followed pneumonia This fall of temperature is a very curious phenomenon, for we believe the pneumonia to be due to the pneumococcus and the empyema to be due to the same micro organism, and that it is in some way responsible for the pyrexia; that being so it is difficult to understand why, although these micro-organisms are constantly present, there should be any fall of temperature, for there may be a well-marked crisis with an apyrexial interval before the onset of the temperature indicating empyema even in cases in which the pus from the empyema contains no micro-organisms save pneumococci. Also it is difficult to understand why, when the temperature is indicative of the invasion of the lungs by pneumococci, the daily variations should not be extreme, but when the same micro-organism subsequently causes empyema the daily variations should be great.

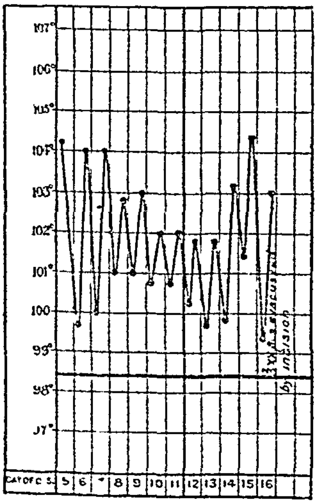
CHART 1



Showing the most common course of the temperature in empyema after pneumonia.

In many cases there is no apyrexial interval and probably in some of these pus is present from quite early in the illness. Chart 2, from a patient under the care of Dr. Taylor, shows very well a case in which there was no interval during which the temperature fell. You must be particular to bear in mind that there is no sharp boundary line between the two groups, for the temperature may fall a little about the end of the first week, but the fall may be so slight that it is impossible to say whether it represents a crisis modified by the presence of pus.

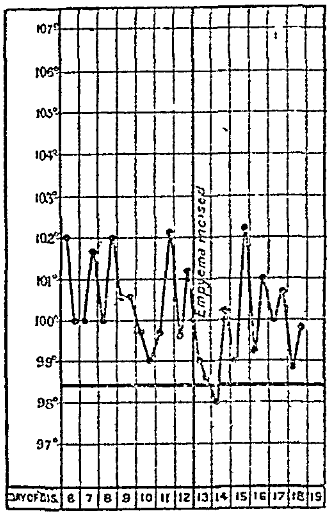
CHART 2



Showing the temperature from a pneumonic empyema without any apyrexial interval.

There is a third group in which also there is no interval during which the temperature is lower, but in which there is some complication present that may well explain this. Pericarditis and malignant endocarditis may both of them be associated with empyema after pneumonia and if they are present early in the case they may prevent the fall. Chart 3 represents the temperature of a boy now in John Ward under my care and as in his case there is pericarditis as well as empyema it is probable that this explains why he did not have a more definite crisis and why even when the empyema was opened the temperature did not fall. It is noteworthy that although pericarditis is a common complication of pneumonia and five of our cases of empyema had pericarditis, yet pyopericardium is so rare. Only one of our 45 cases showed it, and in this case, which was not diagnosed during life, 23 ounces of pus were contained in the pericardium and 12 ounces in the right pleural cavity. Although the empyema in the little boy (Chart 3) now in John Ward lay against the pericardium and he had pericarditis there is no evidence that he has had pyopericardium. Pus in the pericardium from any cause is very rare. I think we have only had six instances at Guy's Hospital in 11 years.

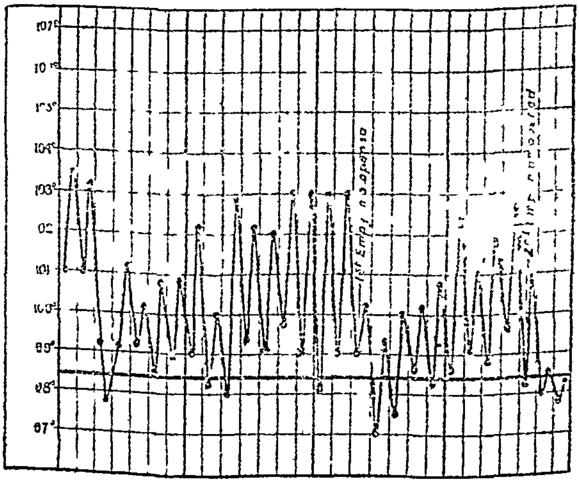
CHART 3



Showing that if pericarditis is present the opening of the empyema may hardly influence the temperature.

Three of our 45 cases developed pneumococcal malignant endocarditis; in one of them, although there was no lesion of the valves, there was general infection as shown by the presence of infective aneurysms. In a fourth case there was a pneumococcal gluteal abscess and in a fifth there was pneumococcal inflammation about the ankle. It is obvious that any of

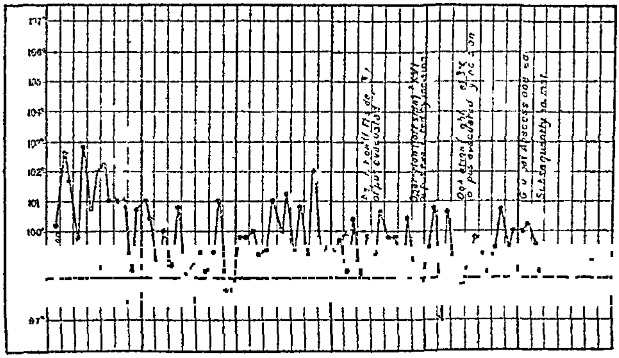
CHART 4



Showing the temperature in a case in which two empyemata were opened by incision.

these will mask the temperature due to the empyema There really appears to be no part of the body in which the pneumococcus may not flourish, you know it will cause meningitis, peritonitis, and arthritis In very rare instances there are two empyemata, then although the first is operated upon the temperature does not fall permanently until the second is opened Chart 4 from a patient under the care of Dr E O Perry, shows this very well, and Chart 5, from a patient under the care of Dr P H Pye Smith, shows a case in which there was a post pneumonic empyema at each base and an at [illegible] was not until all had been [illegible]

CHART 5



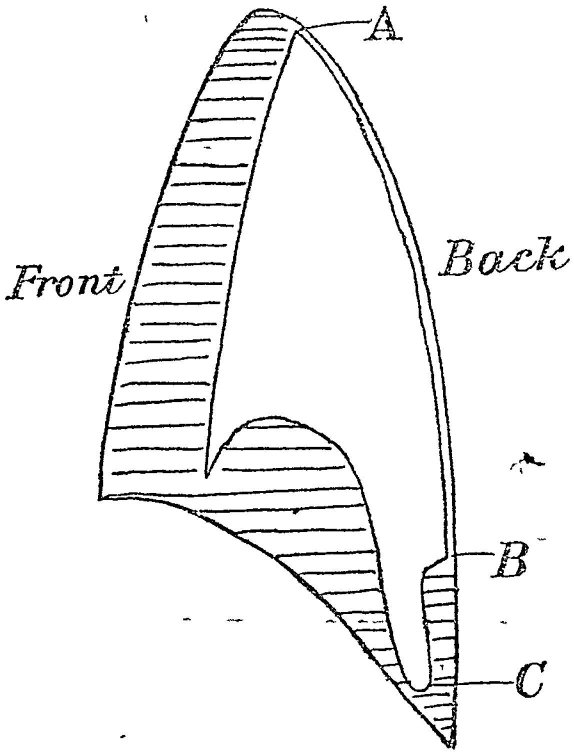
Showing the course of the temperature in a case in which a double empyema and gluteal abscess existed

Althou [illegible] ure is most important in helping you to diagnose an empyema following pneumonia it is not an infallible guide, for in the first place the temperature may remain up for some time and yet no pus be present Crisis occurs in only about half of all the cases of pneumonia and when there is no crisis the temperature sometimes falls irregularly and tediously; this is well exemplified by a boy now in No 3 bed John Ward Usually such temperature receives no explanation from the condition of the patient, but it is to be noted that these irregular unexplained temperatures which may, especially in children, follow upon pneumonia do not often show the considerable daily range which is so suggestive of pus, but, on the other hand, as we shall see directly, pus may be present without any wide daily range Sometimes the persistent temperature after pneumonia is due to some other complication—e g , malignant endocarditis—and not to empyema or it may be due to some associated disease such as typhoid fever Again particularly in children, it is very difficult always to tell lobar pneumonia from broncho pneumonia, and in this the temperature may remain up irregularly for a long time, or pyrexia may be caused by quite a small empyema which is coughed up and never detected In the second place, an empyema in quite exceptional cases follows pneumonia with little or no rise of temperature to reveal its presence In one of our 45 cases the temperature slowly fell to normal, but the signs of a localised collection of fluid below the left clavicle remained and an exploring needle revealed a localised empyema In a patient under my care pneumonia was complicated with pericarditis The patient was taken ill on Sept 23rd, by Oct 15th she was much better, but from then till Nov 6th her temperature was usually raised a degree in the evening From Nov 6th to the 12th it was about 101° F in the morning and 103° or 104° in the evening A small empyema containing four ounces of pus was found Perhaps in this case the empyema had been present all the time although for three weeks the temperature was only raised a degree In another patient, whom some of you saw not long ago there were two or three pints of pus but the temperature was usually only between 99° and 100° I have carefully compared the respirations in several cases, but I have not made out that rapidity of respiration is much help in diagnosis, but there is some slight evidence that when the empyema is due to the pneumococcus the respiration may occasionally be more rapid than either the fluid or the temperature would lead us to expect

Let us now pass on to the examination of the chest, and in the first place let me direct your attention to the great importance of local tenderness Very often people with deep seated small abscesses have one spot pressure upon which with the finger gives rise to a slight feeling of pain Such a spot, if present should be chosen for insertion of the exploring needle and may enable you successfully to find pus that would otherwise probably have been missed I have seen attention to this lead to the discovery of a small suppurating hydatid, small subdiaphragmatic abscesses, and small localised empyemata

There is little to be said about the physical signs Pus gives the [illegible] and exper [illegible] small emp [illegible] layer of lymph and they have much solid lung in their neighbourhood The smallest post pneumonic empyema I have detected during life only contained half an ounce of pus and it is common for them to hold only three or four ounces Sometimes it is the absence of air entry, sometimes it is the percussion note and sometimes it is the absence of bronchophony that particularly guides you In some cases the difficulty is greatly increased by the fact that the empyema is localised and deep in the chest, thus I have seen it sub diaphragmatic and I have seen it between the lobes of the lung There is at the present moment a boy in John Ward (No 14) whose widely oscillating temperature following upon an ordinary attack of pneumonia makes it almost certain that he has an empyema When we examine the chest we find that signs suggestive of fluid can be obtained just against the vertebral border of the scapula when it is well dragged forward but there are none in the axilla We have repeatedly tried, and always failed, to reach this empyema with an exploring needle Probably it is a small one well under the scapula and perhaps between the lobes of the lung Twice I have known a small empyema successfully and easily found with an exploring needle although when later the patient has been under the anæsthetic the surgeon has failed to find it till he has made nearly 20 punctures, and I have seen small empyemata in the post mortem room which had during life been missed, although the exploring needle had been inserted many times There is no royal road to finding them—the only thing is to take an infinitude of pains One reason why they are so difficult to discover is that as often as not adhesions shut off the pus in irregularly shaped cavities The most striking instance I have ever seen of these adhesions is that of a man who was admitted into Philip Ward last March (See Fig 1) He gave a history of two years illness and said that he had been worse lately, but even when questioned would not admit that he had been suddenly taken ill or had had a rigor. His temperature varied between 99° and 100° F., he had much diarrhœa and albuminuria, and he was anæmic and hectic-looking. Both sides of his chest moved equally.

FIG. 1.

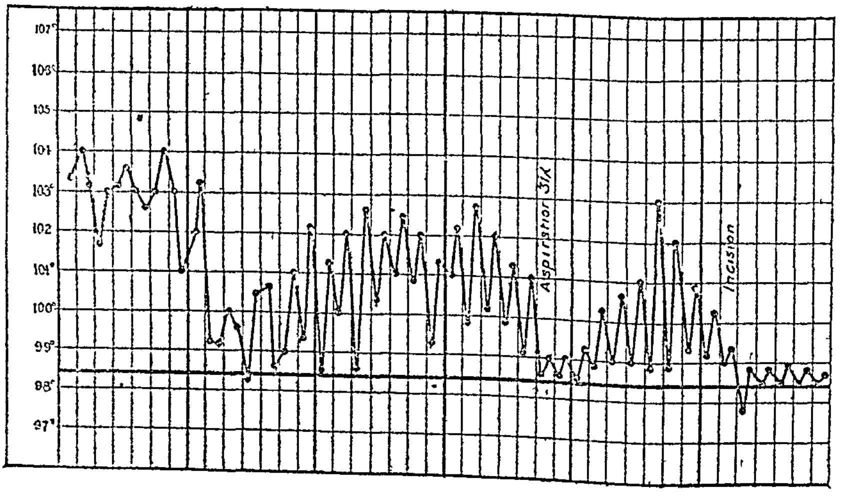


A diagram of an antero-posterior section through the left chest, showing the shape of the empyema which is indicated by horizontal lines From A to B the lung was firmly adherent to the chest wall. From B to C it was compressed. Most of the rest was pneumonic.

The left side was dull in front with a poor air entry, behind it was also dull with a poor air entry and some bronchial breathing. Below the tenth rib base it was especially dull, so that I inserted a needle in the tenth space and withdrew pus; and in order to prove that the whole of the dulness behind was not due to fluid I inserted the needle again in the ninth and eighth spaces without obtaining any pus. There was a loud pleuritic rub and some rhonchi on the right side. I concluded that the case was one of phthisis with a tuberculous empyema at the base of the left lung and finally decided to open it. About four pints of pus gushed out and the patient died very shortly afterwards. We found that he was suffering from a huge post-pneum[illegible] was still in a state of grey [illegible] commenced apparently be[illegible] lung and the diaphragm and strong but recent pleuritic adhesions running vertically down in and behind the mid-axillary line had localised it so that it spread up the front of the chest right up to the clavicle but only up the back as far as the tenth rib. The diagram shows an antero posterior section through the left chest. Had we known that there was so much pus it would have been wiser to slowly aspirate before opening the chest, for probably the sudden taking away of all that fluid from around the heart led to the sudden death. It is interesting to note that there was a small abscess in the lung. I have seen that in at least one other case of pneumococcal empyema, and it is also worthy of note that although there was all this pus there was no œdema of the chest-wall, for it is said that œdema of the chest-wall never occurs with pneumococcal empyema. The pus that is let out of these pneumonic empyemata is often light green and very thick; you can notice this very well in the little boy in John Ward; he coughs out thick pellets of almost solid greenish pus.

Much discussion has taken place about the treatment, for it has often been stated that when the pus contains a pure cultivation of pneumococci aspiration will suffice and incision is unnecessary. Simple aspiration has been tried in several of our 45 cases, but always in a few days the temperature, which at first fell after the aspiration, has begun again to rise and to assume a hectic type, and at the same time signs of fluid have reappeared. One or two very bad cases have died, but in most cases the chest has been ultimately laid open and the patient has done well. Chart 6, from a patient under the care of Dr. Taylor, shows these points admirably. Two patients who have been aspirated have refused to submit to any further operation and have consequently gone out of the hospital. One we have fortunately been able to trace and Mr. Moss kindly visited him at his home and reports that he is now quite well and that his chest seems healthy, although no incision has been made into it. His chart is No. 7. He was admitted under my care for pneumonia on Oct. 16th, 1897, and subsequently was under the care of Dr. Pye-Smith. Five ounces of pus were withdrawn on Nov. 20th. The temperature fell but soon began to rise again, so six ounces were withdrawn on the 28th. Again the temperature fell, but in a few days it rose again and showed wide daily fluctuations, and as he would not have anything more done he left on Dec. 12th, 1897—that is, two and a half years ago. Whether he has coughed up a small empyema it is impossible to say. In none of our cases did a single aspiration suffice to stop the pyrexia and formation of pus, although in some cases—as, for instance, that from which Chart 6 is taken—it was proved that the pus contained no organisms except pneumococci.

CHART 6.



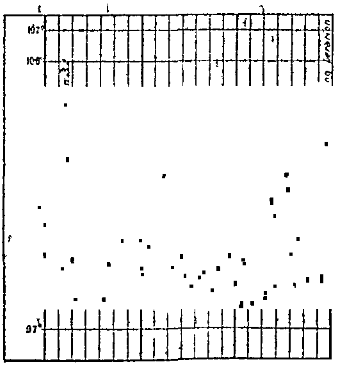
Showing the temperature in a case of post-pneumonic empyema which was aspirated and subsequently incised.

So we may conclude from our experience at Guy's

Hospital that it is very unlikely that simple aspiration will cure any case of pneumococcal empyema; still it must be remembered that a certain number of cases have been recorded in which it has appeared to be curative It seems to me that if the empyema is small it is wiser to evacuate it by incision, for if aspirated probably it will a week or so later have to be incised, and as it is small and will soon heal up it may as well be incised at o
is a large one it is better incised
out the pus to prevent cardiac
seriously and dangerously ill and
prolong his illness by aspiration, as that will almost certainly have to be followed by incision in a week or so Still, in certain cases in which the patient is not very ill and much objects to an anæsthetic or to an operation, you may at his wish try simple aspiration if the pus withdrawn by the exploring needle gives a pure cultivation of pneumococci It is said that children recover more often with simple aspiration than adults

Turning next to the prognosis I find that among our 45 cases 13 died, giving a mortality of almost 29 per cent

CHART 7



Showing the temperature in a case of post-pneumonic empyema which was aspirated twice.

This is considerably higher than that given by some authors, but then it must be remembered that children—in whom the prognosis is most favourable—often go to a children's hospital, so that a large general hospital does not get a fair proportion of patients under 10 years of age, and further, four of the 13 had signs of general infection as shown by malignant endocarditis or infective aneurysms and two were instances of pneumonia occurring in those patients who were already the subjects of phthisis If we deduct these six cases we get a mortality of seven among 39 cases, or about 18 per cent The mortality among patients suffering from pneumonia varies widely in different years Thus at St Thomas's Hospital[1] in 1887 it was 35 per cent in the latter half of 1888 and in the first nine months of 1889 it was 9 per cent, and in 1882 it was 7 per cent, but in January and February when influenza was rife it was 64 per cent It is thus impossible with the figures at our disposal to say how far the danger to life is, in pneumonia, increased by empyema but certainly the extra danger is not very great In one of the cases of empyema with malignant endocarditis this was more marked on the right side of the heart than on the left, suggesting that the infection had taken place from the pleura by means of the azygos veins

It has been stated that recovery usually follows when a pneumonic empyema bursts into the lung, and our series contains a very striking case which goes to support this view. A very feeble man aged 72 years, was admitted under the care of Dr J F Goodhart suffering from pneumonia An empyema formed at the base of the right lung, five ounces of pus were let out by incision, but the patient was no better, a few days later he coughed up several ounces of pus by the mouth; he at once began to mend and made an excellent recovery I have also seen a patient whose case is not included in our series cough up a post pneumonic empyema and get perfectly well, and I am afraid that we must leave the boy in John Ward, whose empyema is probably deep seated somewhere under the scapula, to get well in the same way; indeed, if it is deep between the lobes of the lung probably he will get better more quickly if he coughs it up than if we find it and open it

The amount of pus found in these empyemata is most variable; 170 ounces were present in one of the patients who had malignant endocarditis The rate at which it is poured out must be great, for if in the cases in which 80 and 72 ounces were respectively found we believe that the formation of pus began with the onset of the pneumonia at least five ounces must have been formed daily, and if we consider that the pus did not begin to be formed until the secondary rise of temperature began the rate of collection must have been half a pint a day In striking contrast to these is the case already mentioned in which only half an ounce was found, although 24 days had elapsed since the secondary rise began Rapid as is the rate at which pus may collect in the chest there is no evidence that it can collect at the rate at which clear fluid may be poured out, for I have recorded a case in which over 100 ounces of this were secreted in one and a half days[2]

An Address

ON

THE PHYSIOLOGY AND PATHOLOGY OF INHERITANCE, OR WHAT DO WE INHERIT FROM OUR PARENTS?

A Lecture Introductory to a Course of Clinical Medicine delivered in the Newcastle upon Tyne Royal Infirmary on Oct 31st, 1900,

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GENTLEMEN,—From a biological point of view "we are the heirs of the ages" Not only in the sense that we are participators of the accumulated experience of the race, but in the physical and mental endowments that belong to each of us, do these words find scope for their realisation Studying together, as we shall this winter, clinical medicine, it has seemed to me that the present is not an inopportune time to draw your attention to some of the less frequently discussed problems that underlie human life in health and disease If I can show you that disease is not a morbid entity, requiring to be diagnosed and treated, but something more, and that into our conception of disease there must enter, in addition to the symptoms complained of and the physical signs of ill health, knowledge of the individual with his peculiarities of constitution his susceptibilities his age and his occupation—in a word, that it is not disease as disease but the individual with his malady that requires treatment—the time at our disposal will not have been misspent

Disease, from the words "dis" and "ease," simply means want of ease In health all our organs functionate without impressing themselves upon our consciousness, but in disease we are often too painfully aware of their existence It was the opinion of the ancients that disease depended upon a chemical change in the humours of the body, and so for a period the humoral pathology prevailed, remnants of which are still seen in the nomenclature of disease Later disease was thought to be due to a distinct and tangible cause, a *materies morbi*, while subsequently to this it was regarded as the last link in a chain of processes of deranged metabolism and abnormal function with diminished resistance to external surroundings Within the last two decades, owing to the great strides made by bacteriology—a science which has shown that many diseases, especially those of an infectious nature, and even others that are not appreciably infectious, are due to the entrance into the system of microbes—medical opinion as to the cause of disease has veered round to a belief in the existence of a *materies morbi*. Even here there is danger in being too exclusive. Admitting that tuberculous disease, for example, is bacillary and that there is no tubercle without Koch's bacillus, and also that pneumonia and erysipelas are equally caused by micro-organisms, it is for us to consider whether other factors are not in operation and to assign to each its respective rôle.

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[1] St. Thomas's Hospital Reports, vol. xix.

[2] THE LANCET, March 25th, 1893, p. 6.9

Leaving out of consideration congenital affections and deformities, or those abnormal conditions with which a child is born attributable to circumstances operating directly upon the fœtus in utero, as in congenital syphilis, I shall deal with those individuals who are born presumably healthy and yet in whose system there are such refinements of structure and deviation from the normal that as time goes on life is brought prematurely to a close by disease similar to that from which one or both parents perhaps died, or during whose lives there are exhibited traits of character or peculiarities of temper and of disposition that recall the life of the parent or of an earlier ancestor. I eliminate congenital syphilis and congenital tuberculosis, for in these the actual disease is simply passed on to the offspring and assumes in it the same activity as it did in the parent. In the inheritance of which I speak it is not disease, but simply a susceptibility, that is transmitted.

How, then, can I best illustrate the physiology of inheritance? Galton in his book on "Hereditary Genius" speaks of the child as being not simply the product of the two lives paternal and maternal, but also of the four grandparents and eight great-grandparents and so on, indicating that into the production of the physical constitution and mental qualities of a human being there enters more than is contributed by the immediate parents. The book is an attempt to show from the family history and biography of men distinguished in literature, in science, in legislation, in the profession of arms, and in law that the qualities exhibited by men which made them renowned depended less upon their education and surroundings and more upon the physical constitution and mental powers inherited from their parents or earlier progenitors. In one sense the teaching is depressing. We are what we are because we cannot be otherwise and we become what we are through inherited qualities. Human experience, on the other hand, shows that however much certain qualities may be inherited it is not always and alone thus that they come to us. Evolved in the course of time, they have been fostered by survival of the fittest, by marriage, and by education. If we add to patience, to zeal, and to capacity for work good health, then by the proper exercise of all our powers advancement in life must be secured. Social advantages, dogged perseverance in a particular calling, good manners, and ability to utilise opportunities make for success; yet, on the other hand, it must be admitted that when an individual is possessed of great natural ability or those qualities of intellect and disposition that urge to the performance of acts that lead to reputation it is almost impossible for him to have his progress thwarted either by the circumstance of lowly birth, by social disadvantages, or even by the defects of early education. By virtue of the gifts which he has inherited he overcomes all difficulties and therefore must come to the front. If there are inherited qualities that make for good, so, too, must there be others that make for harm to the individual, and it is this particular feature of inheritance that forms the theme of my discourse to day. When we ask ourselves the question, "What is it that is inherited?" we find it difficult to reply. A mother, for example, may transmit masculine peculiarities to her son which she herself does not exhibit, and it does not follow because a father and mother are highly intellectual that their child will also exhibit ability. The child, as already stated, is the offspring, not of the parents alone, but of earlier ancestors as well. Given intellectual parents, all we can say is that the chances are that their offspring will be gifted to a greater degree than children in whose family nothing beyond mediocrity has ever been attained. Ability clings to families, but in order that it may be displayed there must also be inherited capacity and zeal for work, for without these only a sorry figure will be cut in the world by the individual compared with what might be accomplished. We all know persons of this stamp—men who are extremely able, yet since they lack the other qualities they do not rise in life. The number of people must be few who would underrate the influence of early home training or the invaluable help rendered to a youth by a good and able mother. The natural ability of such a mother, finding but limited scope within the confined sphere of her maternal and domestic duties, causes her to stimulate her son to attempt a career and to achieve results which she herself could only aspire to in imagination; hence it is that able men are often the sons of clever women.

If it is true that mental gifts and physical powers are only obtained by inheritance, is no encouragement to be extended to mediocrity and no hope held out to men whose family records contain no names of sons eminent in science, in art, or in literature? To believe that one is destined to a great end is at once to command success, but there is another fatalism that leads to destruction. The age in which we live is one of keen international competition and the prize must ultimately belong to that nation which, possessing great physical vigour, natural resources, or acquired means of sustenance, finds its opportunity in equable development of mind and body, in adherence to right, in patience and persistence, and in the avoidance of all causes that lead to degeneracy, physical, mental, or moral. Evolution proceeds apace in nations as in individuals. It is from the lower ranks of life that the higher strata of society are filled. There is a continual moving upwards. New conditions, fresh surroundings, and unexpected difficulties stimulate men to rise, but behind all these facts there lies the plastic material upon the hereditary acquisition of which in its best form so very much depends. In a general way, then, we support the contention of the author of "Hereditary Genius." Galton's conclusions have not been allowed to pass without a challenge. Some writers maintain that mental ability is not the outcome of inheritance but of individual acquisition, that it is the result of the operation of such causes as education and external surroundings. Without throwing myself further into this discussion at present I shall try to find answers to some of the problems I have raised by going altogether outside the sphere of the human family, whose actions, ruled oftener by sentiment than by reason, cannot always be controlled, and see whether in racehorses whose pedigrees can be accurately traced and doings recorded Galton's theory finds support or not.

THE MODERN RACEHORSE.

So far as I know there is no instance on record of a horse that was not a thoroughbred ever having won the Derby. This circumstance is appealed to in order to demonstrate the superiority of blood and the transmission of racing qualities by careful mating of sire and dam. A certain amount of doubt surrounds the origin of thoroughbred horses in this country, but to the Darley Arabian which came from Aleppo to Aldby Park in Yorkshire *circa* 1705 to 1710 most authorities attribute the commencement of the breed. Others regard the Byerley Turk as the founder of the famous family, others again claim Godolphin and Flying Childers, but Godolphin came upon the scene 20 years after the Darley Arabian and Flying Childers was his own foal. It is the descendants of the Darley Arabian that form the renowned breed of English racehorses, whose speed for short distances is regarded as the outcome of inherited qualities and the result of careful in-breeding. It is an interesting fact that nearly every winner of the great races last year was a descendant of St. Simon who, although he never competed in the Derby, was yet the better horse, for he beat the Derby winner of his year. St Simon was from first to last an unbeaten horse. He did not run in the Derby owing to the fact that his breeder, Prince Batthyany, died while the horse was a yearling and the nomination therefore became void. The last race St. Simon ran in was at High Gosforth Park as a three-year-old, and this race he won easily. Shortly afterwards he retired with his splendid constitution to the stud and became the progenitor of many distinguished horses—thus causing him to be considered one of the best stallions of the century. During his first six years at the stud he begat stock that won no fewer than 222 races of the value of £220,343. When St. Simon was a two-year-old he ran five races and won them all, and he repeated this as a three-year-old. The Derby was instituted in 1780 and from that date until now the race has been run every year without a break, while the St. Leger, which was commenced in 1776, has also an unbroken record. The Derby is a one-and a-half-mile race, the St Leger one and three quarter miles, and the Oaks about one and a half miles The same weights are practically carried in the three races, horses carrying a few pounds more than the mares The time the Derby is run in is about 2 minutes 45 seconds, but if the ground is wet it may take as much as 3 minutes 4 seconds Blinkbonnie and Shotover covered the distance in 2 minutes 45 seconds, but Ayrshire Merry Hampton, and Blair Athol only took 2 minutes 43 seconds The winner of the Derby for 1900 was Diamond Jubilee, who also won the Two Thousand Guineas and the St Leger, and who belongs to the Prince of Wales The Duke of Westminster's Flying Fox won the Derby in 1899, and in 1896 Persimmon, also the property of the Heir Apparent, was the winner Both Diamond Jubilee and Persimmon are descendants of St Simon by Galopin, a Derby winner, out of St Angela It is an interesting fact that St Simon and Perdita II are the sire and dam of the Prince of Wales's three valuable stallions Florizel II, Persimmon, and Diamond Jubilee, who are said to be worth £120,000 Perhaps never in racing annals has the success of a sire ever surpassed that of St Simon Other horses compete with him for distinction Amongst these is The Baron, who 50 years ago was the sire of Stockwell and Rataplan, animals more valuable in the stud than on the course There is also the Duke of Westminster's Ormonde who was sold to America for £30 000 and who was the sire of Orme, an animal which is less known as a racer than as the begetter of Flying Fox, who was recently sold to France for £35,000 Add to the above facts the following—viz, that Stockwell is the sire of Doncaster, who is the sire of Bend Or, who is the sire of Ormonde, who again is the sire of Orme, by whom was begotten Flying Fox, and we have a line of famous racehorses which, like that of St Simon, goes direct back to the Darley Arabian, the father of the best blood in the racehorses of to-day On the maternal side the strain can be traced back to the Godolphin Arab, a sire who has also contributed to the production of the distinguished breed It is sometimes said of the human family that the children begotten of an elderly father are delicate Foals of ageing racehorses are considered by breeders, as a rule, not to be good winners but there are exceptions Lord Lyon, who won the Derby and St Leger, was born in 1863 He was the sire of Minting, who was born in 1883—i e, when Lord Lyon was 20 years old His previous foals, however, were of no use as winners, but Minting was an exception

What is the effect of castration upon horses from a racing point of view? The Derby is open to two year old and three year-old colts, but there is no instance of a gelding having ever won the race Ourzon who was in addition a half breed, all but succeeded in becoming the exception to this rule, but he just failed He ran second in the Derby of 1895 The more natural and the more perfect a horse is the greater is his chance of winning Entirety, therefore, counts for much even in racing

We hear a good deal in the affairs of human life of the superiority of sex, and, while there is no doubt that men occupy the higher positions in society and stand out more prominently than women, it may be that greater opportunities and advantages are afforded to the one sex than are afforded to the other Let us appeal to the experience of the Derby Girls reach maturity earlier than boys and for quick perception they are usually far ahead of boys In the racing world some experts maintain that the best mares are after all the best [illegible] equivalent to saying that mare [illegible] than the best horses that have [illegible] It is their opinion that racing is carried to greater perfection by mares than horses Probably a mare at two years old is better than a horse at that age, but it would seem as if mares deteriorate more quickly than horses and compete with them unfavourably as three year olds The Derby is an open race and there mares compete with horses They have done so and on some occasions they have won Blinkbonnie won in 1857 and Shotover in 1882 but previously to Blinkbonnie winning the race no mare had won the Derby since 1801 when to Fleanor, who was also winner of the Oaks, was awarded the palm It is only right to add that fewer mares have competed and therefore they have run against odds so far as numbers are concerned Still the fact remains that during 120 years only three mares have won the Derby It is fleetness of foot that is wanted, [illegible] what do the records show? The mares Blinkbonnie [illegible] Shotover ran the Derby in 2 minutes 45 seconds, but horses Ayrshire, Merry Hampton, and Blair Athol coursed the distance in 2 minutes 43 seconds It is only natural to [illegible] horses are like ourselves [illegible] the year we are in better [illegible] others and we do better [illegible] ng in England is in the spring and summer when mares are constantly coming into season They are consequently placed at a disadvantage as regards the Derby, which is run in the month of May September is the mare's month It is then that the St Leger is run This is a race in which mares and horses compete on equal terms, and what do its records show? Since 1776, the year in which the race was established, mares have only won 23 times out of 124 It would appear, therefore, that both in the Derby and the St Leger the greatest speed has been obtained by horses and not by mares In the breeding of racehorses it is absolutely necessary that the greatest care should be taken so as to mate sires of repute with mares that are well bred and distinguished as racers An opportunity is given to breeders to show off the racing qualities of mares at the Oaks, a race which is only for fillies and which is run two days after the Derby The winners of this race often become the dams of future winners of the Derby.

I think I have shown you that so far as racehorses are concerned the qualities that make them famous, and upon which a high money value is placed, are inherited Blood is everything, it is pedigree that commands the price and makes both horses and mares which have been the winners of the principal races so valuable for breeding when they have become old and useless for racing purposes One illustration of such a mare will suffice, and in this instance I shall take it from our own immediate neighbourhood Beeswing was born in 1833 and was the property of Mr Orde of Nunnykirk, near Morpeth She began to run when she was two years old and continued to run until she was nine years old She ran in 64 races and she won 51 times, many of the races being over two miles in length Beeswing won the Newcastle Cup and became the dam of Newminster, who won the St Leger Newminster became the sire of Hermit who won the Derby, while Hermit was the sire of St Blaise, who also won the Derby Hermit was also the sire of Thebais and Lonely, both of whom won the Oaks After 1842 Beeswing ran no more races She was simply kept at the stud and she died at the age of 21 years These facts, taken rather imperfectly from racehorses show us that it is blood or family inheritance and careful training that alone can win the Derby and that so far as the superiority of sex is concerned the evidence is in favour of the horse rather than the mare The English racehorse is the product of very close breeding in and in In the human family, to too close in breeding or consanguineous marriages is attributed such mental and physical defects in the offspring as deaf-mutism, insanity and other nervous disorders Wherever there are defects in the parents or in their family the marriage of first cousins is almost certain to be followed by an intensification of these defects in the children If close in breeding in the human family is bad, what is the result of this form of breeding carried on for so many years in the English racehorse? There are many who believe that the English racehorse of to-day is degenerating Certainly the horses are run too young, for by the time they reach four years of age many of them are practically done as racers Sprint running for man or animals is bad as the distance is covered at an excessive speed from the commencement to the finish The mode of racing itself tells upon the frame of the individual animal Add to this the cumulative effects of close in breeding and there will be much to explain the greater delicacy of constitution, the diminished resistance to cold, and the loss of staying power observed in the racehorse of to-day Breeders feel that fresh infusion of blood is necessary and that this can be obtained by the mating of an English sire, say, with a pure bred dam brought from America or Australia whose predecessors transported years ago to other soil, show a valuable pedigree which has not deteriorated in the descendants in their far off surroundings

ATAVISM.

Professor Ewart in his Penicuik experiments deals with subjects similar to those which we have been discussing and [illegible] is obvious There are uncertainties in [illegible] Galton's distinguished families [illegible] is variation Without variation life would be monotonous and there would be no development Stockbreeders take advantage of variation by perpetuating them so as to improve the breed. In the course of breeding the unexpected often happens; results occur that can only be explained by reversion, prepotency, and in breeding.

Reversion.—Members of the human family do not always bear a resemblance to their parents. The likeness is sometimes rather ancestral than parental. So far as heredity is concerned the parents, we have seen, contribute a half, the grandparents a quarter, the great-grandparents an eighth, and so on, of the total heritage of the average offspring. Composed as the ovum cells and sperm cells are of innumerable gemmules it would seem as if, during development, there occurred conditions in which protoplasmic elements of an older ancestry than the parental competed with those which were derived from the immediate parents and thus succeeded in impressing upon the individual those characters that cause the offspring to resemble, not the parents but the grandparents or even the great-grandparents. That, in a word, is an example of atavism. It is sometimes a circumstance of great value. If, for example, sporting dogs are closely inbred for three or four generations the puppies are extremely degenerated and yet in the grossly in-bred litter there is perhaps one dog who is strong and has a hardy constitution, due to what is called breeding back. He resembles, in a word, a former ancestor, so that reversion would appear to have infused fresh vigour and to have rejuvenated him owing, presumably, to ancestral units having overcome and controlled the more recently evolved and less stable units which, could they have had their own way, would have given rise to "offspring bearing all the marks of decadence that characterised the immediate ancestors."

Prepotency and in-breeding.—In the breeding of animals it is generally admitted that one of the individuals is more prepotent than the other. It is neither easy to demonstrate the fact, nor, when present, to determine the amount of prepotency. In-breeding encourages prepotency. It is because the Jews are a purer breed and an older race that when they marry with the English they are observed to be the more prepotent. In-breeding carried to excess becomes a doubtful heritage. Attempts to obtain prepotency by close in-breeding are often followed by loss of vitality and fertility. By trying to keep the blood too pure species may deteriorate. In order to maintain the vigour of a race cross-breeding becomes at times a necessity. It restores vitality. The protoplasm of animal cells has apparently assigned to it a measured lease of life and unless fresh blood is introduced to rejuvenate it the protoplasm can only give rise to a limited number of generations.

TELEGONY.

In breeding animals for sporting or other purposes the word "infection" is employed to explain the circumstance of a female who had been fertilised for the first time by a male bearing a distinctive colour and form, and who subsequently bears offspring to another male of different colour and form and yet exhibiting a distinct resemblance to the male by which the female was originally impregnated. It is owing to a belief in the occurrence of this possibility that breeders are careful of pedigree dogs and take means to prevent prize bitches being covered by dogs that are not of good breed. These men are afraid of the baser blood showing itself in future generations. It is maintained, although it is difficult to demonstrate the fact, that the same thing occurs within limits in the human female. The example of telegony taken from biology, and which appears in nearly all text-books, is Lord Morton's mare. This mare had been, in the first instance, covered by a quagga, and succeeding foals begotten by other sires showed in a descending scale stripes on the body that recalled the zebra. While Professor Ewart, in his experiments at Penicuik, obtained striping and marking of succeeding foals by different sires as in Lord Morton's mare, he explains the circumstance differently. Ewart regards the striping not so much as evidence of "infection," or "telegony," but of "reversion," for stripes, he maintains, are not unknown in Arabian horses. Belief in harking back, or "infection," is so strongly held by breeders that it must rest on some foundation. Breeders are of the opinion that in impregnation something akin to saturation of the dam's blood and nature takes place through the sire. Is it possible that there can be any absorption from the blood of the fœtus in utero by the mother? We know from experiment that the injection of diphtheritic and protective toxins into the embryos of pregnant rabbits can kill the mother in the one instance and render her immune in the other. Physiological injection is therefore a possibility, but it is difficult to see how germ-cells occupying the depths of the ovary of the female at the date of her first impregnation can have their protoplasm so impressed by the sperm cells of this sire that when subsequently impregnated by other males the progeny should bear resemblance to the original sire. There is no proof that the blood of the mother or her system can be saturated, and yet such circumstances as the following are known. In breeding Bedlington terriers it is desirable to obtain dogs with as powerful jaws as possible. A Bedlington bitch is therefore first covered by a bull-terrier dog and the mongrel litter is destroyed. Covered subsequently by a Bedlington terrier dog the litter is practically pure with the exception that the puppies have stronger jaws than they otherwise would have had, and they also show much of t[illegible] terrier. Anatomical structure and [illegible] are therefore present in the second [illegible] to the breed at all, and they could only have come from the bull-terrier. It is difficult to find examples in the human race, but Dr. Balfour of Surinam noticed among the coloured population that "if a negress had a child by a white man and afterwards fruitful intercourse with a negro, the latter offspring had generally a lighter colour than the parents." Beyond, therefore, drawing your attention to the possibility of telegony, I shall not attempt to explain it.

HEREDITY OF DISEASE.

By the term "heredity of disease" I do not mean, as in congenital syphilis, transmission of the actual disease from which a parent is suffering, but a susceptibility to disease. Among the hitherto recognised diseases might be mentioned hæmophilia, cancer, phthisis, diabetes, and the alcoholic habit. In hæmophilia there is transmitted to males, through the female who does not herself usually exhibit the disease, a peculiar defect confined probably to the walls of the small blood-vessels whereby on the occurrence of the most trivial wound—e.g., lancing the gums or the extraction of a tooth—fatal hæmorrhage may occur. The hereditary nature of this disease, or the fact that the transmission is through the female, have never been questioned. An extended genealogical tree which appears in a former paper written by myself[1] showed how, after lying dormant in the mother, the disease re appeared in her sons.

Diabetes is, in many instances, a hereditary disease. Weil, in investigating diabetes insipidus, traced 90 members of a family extending through four generations, 70 of whom were living at the time of the investigation. The disease was traced to a common ancestor, Peter Schwartz, who was born in 1772. His descendants consisted of five children, 29 grandchildren, and 56 great-grandchildren, or a total of 91 persons. Of these persons 21 were certainly diabetic and 13 were doubtfully so. Removing the doubtful cases there remained 78 persons, of whom 23 were affected with diabetes, or 30 per cent. I have at the present time under my care two brothers, aged 40 years and 43 years respectively, suffering from diabetes mellitus. In one of them the glycosuria is intermittent. The father died from diabetes and a paternal uncle is at present dying from the same disease. The maternal grandmother died from diabetes. Within the last four months I have also had under my care a father, aged 45, who is suffering from diabetes, and his daughter, aged 14 years, suffering from the same malady. The Royal Insurance Company have been good enough to send me the details of the family history of an applicant for insurance to their company. The applicant had seven brothers and one sister. The father died from diabetes, aged 65 years. One brother, aged 19 years, died from the effects of an accident. Three brothers, aged 49 years, 41 years, and 32 years respectively, died from diabetes; and one sister died from the same disease at the age of 23 years. The remaining three brothers are healthy. Facts such as these surely point to diabetes mellitus under certain circumstances being hereditarily transmitted.

When we come to deal with phthisis and cancer, the former of which is a bacillary disease, we admit that it is necessary somewhat to alter our views upon the hereditary character of these diseases. Briefly, all that can be said of pulmonary tuberculosis is that there is the accidental

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[1] THE LANCET, Sept. 18th, 1886, p. 526.

incidence of the tubercle bacillus upon tissues that are susceptible. Experience tells us that some families are more susceptible than others to infectious diseases. Some children take every infectious disease that is going, while others, though equally exposed to infection, escape. It would seem, therefore, as if a certain habit of body was transmitted, due to some peculiarity of the idioplasm of the individual. However excellent a filter the human placenta may be it cannot prevent maternal poisons passing to the fœtus Tuberculosis itself is so very rarely transmitted directly from parent to child that at this juncture we can ignore it, nor is there any strong evidence
is transmitted and lies dormant for a p
is transmitted is the soil—an enfeebled
diminished resistance to the particular m
close intimacy that exists between an
and her infant there are doubtless opportunities given after birth for infection, but this is infection and not transmission. The soil counts for as much as the micro organism. Charrin has demonstrated experimentally that if the blood *and tissues of the body are chemically altered resistance to* pathogenic germs is diminished, while Chatin and Guinard have shown that when an animal is impregnated with excess of sugar it becomes a readier prey to the diphtheritic poison and to the infection of typhoid fever. Excess of fat also diminishes the resistance to diphtheria, whereas animals that have been exposed exclusively to proteid food resist for the longest time the diphtheritic poison. May not the lines of cellular nutrition which are laid down in the fœtus in
the explanation of suscepti-

ccuracy the medical history of any human family, for where there are mental and physical defects there is rather a desire to conceal than to publish the facts. The records of insurance companies, however, to some extent remedy this deficiency. Before examining a life for insurance the details of the family history have generally been supplied to the offices. Within the last 50 years the span of human life has distinctly lengthened. In England and Wales during the period from 1841 to 1850 the death rate in males of all ages was 23 1 per 1000. During the years from 1886 to 1889 the rate was 20 per 1000, while among females the rates were 21 6 and 17 8 per 1000 respectively, showing, therefore, a distinct gain. Opposed to these facts must be placed the number of births The birth rate of this country during 1842 equalled 32 6 per 1,000,000 of the population, while in the period from 1886 to 1890 it equalled 31 4—a fall in the birth-rate which, if it continues, may jeopardise the future of England just as at the present time it is the cause of anxiety in France.

Pulmonary phthisis has for long been regarded as hereditary. Where there is a family history of phthisis insurance companies may accept the life, if the applicant is under 30 years of age and physically strong, but they will load it by adding a few years to it, or if several members of the family have died from phthisis they will refuse the life altogether. Experience has taught them that members of a family, some of whom have already succumbed to phthisis, are much more liable to the disease than members of other families which have no such
that has come over medical o
tariness of phthisis, to fulle
character, to improvement of
and to the fact that the death rate from this disease is diminishing, insurance companies are disposed, according to the extent of the taint in the family, to offer less stringent terms than formerly. During the years from 1858 to 1860 the number of people in England and Wales who died from phthisis was on the yearly average 2565 per 1,000,000 During the period from 1871 to 1875 the average number was 2218 Between the years 1886 and 1890 the death-rate from this cause was 1635, in 1891 it was 1599, and in 1892 it stood at only 1468 Within these years there has been a fall in the mortality-rate of phthisis of 42 per cent The diminution of the death-rate may be consequent upon our better knowledge of the infectious nature of the malady and improvement in the housing of the working classes, or it may possibly be due to reversion, as in the case of in-bred animals, to a healthier stock. Notwithstanding Weismann's theory that acquired characters are not transmitted, and that the germ-plasm alone is transmitted, there is yet implanted in the nucleus of
e cannot but be
that surrounds
it, and hence while Weismann's theory explains much in heredity there are still conditions that are not explained by it. Experience and statistics alone can settle the question of family phthisis. Because the death-rate from phthisis is diminishing that is no proof that the disease is not hereditary. All that this circumstance shows is that there are fewer cases of acquired as well as of inherited phthisis, and that improved vital resistance on the part of the individual is to some extent overcoming the hereditary influence.

The Mutual Life Insurance Company of New York has

and the same diseases that affect youth carry off people in old age. Tuberculosis caused 5585 deaths, and with the exception of 133
were affected in all. Dividing
those under 45 years *of age*,
60 years of age, and (3) those above 60 years of age—it is observed that the mortality-rate of tuberculosis is highest at the early ages and diminishes with advancing years, although it is still

under 45) shows 59 2 per cent., the second age-period 28 94 per cent., and the third age-period 11·85 per cent, while taking the total deaths from all causes, tuberculosis caused 24·27 per cent., 10 88 per cent, and 4 03 per cent. of the deaths in the respective periods.

TABLE I.—*Showing the Mortality from Tuberculous Diseases for Various Age periods (Mutual Life Insurance Company of New York).*

Age-periods.	Number of deaths.	Percentage	Percentage of total deaths from all causes
Under 45 years . .	3307	59·21	24·27
From 45 to 60 years	1616	28·94	10·88
Above 60 years . ..	662	11·85	4·03
Total	5585	—	—

Table I. shows that the largest percentage of deaths from phthisis occurred under 45 years of age, and that no period of life was free from it.

TABLE II.—*Showing the Mortality from Tuberculous Diseases in Non consumptive and Consumptive Families respectively (Mutual Life Insurance Company of New York).*

Age at death.	Deaths in non-consumptive families.			Deaths in consumptive families		
	From all causes.	From tuberculosis.	Percentage of deaths from tuberculosis.	From all causes.	From tuberculosis.	Percentage of deaths from tuberculosis.
To 29 years	106	38	35·8	60	31	51·6
From 30 to 39 years	372	93	26 3	194	77	39 6
„ 40 to 49 „	506	100	17 6	284	70	24 6
„ 50 to 59 „	724	49	6 7	489	77	15·7
„ 60 to 69 „ . „	613	36	5 8	569	47	8·2
„ 70 to 79 „	325	12	3 7	358	8	2 2

Table II. shows that the greatest number of deaths from phthisis occurs under 30 years of age, both in families that have a history of the disease, and in those that are non-consumptive, and that it is larger in the "tainted" than in the "non-tainted" section for every decennial period of life to extreme old age. The taint, therefore, would seem to last

advancing years, owing to the fact that other diseases come upon the scene. It is in the early years of manhood that phthisis claims the largest number of victims, for after middle age degenerative diseases of the circulatory and nervous systems make their appearance and cause it to assume a less conspicuous position. The age of 35 years, in the experience of the Scottish Widows Fund, is that in which the largest number of deaths occurs from phthisis. From the tables drawn out by the Mutual Life Insurance Company of New York it appears that a family history of phthisis indicates (1) a liability to the disease on the part of an applicant for life insurance, and (2) that the amount of this increased liability may be estimated at 30 per cent., an estimate that holds good certainly until the age of 50 years is reached. Naturally, where there is a history of two or more tuberculous persons in a family this circumstance is of more ominous importance than where there is the record of only a single case, and the death of a parent would carry more weight than that of a brother or a sister, especially up to the age of 40 years. There is a belief that of the two parents the mother who is consumptive and in whose family there are records of this disease is more likely to transmit a liability to phthisis than the father. The statistics of the Mutual Life Insurance Company of New York, however, rather point the other way and show that the percentage liability to phthisis between 20 and 29 years of age is 43 3 when the father has died from phthisis, and 36·5 when the mother was the subject of the malady. Another point sometimes raised is whether the tendency to phthisis is not more marked between brothers and sisters than between parents and children.

TABLE III.—*Showing the Proportionate Mortality from Tuberculosis among those with tainted Record and arranged according to the Degree of Taint and the Age at Insurance.*

Number of members of family affected	Total.	Age at insurance			
		20 to 29 years	30 to 39 years.	40 to 49 years.	50 years and upwards
	Per centage	Per-centage	Per-centage.	Per-centage.	Per-centage
Both parents .	14 3	—	—	50 0	—
Father	20 7	43 3	16 1	10 4	9 6
Mother ..	15 5	36 5	17 1	7 5	4·6
Parent and brother or sister	11 0	18·2	21 4	5·5	—
One brother or sister	14 3	34·1	20·6	10 2	4 3
Two or more brothers or sisters	19 4	62 5	42 4	7 5	7 5
Tuberculosis percentage ..	12·7	28 5	13·3	6 8	4 6

Where there is a history of tuberculosis in both parents insurance companies will hardly accept the life. The statistics of double inheritance in the preceding table refer to such a small number of cases that they scarcely give us complete information upon this part of the subject. Besides, where there is a history of phthisis in a family it does not necessarily follow that the sons and daughters shall die from the disease. All that can be said is, that there will be in them a greater predisposition to phthisis. Since, therefore, individuals of a tainted family may completely escape phthisis, this circumstance suggests that conditions are in operation to neutralise this hereditary tendency. Improved external surroundings, better ventilated homes and workshops, less dusty occupations, and improvement in the physique of the individual as shown by greater muscular vigour, increased weight of body and chest measurement, render the individual less liable to phthisis. All "consumptives," as the name naturally suggests, are below the normal weight. It is known that "the highest proportion of consumption mortality, and the highest proportion of underweights are found before middle age; the least percentage of consumption mortality and the highest proportion of overweights after middle age." In persons with no history of phthisis in the family there are twice as many deaths among those below than above the average weight, while in tainted families the percentage is greater—circumstances which show that poor physique and enfeebled nutrition play some part in the causation of the disease. In the experience of the Scottish Widows Fund 80 per cent. of the sufferers from phthisis fell short of the average of weight to height. Light weight, and especially losing weight, are precursors of phthisis. Robust bodily development is therefore not without a favourable influence, and yet it does not prevent phthisis, for I have seen some of the strongest athletes with splendid physical frames, sons of a tainted family, succumb one after another to the inherited malady. Nor, on the other hand, does robust physical development, even in the absence of family taint, ensure against the danger of phthisis. All are liable to phthisis but the liability is shared unequally. While, therefore, we admit that the family history has a value which cannot be ignored, personal development, station in life, occupation, and surroundings are circumstances that play a part in the causation of disease as great as, if not greater than, inheritance. Dr Claud Muirhead,[2] medical referee to the Scottish Widows Fund, states that 15 per cent. of their applicants for admission show a family record of phthisis, and that in his experience undoubted phthisis is more frequently transmitted by the mother than by the father, the ratio being 6·29 per cent. on the side of the father as against 8·97 per cent. on that of the mother. The experience of the Scottish Widows Fund in regard to phthisis is, generally speaking, much more favourable than that of the American office. It shows that the tendency for phthisical parents to beget phthisical children is small, the difference between the two classes of parents being only 1 per cent., the number being 8 per cent. for consumptives and 7 per cent. for non-consumptives. The subjoined table shows that where lives are selected *after* medical examination the death-rate from phthisis is distinctly lower than that of the community so far as Scotland, at any rate, is concerned, but not of people living in the country districts after 30 years of age.

TABLE IV.[3]—*Percentage of Deaths from Consumption on the Total Mortality from all Causes for each Decennial Period of Adult Life (Scottish Widows Fund)*

Age.	Scottish Widows Fund.	Mutual Life Assurance Company.	New York Assurance Company.	Scotland.	Ten Scotch counties
From 20 to 29 years	31·82	37 09	40 84	43·25	32·60
,, 30 ,, 39 ,,	29 45	28·06	35 13	30 04	23 58
,, 40 ,, 49 ,,	15 16	19 62	28 46	19·45	13 69
,, 50 ,, 59 ,,	6 39	10·27	23 99	8 09	7 47
,, 60 ,, 69 ,,	3 04	6 10	18 57	5·03	2 44
,, 70 ,, 79 ,,	0 78	5 51	12 72	0·95	0·63
,, 80 ,, 89 ,,	0 03	—	5 56	1 97	0 52
All ages above 20	9 51	19 74	29 38	13 60	11·75

The Royal Life Insurance Company has, like the Scottish Widows Fund, been good enough to favour me with their experience of tuberculosis. Taking 188 of their deaths from this disease I find that the greatest number occurred from the fiftieth to the sixtieth year of age, that in 25 cases a parent, a brother, or a sister had died from phthisis, that in 19 one or more of the grandparents had died early (many of them presumably from phthisis), and that in at least nine of these there was a history of a parent, or brother, or sister having died from tuberculosis.

In spite of all that has been said and published by insurance offices there are still many who do not believe in the inheritance of phthisis. Personally I have no doubt as to the transmission of a susceptibility to phthisis, but the influence of this is much less than we have hitherto believed, and apparently it is in these latter years a diminishing factor. Admitting for good or ill all the influence of external surroundings, it is impossible to ignore the history of tuberculous disease in the family that is given by patients who came to the Newcastle on-Tyne Infirmary and to our consulting-rooms. Dr. Reginald E. Thompson[4] tabulated all the cases admitted into the Brompton Hospital for Consumption from 1855 to 1880—i.e., a quarter of a century. The history of each case was carefully recorded by the clinical assistants and the diagnosis made by the physicians, care being taken to exclude such errors as the possibility of infection from one member of the family to another. Dr. Thompson's experience confirms what has already been said. He shows, too, that where there is a family history of phthisis the members of that family who *become phthisical do so at an earlier age than those of an untainted family* who acquire the disease; also that where there is a history of both parents having been tuberculous there is not only a greater liability to the disease but that it develops at a still earlier age than when there is only a single inheritance. Out of 3000 cases at Brompton Hospital Dr. Thompson found that 36 per cent. of the males gave a family history of phthisis and 58 per cent. of the females the same. In 80 cases of well-marked family phthisis he found a history of paternal inheritance in 24 instances and maternal inheritance in 30 cases, double heredity in 14 cases, and atavism in 12 cases. Among these 80 families 385 children were born, of whom 203 were males and 182 females. In them phthisis appeared in 98 males and 96 females, there died in childhood 21 males and 16 females, and there remained apparently healthy 84 males and 70 females. In other words, 194 members of these tainted families, or one half, died from phthisis, 37 of the deaths occurring in childhood. It is Dr. *Thompson's opinion that the effect of* paternal inheritance upon males is to cause phthisis to appear at an earlier age than in the parent and to reduce the constitutional resistance of the individual to the disease, while upon the females it also causes an earlier manifestation of the disease, but if anything increases their resistance to it. The influence of tuberculous mothers, on the other hand, upon males is to increase the tendency to rather copious bleedings from the lungs, a circumstance not so noticeable in females.

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[2] In a paper read before the Faculty of Actuaries in Scotland, January, 1893.

[3] Ibid.

[4] Family Phthisis.

I have dwelt upon the evil effects of "in-breeding" in animals. If these are bad in the case of animals how very much aggravated must they be in the human race when there is a family history of phthisis. On humanitarian grounds alone consumptives *should not marry. Marriages, however,* are not regulated by reason but by sentiment, and even when circumstances are made clear to one of the contracting parties, an expression of optimism usually prevails before which pathology generally has to bow.

We have seen that there is an individual and family susceptibility to phthisis. There is also a racial susceptibility and no one doubts that the characters of race are inherited. Over a period of six years ending in May, 1890, it was estimated that in every 100,000 of the population of New York phthisis claimed on an average 238 48 per annum of the white native population, 483 83 of the foreign white population, and 774 21 of the coloured population. Negroes and the offspring resulting from the union of the white and coloured races in America are extremely susceptible to phthisis, *and yet while the negroes* exhibit this excessive liability to the disease the Jews are wonderfully exempt from it. Out of every 1000 of the total deaths of the whole of the United States, pulmonary consumption carried off in 1880 108 79 of the general population but only 36·57 of Jews. This freedom of the Jews *from* consumption has *for long* attracted attention. It can scarcely be said that their homes are more sanitary than those of Christians or that they are more given to ventilating them. As a class they are more abstemious and their food is better prepared and they are the *more vigorous race.* That over-populated districts are unhealthy requires no demonstration. Dr. J. B. Russell of Glasgow found that where the death-rate was greatest the cubic space was smallest. In 100,000 of the population the death-rates from diseases of the lungs, including phthisis, were in one-roomed or two roomed houses 985, in three-roomed or four-roomed houses 689, *and in five-roomed houses* and upwards 328. Where overcrowding exists there is a greater tendency to tuberculous disease simply on the ground of contagion. It is not that the tuberculous patient gives off in his breath bacilli into the atmosphere, but that the sputum contains the microbes and *as* the expectoration heedlessly spat upon the floor dries and is ground into dust this rises into the atmosphere, is inhaled, and so the disease spreads. Each individual becomes thus a centre of infection to others.

We have *seen* that not only in the medical profession but in the public mind and in insurance offices there is a belief that pulmonary phthisis is hereditary. Careful sifting of all the facts shows that the extent of the inheritance has been exaggerated.

Without carrying the remainder of this inquiry much further I shall only say a few words on the question of the hereditariness of cancer. The mortality records of the Mutual Life Insurance Company of New York deal with 1882 deaths from cancer. The age period in which the largest number of deaths from cancer occurred is from 55 to 60 years. Statistics, both in England and in America, show that the rate of mortality from pulmonary phthisis is decreasing while the deaths from cancer are notably on the increase. It may be that cases are more carefully diagnosed now than formerly, but apart from this probability, there is a very strong feeling in the medical profession that *cancer is more prevalent than it was.* Taking the cancer returns of the American insurance office I find that while in 1879 the percentage of deaths from cancer between the ages of 50 and 70 years was 4·23, in 1889 it was 6 22, and in 1898, 7·59. In support of the opinion that cancer is increasing I would also draw attention to the statistics of the Scottish Widows Fund kindly placed at my disposal by Dr. Claud Muirhead, principal medical adviser to that society. From 1815 to 1845 the deaths from cancer were 0 93 per cent. of the whole number. From 1845 to 1852, they were 0 72 per cent., from 1852 to 1859 2·87 per cent., from 1859 to 1867 3 0 per cent., from 1867 to 1873 4·56 per cent., from 1873 to 1880 4·34 per cent., and from 1880 to 1887 5·23 per cent. *Allowing for greater accuracy in the returns* Dr. Claud Muirhead admits that "the number of deaths from this cause has increased enormously, the number being more than 40 times greater than in the previous 37 years." Females die from cancer in a proportion double to that of males, their mean age at death being 62 69 years, as against 60 43 years of males. In regard to the hereditariness of cancer the statistics of the Scottish Widows Fund show that only in *9 5* per cent. was there *a history of malignant* disease in the parents. In 11 of the cases the disease was transmitted through the father, in 14 cases through the *mother*, and in one case a brother was similarly affected. The hereditary transmission of cancer is considered to be *not so great* as that of phthisis, a fact that must be comforting to many people who have lost near relatives from cancer.

Summing up the subject, as to what is inherited from our parents, I would say that from a physiological point of view there is considerable evidence to show that mental, not less than physical, qualities are transmitted, that pathologically such a disease as hæmophilia is inherited, and that where there is a family history of phthisis and cancer there is, especially as regards phthisis, a greater liability to the disease than where a family shows no such record. I believe that the influence of inheritance, however, has been exaggerated. Tuberculous disease is inherited, but only in the same sense as other diseases that are due to microbes. It is in the form of an enfeebled resistance on the part of the *tissues*. Pulmonary phthisis seems to exhibit a kind of inheritance that *is particularly its own*, but on scrutiny this is found to be largely due to the domestic character of the malady which is encouraged by our home life, insanitary dwellings, overcrowding of the poorer working classes, infection, Britain's changeable climate, dusty occupations, and ill-assorted marriages.

TWO CASES OF ACUTE HÆMORRHAGIC PANCREATITIS.

BY J. H. BRYANT, M D , M R C.P. LOND.,[1]
ASSISTANT PHYSICIAN AND DEMONSTRATOR OF MORBID ANATOMY AT GUY'S HOSPITAL.

I PUBLISH these two cases as they present some curious features which I have not been able to find recorded before. If perchance I have missed any case in which similar changes have been noted I take this opportunity of apologising to the author or authors for claiming them as new. In *Case 1* when performing the necropsy I found marked fat necrosis of the mediastinal and pericardial fat and in both cases at the time of the operation the peritoneal cavity was found to be distended with large quantities of bile-stained *serous fluid*.

CASE 1.—The patient, a bandmaster, aged 38 years, was admitted into Luke Ward at Guy's Hospital on May 31st, 1899, under the care of Mr. L. A. Dunn, for excruciating general biliary pigmentation, although the urine contained a large amount of bile, a condition which was noted before death. The liver weighed 51 ounces. A depressed, wedge-shaped, dull yellowish-looking area was found at the edge of the left lobe extending upwards for about half an inch and being about a quarter of an inch in thickness. In appearance it resembled an infarct more than anything else. The kidneys weighed eight ounces. The left kidney was normal. The perinephric fat surrounding the right kidney was bile-stained and showed numerous opaque, milk-white, and orange-yellow spots and patches of fat necrosis. The spleen weighed three and a half ounces. It was quite healthy. The suprarenals were normal

Sections from different parts of the pancreas were examined under the microscope. It was found that the pancreas was not involved throughout. All the sections examined showed areas where the acini and their cells appeared to be quite normal. Irregular-shaped areas were also seen, the central parts of which appeared to be made up of a granular débris, no outline at all of the acini or their epithelial cells being visible. Dotted about in this granular débris were a number of polymorpho-nuclear leucocytes. There were also several patches where this granular débris was stained a bright golden colour (? bilirubin). In places effusion of blood could be seen into the inter-lobular tissue. The blood-vessels generally were distended with blood and some of the smaller ones were filled with thrombi partially organised. At the periphery of the necrosed areas the outline of the acini and their cells could be seen, but the protoplasm of the cells had a very granular appearance and their nuclei were not stained. Some of these cells were stained a bright golden colour and contained granules of this pigment. Outside these the cells were faintly stained and outside these again the acini appeared to be normal. There was undoubted parenchymatous inflammation, necrosis of the glandular tissue, pigmentation, and blood effusion and infiltration. Numerous patches of fat necrosis were seen also in the interlobular connective tissues. Sections stained with carbol thionin blue and examined with a $\frac{1}{12}$th oil immersion did not show the presence of micro-organisms. Cultures were taken and a pure growth of the bacillus coli communis was obtained.

Remarks.—Case 1 was not diagnosed during life. The history of previous attacks of abdominal pain and indigestion spreading over several years, and the acute onset of severe abdominal pain after a late meal of pigeon-pie, seemed to point to perforating gastric ulcer as the most likely explanation of the patient's condition when he was seen on his admission into the hospital. A satisfactory elucidation, however, of the cause of these attacks of pain was found at the necropsy in the gall-bladder, which contained several calculi. A small calculus was also found in the other case, lying in a fold of mucous membrane in the common duct close to the opening of the cystic duct. This association of gall-stones with acute hæmorrhagic pancreatitis is far from being uncommon. If the calculi are formed as a result of changes in the ducts and gall-bladder produced by an invasion of the bacillus coli communis, and as in nearly all of the cases of pancreatitis which have been examined bacteriologically the bacillus coli communis has been found, the invasion of the organ by this organism may have been the cause of this disease, for if the bacillus has ascended the bile duct, the cystic duct, and the hepatic duct it might at the same time just as easily have invaded the pancreas by means of the duct of Wirsung. The diagnosis was cleared up by the operation, fat necrosis being found. The bile-stained peritoneal fluid I shall refer to when discussing Case 2

The chief point of interest in Case 1 was the finding of fat necrosis outside the peritoneal cavity. No mention of such a possibility is mentioned either in Osler's, Taylor's, or Allbutt's "System of Medicine." Osler[1] writes: "A point of interest is the relation of fat necrosis to pancreatic disease. The areas are found in the interlobular pancreatic tissue, in the mesentery, in the omentum, and in the abdominal fatty tissue generally." Fitz, in his article in Clifford Allbutt's "System of Medicine," chiefly draws attention to sub-peritoneal fat necrosis.

A good deal of experimental work has been done on fat necrosis, but I have not been able to find any note of it as having occurred outside the peritoneal cavity. Flexner[2] and Williams[3] have published the results of their work on the pathology of this curious change in the fat and they both give important summaries of the work of other pathologists. The first pathologist who directed attention to fat necrosis was Balser[4] in 1882; he found it either within the inter-acinous tissues of the pancreas or in the adjacent and distant fat. Langerhans[5] injected the sterilised pulp of fresh pancreas into the peritoneal tissues of rabbits and inflammation resulted with evidence of fat necrosis. He, however, only had one successful experiment out of 12. He satisfied himself that a decomposition of the fat molecule occurred with liberation of the fatty acids and considered that it was due to the action of the fat-splitting ferment. Dettner[6] experimented with pure trypsin which produced a sero-hæmorrhagic effusion in the peritoneal cavity but no fat necrosis. Hildebrand[7] suggested that the hæmorrhage in acute hæmorrhagic pancreatitis was due to trypsin and that the fat necrosis was caused by the action of the fat-splitting ferment. Hlava[8] produced hæmorrhagic pancreatitis and fat necrosis by injecting Klebs-Löffler bacilli into the pancreas after a laparotomy. Rosenbach and Jung[9] experimented with trypsin and with portions of pancreas which they introduced into the abdominal cavities of rabbits. They obtained fat necrosis with pieces of pancreas once out of four times. Flexner's conclusions are as follows:—1. In peritoneal fat necrosis the fat-splitting ferment is demonstrable at certain stages of the pathological process. 2. It is present in greatest amount in the early stages and may disappear in the later ones when the healing is well advanced. 3. Although it cannot be affirmed that steapsin is the direct cause of the necrosis of tissue such an assumption is rendered highly probable by its constant occurrence in the diseased areas, its absence from the healthy fat, and the nature of the pathological changes. 4. The escape of the pancreatic secretion into the peri-pancreatic and pancreatic tissues is the origin of the necrosis and this escape is facilitated chiefly by lesions of the pancreas itself, but also by disturbances in its circulation. Williams concluded that there was some substance in the pancreatic tissue, probably the fat-splitting ferment, which had the power of producing changes in fat similar to those found in fat necrosis.

It will be seen from the above that experimental evidence goes to show that fat necrosis is caused by an escape of the pancreatic secretion into the peri-pancreatic and pancreatic tissues. The changes in the mediastinal and pericardial fat could not be explained exactly in this way, as there was certainly no direct communication between the peritoneal cavity and the pericardial sac. If fat necrosis is due to the action of the fat-splitting ferment of the pancreatic secretion it must have been carried to the pericardial and mediastinal fat by the blood, or by the lymphatic vessels, or by both. It is a well-known fact that a pericarditis or pleurisy may proceed from a peritonitis and that the channel of infection is along the blood-vessels or lymphatics, and I see no reason why the pancreatic secretion should not be carried in a similar manner. The reddish areas of hæmorrhage which were noted in the fat of the mesentery, which were similar in size and form to the areas of fat necrosis, suggested that the factor causing the fat necrosis was carried in the blood-vessels.

In Case 2 the previous history of abdominal pain and indigestion and the acute onset with pain suggested perforating gastric ulcer as the most likely diagnosis to explain his symptoms and condition. The fulness in the upper part of the abdomen, the tenderness situated midway between the umbilicus and ensiform cartilage, and the curious area of dulness made me seriously consider the possibility of acute hæmorrhagic pancreatitis being the disease from which the patient was suffering. The previous history of jaundice and abdominal pain I did not consider to be against this view, as a few months before I had seen a case of acute hæmorrhagic pancreatitis giving a similar history (Case 1). At the necropsy on this case gall-stones were found and fully accounted for the previous attack of abdominal pain and jaundice.

The most striking point of interest about Case 2 and the one I wish to draw particular attention to was the large collection of clear, bile-stained, serous, sterile fluid found in the peritoneal cavity at the time of the operation. It puzzled us a good deal and many suggestions were made to explain its presence. No fat necrosis was found and the pancreas did not appear to be enlarged, so that the diagnosis of acute hæmorrhagic pancreatitis was given up. It was suggested that possibly the bile stained fluid might be accounted for by a perforating ulcer of the duodenum, but against this view was the absence of peritonitis, the clear character of the fluid, which proved also to be sterile, and the fact that the duodenum was carefully examined and found to be intact. The gall-bladder at the time of the operation was shown to be full of bile and intact, so that a perforation or rupture of this organ was excluded. The cystic duct was also normal but the bile ducts and the hepatic ducts could not be satisfactorily examined. We thought that possibly one of the ducts had ruptured and that the previous attack of pain and jaundice suggested a gall-stone as being the most probable cause of the trouble. At the necropsy a biliary calculus was found, but it was small and was not obstructing the flow of bile The tissues in the neighbourhood of the bile-passages and pancreas had a swollen and sodden [illegible]

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[1] The Principles and Practice of Medicine, p. 494.

[2] Journal of Experimental Medicine, 1897, vol. xi., pp. 413 to 425.

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[4] Virchow's Archiv, 1882, Band xc., p 520.

[5] Experimenteller Beitrag zur Fettgewebsnekrose, Virchow's Fortschrift.

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bile [illegible] I thought that the inflammatory and sodden condition of the tissues and ducts had allowed of an escape of bile into the peritoneal cavity by means of either the lymphatics or blood-vessels, or [illegible] and the urine both c[illegible] there was no gener[illegible] point in favour of a [illegible]tity of bile-stained serous fluid was also found in the peritoneal cavity of Case 1 at the time of the operation, and at the necropsy the tissues in the neighbourhood of the bile passages were stained with bile Another point of interest in Case 2 was the marked pigmentation of some of the cells and of the débris in the affected areas.

ON THE INFLUENCE OF FATIGUE ON THE MINUTE STRUCTURE OF THE KIDNEY AND LIVER:

PRELIMINARY ACCOUNT.

BY DR. GUIDO GUERRINI.

IN a fatigued organism *there circulates, as is known*, a very large quantity of particular substances which, when collected and spread through all the system, produce a certain condition the manifestations of which, perhaps, constitute in great part the symptomatology of fatigue. *Now, given the presence in the circulation of such substances* and given, on the other hand, the great ease with which the cells of the organ react in their minute structure to such conditions, it is not difficult to deduct that in fatigue also the organs will show some change in their cellules It is *just this hypothesis that I have sought to verify.* The minute modifications of structure which I saw in the nerve-cells of the cerebral and cerebellar cortex have been already published, and the minute modifications of structure which I saw in the nerve cells of the spinal marrow will soon be published, but in the meantime in this preliminary note I give *the results which I have already obtained as regards the* kidney and liver—two organs which from the nature of their functions must certainly be affected by the presence in the circulation of the products of muscular exchange during fatigue. The technical part of the experiments was the same as that which I used for the study of the nervous system. I made several dogs run within an *apparatus* resembling that used by Grandis for the study of the influence of work, fasting, and temperature on the production of carbonic acid and the diminution in weight of the organism until they evinced symptoms of very evident fatigue. Afterwards I killed the animals with numerous special precautions and sought for the alterations in the minute structure of the kidney and liver caused by the excessive work. All the experiments were begun only after a certain time (the same for all the animals) after the last meal. The results of my experiments are the following.

In the kidney.—The grosser modifications of structure are in the cells of the convoluted tubules and of the ascending part of the loop of Henle. The corpuscles of Malpighi and the collecting tubes are nearly always normal. In the affected cells the modifications of structure are, naturally, in relation with the degree of fatigue undergone by the animal. The more fatigued the dog was the more profoundly altered were the cells. In animals already much fatigued the following appearances may be observed. The protoplasma loses its usual aspect and becomes homogeneous and granular. It appears that the cellular body enlarges, sometimes little, sometimes so much that in a transverse section all the openings of the canals seem to be closed by the swollen cells. The edge between the cells becomes uncertain and sometimes disappears altogether. In animals still more fatigued the minute modifications of the cells of the convoluted tubules are, as I have said, much greater. It is seen, in fact, that the borders of the cells which surround the opening of the canals fray out and break and that the cellular protoplasm shows here and there rarefied points, vacuoles and cracks, and finally crumbles away into a fine detritus which collects in the opening of the tubules In the midst of [illegible] sometimes [illegible] nuclei. Thi[illegible] certain number of cells, but sometimes it is seen only in a group of a few diseased cells which are in the midst of several normal ones.

In the liver.—The minute modifications of structure of the liver cells are much less than are those of the kidney cells, and they appear conspicuously only in the liver of those dogs in which the modifications of structure are the greatest. They are as follows. From the beginning all the cellular protoplasm appears homogeneous, cloudy, and granular. The cellular body enlarges and the edge between the cells becomes uncertain and sometimes disappears altogether. Sometimes the little biliary canals are evidently compressed, whereupon *the protoplasma of the liver cells* appears rarefied, full of knots, spongy, and very dark from biliary pigment

These are, in short, the results of my researches on the influence of fatigue on the minute structure of the kidney and liver. I will systematically continue the researches on the other organs.

A SERIES OF ELEVEN OPERATIONS FOR PERFORATED GASTRIC ULCER.

BY G. H. HUME, D.C.L. DURH., M.D., F.R.C.S. EDIN.,
SURGEON TO THE ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

THE 11 cases in the accompanying table have been operated upon during the past seven years and form a complete list of all the cases of acute perforation and gastric ulcer on which I have operated. The results agree in the main with the most recently published statistics and illustrate both the recent improvement in results and the dependence of this improvement on earlier opportunity of operating. *A few remarks suggested by the cases may be* arranged under the following heads.

Diagnosis—In only one of the cases (Case 9) was there doubt when first seen as to the occurrence of perforation. The patient was seen in the night and had quite recovered from the collapse which marked the beginning of the illness. She was left till morning when the signs of commencing peritonitis were too evident to admit of further delay and she was operated on with good result In another case (Case 3) there was doubt as to the origin of the general peritonitis which was fully developed. There was a history of a previous attack of peritonitis; the present illness was *said to have begun* with *pain* and tension in the right iliac region and it was uncertain which *of* the two—a perforated appendix or perforated gastric ulcer—was the source of infection. An exploration of the region of the appendix was first made with negative result; then the epigastric region was opened and the perforation *was found.* As a rule it is not difficult to make an early diagnosis The past history of stomach trouble, general biliary pigmentation, although the urine contained a large amount of bile, a condition which was noted before death. The liver weighed 51 ounces. A depressed, wedge-shaped, dull yellowish-looking area was found at the edge of the left lobe extending upwards for about half an inch and being about a quarter of an inch in thickness. In appearance it resembled an infarct more than anything else. The kidneys weighed eight ounces. The left kidney was normal. The perinephric fat surrounding the right kidney was bile-stained and showed numerous opaque, milk-white, and orange-yellow spots and patches of fat necrosis. The spleen weighed three and a half ounces. It was quite healthy. The suprarenals were normal

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Remarks.—Case 1 was not diagnosed during life. The history of previous attacks of abdominal pain and indigestion spreading over several years, and the acute onset of severe abdominal pain after a late meal of pigeon-pie, seemed to point to perforating gastric ulcer as the most likely explanation of the patient's condition when he was seen on his admission into the hospital. A satisfactory elucidation, however, of the cause of these attacks of pain was found at the necropsy in the gall-bladder, which contained several calculi. A small calculus was also found in the other case, lying in a fold of mucous membrane in the common duct close to the opening of the cystic duct. This association of gall-stones with acute hæmorrhagic pancreatitis is far from being uncommon. If the calculi are formed as a result of changes in the ducts and gall-bladder produced by an invasion of the bacillus coli communis, and as in nearly all of the cases of pancreatitis which have been examined bacteriologically the bacillus coli communis has been found, the invasion of the organ by this organism may have been the cause of this disease, for if the bacillus has ascended the bile duct, the cystic duct, and the hepatic duct it might at the same time just as easily have invaded the pancreas by means of the duct of Wirsung. The diagnosis was cleared up by the operation, fat necrosis being found. The bile-stained peritoneal fluid I shall refer to when discussing Case 2.

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It will be seen from the above that experimental evidence goes to show that fat necrosis is caused by an escape of the pancreatic secretion into the peri-pancreatic and pancreatic tissues. The changes in the mediastinal and pericardial fat could not be explained exactly in this way, as there was certainly no direct communication between the peritoneal cavity and the pericardial sac. If fat necrosis is due to the action of the fat-splitting ferment of the pancreatic secretion it must have been carried to the pericardial and mediastinal fat by the blood, or by the lymphatic vessels, or by both. It is a well-known fact that a pericarditis or pleurisy may proceed from a peritonitis and that the channel of infection is along the blood-vessels or lymphatics, and I see no reason why the pancreatic secretion should not be carried in a similar manner. The reddish areas of hæmorrhage which were noted in the fat of the mesentery, which were similar in size and form to the areas of fat necrosis, suggested that the factor causing the fat necrosis was carried in the blood-vessels.

In Case 2 the previous history of abdominal pain and indigestion and the acute onset with pain suggested perforating gastric ulcer as the most likely diagnosis to explain his symptoms and condition. The fulness in the upper part of the abdomen, the tenderness situated midway between the umbilicus and ensiform cartilage, and the curious area of dulness made me seriously consider the possibility of acute hæmorrhagic pancreatitis being the disease from which the patient was suffering. The previous history of jaundice and abdominal pain I did not consider to be against this view, as a few months before I had seen a case of acute hæmorrhagic pancreatitis giving a similar history (Case 1). At the necropsy on this case gall-stones were found and fully accounted for the previous attack of abdominal pain and jaundice.

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IN a fatigued organism there circulates, as is known, a very large quantity of particular substances which, when collected and spread through all the system, produce a certain condition the manifestations of which, perhaps, constitute in great part the symptomatology of fatigue. Now, given the presence in the circulation of such substances and given, on the other hand, the great ease with which the cells of the organ react in their minute structure to such conditions, it is not difficult to deduct that in fatigue also the organs will show some change in their cellules. It is just this hypothesis that I have sought to verify. The minute modifications of structure which I saw in the nerve-cells of the cerebral and cerebellar cortex have been already published, and the minute modifications of structure which I saw in the nerve cells of the spinal marrow will soon be published, but in the meantime in this preliminary note I give the results which I have already obtained as regards the kidney and liver—two organs which from the nature of their functions must certainly be affected by the presence in the circulation of the products of muscular exchange during fatigue. The technical part of the experiments was the same as that which I used for the study of the nervous system. I made
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In the liver.—The minute modifications of structure of the liver cells are much less than are those of the kidney cells, and they appear conspicuously only in the liver of those dogs in which the modifications of structure are the greatest They are as follows. From the beginning all the cellular protoplasm appears homogeneous, cloudy, and granular. The cellular body enlarges and the edge between the cells becomes uncertain and sometimes disappears altogether. Sometimes the little biliary canals are evidently compressed, whereupon the protoplasma of the liver cells appears rarefied, full of knots, spongy, and very dark from biliary pigment.

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Diagnosis.—In only one of the cases (Case 9) was there doubt when first seen as to the occurrence of perforation. The patient was seen in the night and had quite recovered from the collapse which marked the beginning of the illness. She was left till morning when the signs of commencing peritonitis were too evident to admit of further delay and she was operated on with good result. In another case (Case 3) there was doubt as to the origin of the general peritonitis which was fully developed. There was a history of a previous attack of peritonitis; the present illness was said to have begun with pain and tension in the right iliac region and it was uncertain which of the two—a perforated appendix or perforated gastric ulcer—was the source of infection. An exploration of the region of the appendix was first made with negative result; then the epigastric region was opened and the perforation was found. As a rule it is not difficult to make an early diagnosis. The past history of stomach trouble, TABLE OF 11 CASES OF PERFORATED GASTRIC ULCER OPERATED ON WITH SIX RECOVERIES.

No.	Sex and Age	Date of operation.	Interval between perforation and operation.	Situation of ulcer.	Treatment of peritoneal cavity.	Result.
1	F., 20	August 8th, 1893.	48 hours	Anterior wall near pylorus.	Flushed and drained.	Died.
2	F., 28	June 23rd, 1894.	Not stated in notes.	Not stated.	,, ,,	,,
3	F., 30	April 9th, 1896	48 hours	Anterior wall near cardia	,, ,,	,,
4	F., 23	Oct 10th, 1896.	5¼ ,,	Greater curvature.	,, ,,	,,
5	F., 16	Nov. 15th, 1896.	11½ ,,	Lesser curvature	,, ,,	Recovered.
6	F., 18	Dec. 1st, 1896.	43 ,,	Anterior wall.	,, ,,	Died.
7	F., 19	April 9th, 1898	6 ,,	,, ,,	,, ,,	Recovered
8	F., 18	August 19th, 1898	28 ,,	Greater curvature.	Wiped dry; no drainage.	,,
9	F., 26	April 12th, 1899	21 ,,	Pylorus	Sponged, no drainage.	,,
10	F., 18	Nov 5th, 1899	7½ ,,	Posterior wall, near lesser curve	,, ,,	,,
11	F., 27	March 19th, 1900	7 ,,	Anterior at cardiac end.	Flushed and drained.	,,

the sudden and severe pain with collapse, the epigastric tenderness and rigidity, with soon a slight rise of temperature, are indications enough to justify exploration. Vomiting occurred once or twice in all my cases and in at least one retching was continuous. When this occurs it is of evil import.

Interval since rupture.—In three cases the interval was from 43 to 48 hours and all these cases died. In another fatal case the interval between the occurrence of perforation and operation was the shortest in the list—namely, five and a quarter hours. In this case general peritonitis developed rapidly and was attended with great suffering. The course of this case I think is explained by the fact that shortly after the beginning of the attack a large dose of castor oil was administered. In the cases that recovered the interval ranged from six to 28 hours. In the instance in which 28 hours had elapsed the rupture had taken place when the stomach was empty, absolutely nothing by the mouth was allowed from the time of its occurrence, and at the operation there was so little extravasated fluid that only slight sponging was required.

Position and treatment of the ulcer.—In only one instance was the perforated ulcer found on the posterior wall of the stomach. It was found by turning up the stomach and tearing through the omentum. The treatment of the ulcer was the same in all cases. The edges were not excised but the opening was closed by a double set of Lembert stitches of catgut. A piece of omentum was laid over the site and fixed where this could be done.

Treatment of the peritoneal cavity.—The treatment of the peritoneal cavity has depended on the amount of extravasated stomach contents and general effusion. In Case 5, in which perforation had taken place soon after a meal and 11½ hours before operation, the abdomen was full of grumous fluid with particles of food, and the favourable result was thought to be due to the thoroughness with which the cavity was flushed out and drained. In three cases again the cavity was sponged dry where fluid existed and no flushing or drainage used. This is no doubt the preferable treatment and should be followed where there is only limited and local extravasation.

Newcastle-on-Tyne

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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A CASE OF ANTHRAX.

By EDWARD ALBERT CLARKE, M.R.C.S. ENG., L.S.A.

THE following case which I have recently had under my care has a considerable resemblance to the one recorded by Mr. E. C. Bousfield in THE LANCET of Oct. 20th, p. 1133.

On July 14th, 1900, a man requested me to go to see his son who, he said, had scratched his forehead and got erysipelas in it. I went to see the case and found a lad, about 17 years old, who told me that on July 9th he had a pimple on his forehead which he had scratched. On July 12th it had become inflamed and swollen, but as he had no great pain he did not think it serious until the day of my visit, when the swelling had become so great that he could not see out of his left eye. On examining the left side of his head I found a black dry eschar, around which were an inflamed area and a circle of small vesicles. The skin on the left side of the head was swollen and œdematous and all along the border of the sterno-mastoid muscle the skin was raised, red, and swollen. Both upper and lower eyelids were swollen and were so œdematous that it was impossible for him to open the left eye. His temperature was 104° F., his pulse was in proportion, but he did not complain of any great bodily illness. At first sight I took the case to be one of erysipelas, but noticed the general good condition of the patient and the absence of pain, and whilst making up my mind I was struck by the appearance of the eschar and vesicles which seemed to resemble a plate or illustration that I had seen somewhere. The youth was a brush-maker and had been sorting hog bristles which had come from abroad. It then occurred to me that this was a case of malignant pustule and I determined that I would then and there without delay excise it. Having obtained the assistance of my friend Dr. R Bleasdale chloroform was administered and I made an elliptical incision round the eschar and vesicles about an inch and an half away from their outer border, cutting down deep to the bone and removing a portion of the muscle underneath, irrigating the wound all the time with a 5 per cent. solution of carbolic acid. The bleeding was very profuse as a number of small arteries were cut; this we allowed to go on unchecked until the whole piece, about two inches in its longest diameter and one and a half inches wide, was removed and then, by the aid of pressure forceps, strong carbolic acid, and hot water, it was got well under control. I then filled a hypodermic serum syringe with a 5 per cent. solution of carbolic acid and thrusting the needle beneath the edges of the wound for about one inch I injected the solution in eight or nine different places round the wound. A piece of lint soaked in the 5 per cent. carbolic acid solution was placed over the wound and an ice-bag was placed over all and instructions were left for the patient to have on the next day some strong beef-tea and a mixture containing five-grain doses of sulphate of quinine every three hours. On the following morning (July 15th) the temperature and the pulse-rate had fallen, and beyond the effects of the chloroform and severe shock the patient was doing very nicely; the swelling in the face and neck seemed to be slightly less. From this time to August 2nd I visited him daily, giving him plenty of nourishing food such as beef-tea, port wine, &c., and continuing the application of the 5 per cent. carbolic acid lotion and the ice-cap. He also had the quinine mixture, and during the whole of this time he improved daily. He then went to the seaside and eventually recovered perfectly.

I was unfortunately unable to have the portion of skin removed with the vesicles bacteriologically examined for anthrax bacilli. The interesting features of this case were: (1) that a case of anthrax has not been known in this neighbourhood before; (2) that the evidence distinctly pointed to the foreign bristles being the source of infection; and (3) that the prompt treatment by excision and thorough disinfection had been successful in a case which otherwise might have been fatal. Although there was no bacteriological examination I am convinced from the eschar and the vesicles, the œdematous swelling, and the slight pain in proportion to the local signs, that there was no doubt of the disease being anthrax.

Dukinfield.

AN INTERESTING CASE OF AMENORRHŒA.

By Wilfrid J. H. Hepworth, L S A.

I WAS consulted some months ago by a woman who was desirous of ascertaining whether she was pregnant or not. She was 23 years of age and had two children, the youngest being four months old. Her reason for thinking herself pregnant was that she had only infant was born, and that was On the other hand, she thought herself unlikely to be pregnant, for she had not experienced any of the sensations that she had noticed in her previous pregnancies, such as painful breasts, morning sickness, &c. Menstruation commenced at 12 years of age; there was then a period of six months' amenorrhœa and then regularity up to her marriage. Both labours were natural, but she did not nurse either child. She was preparing to pay a visit to the country when she consulted me and I advised her to come to see me again in six weeks' time (i e, when she returned home), as I could not find any physiological or pathological reason for the amenorrhœa According to promise she came to see me at the expiration of the six weeks, but it was to inform me that menstruation had returned two days after ain a month later. Three months ie to me with the same story of above She had been in London three months and had not once menstruated, though her periods had been regular whilst she was away. I recommended her to try another change of air. She did so and she was once more restored to regularity. She now leaves London for a couple of days each month when she at once becomes "unwell," though this is not the case if she remains in town. I have recommended her if possible to take up her abode in the district in which she resided previously to her marriage.

Old Basford, Nottingham.

SURGICAL EMPHYSEMA OF THE EYELIDS.

By Charles Leo Birmingham, M.D. R U.I.

ON Oct. 13th, 1900, a patient of mine, who was walking along a public road and carrying an open umbrella for protection from the rain had his umbrella suddenly blown against his face. One of the ends of a rib of the umbrella struck the right eye close to the caruncula lacrymalis. This caused a slight wound which did not bleed. There was no pain and my patient continued his walk. About three hours later he had returned to his dwelling and was sitting in an armchair removing his boots when he paused to blow his nose. Immediately his eye was closed with an inflated swelling of both the lids. I was summoned in great haste and arrived about 15 minutes after the onset of the swelling when I found that the enlargement of the lids was so great that not even the eyelashes could be seen. Gentle pressure on the lids gave rise to a "crackling" sensation. On hearing of the injury I at once diagnosed surgical emphysema of the eyelids. Without delay I began to apply gentle, slow, continuous pressure, using pads of lint soaked in boric acid solution beneath my finger ends. Within an hour I had the eyelids emptied of air. I left a pad of lint on the eye firmly fixed with a bandage Recovery was subsequently uninterrupted and the patient is now able to blow his nose again. There was slight epistaxis on the third day after the injury. My explanation of the occurrence of the emphysema is that the lacrymal apparatus was ruptured at the junction of the canaliculi and the sac None of the books on surgery which I have been able to consult records any case of injury such as I have described.

Westport, Co. Mayo

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb*, lib. iv. Prooemium.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.

A CASE OF SARCOMA OF THE SIXTH RIB IN THE REMOVAL OF WHICH THE PERICARDIAL AND LEFT PLEURAL CAVITIES WERE OPENED; RECOVERY.

(Under the care of Mr. C Whipple and Dr. H. W. Webber)

THE frequency of the occurrence of malignant disease of the rib is small, and especially rare is primary malignant disease in this situation It is generally necessary in attempts to remove the growth in such cases to open the adjacent pleura, or in exceptional cases the pericardium also may be involved in the course of the operation,[1] as in the case reported below.

A man, aged 46 years, a farm labourer, was admitted into the South Devon and East Cornwall Hospital on Sept 18th, 1900, for a tumour in the left side. The history given was that three months previously a small pimple formed over the position of the swelling; this broke and discharged matter owing (according to the patient) to the friction of his braces. A lump had appeared in the situation of the pimple which had gradually grown larger and caused him considerable pain. On admission he was seen to be a rather sparely-built man; he had formerly served in the army in India and while there had suffered from "fever and blood poisoning." Over the sixth rib, just external to the apex beat of the heart, was a tumour of the size and shape of a hen's egg with its long axis in the course of the rib; it was firm at the periphery, soft and semi fluctuating in the centre, firmly adherent to the rib, but not appreciably involving the skin. The skin over the tumour and for a little distance around it was marked with dilated veins.

On Sept 23rd, under chloroform, an incision five inches in length was made over the tumour in its long axis and the skin and subcutaneous fat were dissected off it. The rib was then cleared at points half an inch beyond the limits of the tumour and the bone with the tumour between these points was excised. In doing this the cavities of the left pleura and of the pericardium were freely opened, and the result was a hole some three inches by one inch, into which the apex of the heart bulged at each beat, and at the bottom of which the left lung collapsed (by the air admitted) could be seen lying. The screw-like mechanism of the heart in systolic contraction was well seen. The wound having been swabbed dry was closed by several interrupted fishing-gut sutures through the skin and the subcutaneous tissue. Dressings of sterilised gauze and wood-wool were applied. temperature had risen from °; he was unable to lie down n attack of bronchitis. The dressings required packing with wood wool, as much blood-stained serum had oozed through. On Sept 24th dyspnœa and orthopnœa were marked with frothy mucoid expectoration and inspiratory rhonchi The pulse was 100 per minute and the respirations were 32, the temperature having fallen to 99°. In the evening the temperature rose to 102 4° and the dressings, which were soaked with blood stained serum, were changed. On the 25th the morning temperature was 100 2° and the respirations were 36; dyspnœa and expectoration from bronchitis were rather troublesome. On the 26th the temperature in the morning was 99° and in the evening 99 6°; the respirations were 28 per minute. The dressings were changed again. On the 28th the evening temperature was 101°; the respirations were 28. On changing the dressings the edges of the wound were found to be somewhat red, so every other stitch was removed. A little slightly blood-tinged serum escaped with each forced expiration from between the stitches, evidently from the serous cavities. Hot boric fomentations were ordered every two hours to the wound. On the 29th the wound was cleaner and more healthy-looking, so dry dressings were re-applied. The morning temperature was 98° and the evening temperature was 99°; the respirations were 24 per minute. The bronchial attack was subsiding and the dyspnœa and expectoration were only slightly troublesome. From this date the patient gradually recovered and was discharged to the Pearn Convalescent Home on Oct. 15th. On discharge the wound was soundly healed, a somewhat depressed scar which bulged a little with each beat of the heart being present at the site of the operation. The venules round it were still dilated but to a much less extent than previously to the removal of the tumour.

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[1] Quenu et Longuet: Les Tumeurs du Squelette Thoracique, Revue de Chirurgie, 1898, p. 365.

Remarks by Dr. WEBBER.—I am indebted to Mr. Whipple for kind permission to operate on the above case and to record the notes and I consider it worthy of record as in few cases has the pericardial cavity been freely opened in the manner above described. Dr. F. G. Bushnell prepared in our clinical laboratory microscopic sections of the growth which showed that it was a periosteal spindle-celled sarcoma with numerous hæmorrhages into its substance; its invasion of the costal cartilage was well shown at one part of the section.

PENRHYN HOSPITAL, BETHESDA.

A CASE IN WHICH A VARICOSE CONDITION OF THE INTERNAL SAPHENOUS VEIN WAS COMPLICATED BY IRRITATION OF THE INTERNAL SAPHENOUS NERVE; OPERATION AND CURE.

(Under the care of Dr. E. A. MILLS-ROBERTS.)

AT the present day the operation of excision of varicose veins is so very simple in performance and satisfactory in result that it is somewhat difficult to realise the hesitation with which surgeons formerly operated on veins and the fatal results which were only too often obtained. The mortality after excision is very small, probably less than 1 per cent., and the two most common causes are sepsis and embolism.

A man, aged 42 years, consulted Dr. Mills-Roberts in June, 1895, complaining of what he described as "severe pain" in the left leg. On examination he was found to be suffering from a varicose condition of the internal saphenous vein of the leg. The condition did not seem to be serious; the chief varices consisted of a considerable bunch in the region of the knee, there was an enlargement of the vein at the mid-calf, and there was a third enlargement contained in old cicatricial tissue about two inches above the internal malleolus. The painful area extended from about four inches above the internal condyle down the posterior and internal aspect of the leg to the ankle. There was a very distinct dark nodule in the cicatricial varix that, he complained, was acutely painful. The cicatrix was due to an injury received when he was 10 years old, the result of being kicked or trodden on by a horse, resulting in a necrosed condition of the lower third of the internal surface of the tibia. The necrosis and resulting ulcer took 12 months to heal and during this time "86 bits of bone were removed from it." He first noticed the varicosed condition of his leg when he was about 20 years old. The patient was employed as a slate quarryman and his wife kept a public-house where they resided. He confessed to free indulgence of stimulants but not to excess and he was never inebriated. He had a particularly healthy family history. The usual treatment of rest, bandage, and tonics was advised. Circumstances would not allow him to give up his employment. The treatment seemed to give him little or no relief, and he evidently thought not only that it was ineffective but that it rather aggravated the symptoms.

In the spring of 1899 the pain became so intolerable and severe that the patient was forced to give up his empl ment. While absolutely quiet he did not suffer muc comfort, but if he indulged in anything like activit who, h all the painful symptoms. In the aut erysipelas in again consulted Dr. Mills Roberts w about 17 years and found no evidence that the c pimple on his f

worse. It was unilateral, and from any evidence to trary the varicosity was confined to the length of extending from two inches above the ankle to the the region of the knee. The patient was urged to a radical operation and to have the varices remov seemed to be rather diffident about following this ad asked if there was any objection to his having advice. No objection was made. He in conseque sulted two Liverpool surgeons, who endorsed D Roberts's views, and returned seemingly satisfied and to undergo the operation. He was admitted to Hospital on May 4th, 1900, the operation being perf the 7th.

The patient having been anæsthetised an incisi five inches in length was made in a longitudinal and transverse direction, extending along the greatest of the bunch in the region of the knee, the mid-poi behind the inner tuberosity of the tibia. Aft trouble and very careful and prolonged dissection the saphenous nerve was found and was separated freel wards as far as the incision would allow, after whic gentle pulls were given. The vein was then tied at end of the incision and cut. The nerve in th time was kept out of harm's way by means of retractor. The dissection of the vein was continued four well-developed and enlarged branches being fo ning somewhat transversely towards the anterior m the leg. Five inches of the main trunk of the inner s vein were removed—that is, the length of the incis about an inch of each of the branches mentioned. was next directed to the mid-calf enlargement, means of an incision two and a half inches long, th of the vein was removed. The cicatricial varices *in statu quo*, Dr. Mills-Roberts, not feeling ju interfering with what had been a long-healing ulc incisions were drawn together with a few sutures dressed with carbolic oil and iodoform. The patien somewhat slow and uneventful recovery. His ten on the evening of the operation (May 7th) was 9 continued the same on the 8th, on the evening of had his bowels well moved. On the 9th the ten was normal and continued so. He was dismissed 16th perfectly convalescent and suffering no pa varicosity contained in the old cicatrix seemed to be and it was hoped that it would disappear. The no quite painless.

Remarks by Dr. MILLS ROBERTS.—1. What was pa interesting about the above case was the unusual se the pain which the patient suffered. I could only for it by the fact that his employment necessitated and often prolonged work in the kneeling positio times all day and often for four or five hours at a tin bunch at the knee must have pressed on the saphenous nerve, the pressure being considerably i during the time he was in the kneeling position. the ulcer he suffered from when a child the primary the varicose condition? 3. The blood lost during t tion was practically *nil*. 4. The delay in healing was due to the patient's "moderate alcoholic tendencies."

I saw the patient on July 24th. He was then q from pain and was perfectly able to resume his emp but on account of the liability of the recurrence of dition I have advised him to find some employm laborious. The varicosity in the cicatricial tissue appeared, there is no sign of the nodule, and absolutely no pain.

ROYAL UNITED HOSPITAL, BATH.—The s annual amateur performances in aid of the funds Royal United Hospital at Bath will be held at the Royal during the week commencing Dec. 10th. will be nine performances, and *Iolanthe* and *The S Scandal* are the pieces selected.

UNIVERSITY OF CAMBRIDGE.—Dr. G. E. H has been appointed an examiner in midwifery, C. T. R Wilson, F.R.S., an examiner in physics for egrees.—Professor Alexander MacAlister, M.D., as been elected President of the Cambridge Philo ociety.—The total of the donations paid, or prom University Benefaction Fund now exceeds £66, donations, a number are specially assigned ion of the new buildings for the medical school.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Laboratory Meeting.

A MEETING of this society was held at the laboratories of the Royal Colleges of Physicians of London and Surgeons of England on Nov. 6th, Mr. WATSON CHEYNE, the President, being in the chair.

Mr. WALTER EDMUNDS exhibited a dog which as the result of Total Extirpation of the Thyroid four days previously showed marked weakness and rigidity of the limbs with some tremor, and recession of the eyeballs.

Dr. W. D. HALLIBURTON and Dr. F. W. MOTT made a communication on the Chemistry of Nerve Degeneration, giving further results of their experiments in respect to the occurrence of choline in nerve degeneration and the chemical and physiological tests for that substance.

Dr. F. W. PAVY, Dr. R. L. SIAN, and Dr. T. G. BRODIE made a communication and demonstrated some experiments on Phloridzin Glycosuria.—Dr. PAVY remarked that when this substance was injected into the renal artery of a dog it produced the immediate appearance of a large quantity of sugar in the urine from the kidney on the same side and presently sugar appeared in the urine from the ureter on the other side. Whether taken into the stomach, or injected subcutaneously, or intravenously, phloridzin produced a very large quantity of sugar (amounting even to 10 per cent.) in the urine. The source of the sugar was an enigma. It might come from the general system or it might be produced by the action of the kidney on the blood. He referred to experiments in this subject by Zuntz.

Dr. A. E. RUSSELL and Dr. BRODIE exhibited some experiments upon the Cardiac Reflexes, showing that stimulation of the central end of the pulmonary branches of the vagus slowed the cardiac rate.

Dr. W. E. DIXON and Dr. BRODIE exhibited some experiments on Pulmonary Motor Mechanism, showing that pilocarpine produced muscular spasm of the bronchioles, and that ergot produced engorgement of the lung by constricting the peripheral arterioles.

GLASGOW SOUTHERN MEDICAL SOCIETY.

A Discussion on the Plague.—A Fresh Specimen of Hydatid Mole.

THE third meeting of the session of this society was held on Nov. 1st, Dr. WILLIAM WATSON, the President, being in the chair.

Dr. J. W. ALLAN introduced a discussion on the subject of the Plague and commented on the fact that the disease seemed to be dying out in Glasgow. Some people were inclined to say "supposed plague," a statement which in his opinion was foolish, for the advice of experts and bacteriological examination had proved the presence of the disease beyond doubt. So far Glasgow had been fortunate in the smallness of the number attacked and in the number of fatal cases. While, however, there remained even only a few cases in the city the position was still serious on account of the interference with commerce and shipping. Failure to detect and deal with the early mild cases might result in the development at a later stage of a more virulent form of the disease and also the conversion of the city into an endemic centre. According to Professor Simpson "two features are specially characteristic of plague, first, the slow, irregular, and gradual manner in which the disease acquires a hold over a locality into which it is imported and which may later become the scene of an epidemic; and secondly, the obscurity which often surrounds the earlier cases." From this statement it could be understood how important it was to deal quickly and thoroughly with early cases of the disease. Of the types of plague which he had seen at Belvidere Hospital the impression he formed as he saw them at the time was that they showed nothing characteristic until the local manifestation had been revealed. In one case the facies suggested to him typhus fever and in that of an old woman very ill had typhus fever. The lesson seemed clearly conveyed that bubonic plague might easily be missed unless it was expected. Dr. Allan then proceeded to describe briefly the various types of plague as enumerated by Professor Simpson and Mr. Cantlie of London—viz., (1) the larval, ambulant, or abortive type, or pestis minor; (2) the bubonic; (3) the pneumonic; (4) the intestinal; (5) the typhus; (6) the septic; (7) the nervous; and (8) the puerperal. In view of the different varieties of the disease of plague the diagnosis was no easy matter and the mild or larval type might readily be overlooked. Positive information, however, might be obtained by the aid of the microscope, and he would point out the value of "association" as a key in doubtful cases. What might be called the "house affection" or the "family connection affection"—the association by personal contact—was to be regarded as a valuable point in the diagnosis. Speaking of the variable nature of the malignancy of plague Dr. Allan gave some interesting information. Quoting from the "Memorandum on the Progress of Levantine Plague in 1878–79, including the re-appearance of the Disease in Europe," by Mr. N. Radcliffe, he showed how at first the disease at Vetlianka, on the Volga was of a mild glandular form, but that it was succeeded in time by a more virulent type, and finally ended in the pneumonic form in which the mortality was 100 per cent. This increased severity of the plague at Vetlianka was attributed to the approach of winter, which caused the inhabitants to pack themselves in their ill-ventilated stove-heated houses. With regard to the geographical distribution of the disease it had been known for years in India and China. Endemic in certain parts of these countries violent outbreaks spread from time to time. It was only too evident that the disease had now travelled beyond their boundaries probably by commercial relationships and had become pandemic. In conclusion, Dr. Allan remarked, seeing that plague could assume so many clinical aspects and that the possibilities of its re-introduction to Glasgow were neither few nor remote, it behoved the medical profession to keep on the alert for some time to come and to report promptly to Dr. A. K. Chalmers, the medical officer of health, all doubtful or suspicious cases. Let them not be lulled into a false security, for in that lay the greatest danger of all.—Dr. CHARLES E. ROBERTSON gave a short account of the illnesses of the patients Malloy who in hospital were recognised as the first cases of plague. After a consultation with Dr. Thomas Colvin, who had also visited the Malloy family, both concluded that they had an infectious disease to deal with and that the patients should be isolated in hospital. Accordingly the patients were then notified and removed as cases of doubtful enteric fever. Dr. Robertson further remarked that during his attendance on the family the cases presented features which, after excluding poisoning by irritant ingesta, suggested typhus fever to his mind.—Dr. THOMAS COLVIN remarked that as Glasgow had no special port sanitary medical officer to detect the introduction of infectious diseases from foreign ports the city's first line of defence was the general practitioner, to whom the present discussion was of the utmost importance. He thought that one practical outcome of the discussion would be a resolution to the effect that the sooner the corporation appointed a port sanitary medical officer the better for all concerned. In his opinion it was a great blessing for the community that so early in the outbreak of plague in the city they found no less than four cases of that disease in the same household. It was the association of the four cases that enabled him to say without any difficulty that whatever the exact nature of the disease was it must be infectious. A consideration of the same circumstance also must have helped to determine the provisional diagnosis of plague in Belvidere Hospital. Another important fact the plague brought out was how little was yet known of the exact nature of natural immunity from any of the infectious diseases. Charles Malloy was brought into the closest personal contact with his brother who died from the plague. He slept with him, ate and drank out of the same dishes, nursed him as best he could for the greater part of a week, and yet he did not take the disease. Mrs. M.—another case of Dr. Colvin's—was also brought into the closest contact with her daughter ill with the plague for 18 days and escaped the disease. On the principle of phagocytosis it might be said that they escaped because their leucocytes were able to digest the plague bacilli. But the question still remained, Why were their leucocytes able to do so, especially when it was known that both "contacts" were much run down for want of sleep and of proper food? Dr. Colvin then discussed at length the differential diagnosis of plague and enteric fever as seen in general practice, and in summing up said that in his opinion plague in the forms met with in Glasgow simulated many other diseases and the only valuable differential sign was the bubo. With regard to the bubo they had to exclude syphilis, gonorrhœa, and septic irritation. Finally, to complete the diagnosis the plague bacillus had to be found by bacteriological examination.—Dr. MATTHEW DUNNING gave an account of the cases of plague that he had observed in his practice during the epidemic.—Dr. A. K. CHALMERS in the course of his remarks gave an interesting history of the course of the plague in Glasgow. With regard to its similarity to typhus fever as regards the rash occasionally found, it was to be noted that the rash of plague resembled the late stage of the typhus rash and, moreover, was found earlier in the disease. While the plague as seen in Glasgow might reasonably be called a mild form of the disease it was yet true that the mortality was considerable, being no less than 47 per cent., and approaching the mortality of the epidemic in Cairo. In conclusion, Dr. Chalmers spoke at length as to the probable means of transmission of plague, the causes of its variable malignancy, and the value of serum injections.

Dr. JAMES WEIR showed a fresh specimen of Hydatid Mole which was examined with interest by the members.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 2nd, Dr. Gordon Black, the President, being in the chair.—Dr. L. A. Rowden read notes of a case of Descending Landry's Paralysis in a child. The child, a lad, aged 10 years, had whooping-cough in 1897 and cholera in 1898, but had since been in good health. On Sept. 14th, 1900, he slipped into a pit but seemed none the worse. On the 15th he appeared to have a stiff neck and on the 16th he did not seem very well and had a restless night. On the 17th there was paralysis of the muscles of the neck and of the deltoids with a temperature of 103° F. On the 18th there was complete paralysis of the neck, arms, forearms, &c., and intercostals, and later the muscles of the legs, face, and tongue became affected. The child died completely paralysed in all his muscles at 1 A.M. on the 19th from cardiac failure. The diagnosis was based on (1) progressive, symmetrical, motor paralysis; (2) no disturbance of sensation; (3) absence of rigidity, twitching, pain, or tremor; (4) mental functions unimpaired; and (5) no loss of control over the emunctories. There was no evidence of scarlet fever or diphtheria in the case, and the fall seemed to be a coincidence, as there was no injury to the spine.—Dr. Wardrop Griffith supported Dr. Rowden in his diagnosis of Landry's disease and referred to other instances where the paralysis was descending instead of ascending. He argued that the simple conception of a lesion, organic or nutritional, passing along the cord was often at variance with the march of the palsy, as in many of the ascending cases the arms were affected before the trunk. On the other hand, a purely peripheral affection of the nerves, though it accounted for most of the phenomena of the disease, and notably for that variability in the combination of motor and sensory symptoms which Landry himself had pointed out, did not account for all, and the association of right-sided facial palsy with paralysis of the external rectus of the same side, which was observed in one undoubted example, pointed to a lesion of the closely associated border of the seventh and sixth cranial nerves. He favoured the view, therefore, that Landry's disease was due to a toxic process, affecting various parts of the nervous system in different cases, and in some instances leading to demonstrable inflammatory lesions.—The President, Dr. A. G. Barrs, and Dr. J. Campbell also discussed the case.—Dr. Rowden, in reply, pointed out the similarity between Landry's paralysis and infantile paralysis and suggested that the former might also be caused by an acute anterior poliomyelitis but of a more regular and spreading character than in the latter.—Dr. E. F. Trevelyan read a paper on six, mostly severe, cases of Diphtheritic Paralysis, including remarks on albuminuria and ataxia in diphtheritic paralysis and on the prognosis and treatment of this affection.—Dr. A. G. Barrs spoke of the importance of complete rest in bed until the knee-jerk had returned in cases of diphtheritic palsy in which it was absent, for so long as the knee-jerk was absent the patient was the subject of diphtheritic palsy. He also referred to the importance of avoiding all restrictions in diet even in the acute stage of the disease beyond those imposed by the difficulty in swallowing and the loss of appetite inevitable to an acute infective state.—The President, Mr. J. W. Draper, Dr. A. Christy Wilson, Dr. S. Lodge, jun., Dr. H. J. Campbell, and Dr. J. E. Eddison also took part in the discussion.—Dr. Trevelyan, in reply, thought that the time of the re-appearance of the knee jerk was too variable and sometimes too delayed to be taken as a guide in the question of rest.—The following cases, pathological specimens, &c., were shown:—Dr. Gordon Sharp: Some New Drugs.—Mr. E. Ward: (1) A Mauser Bullet Wound of the Lumbar Region received at Willow Grange; immediate paraplegia; recovery after a long interval; and (2) a case of Gastro-jejunostomy, with illustration of a Method of Using Murphy's Button.—Dr. A. G. Barrs: (1) Gangrene of the Lung; (2) Retro-peritoneal Growth; and (3) Tuberculous Disease of the Suprarenal Capsules.—Mr. W. E. Bennett (Otley): A patient who 10 years ago was believed to be the subject of Intracranial Tumour.—Mr. B. G. A. Moynihan: (1) Four cases of Molluscum Fibrosum in the same family; (2) Tumour connected with the Vagus Nerve removed from one of the above patients; (3) a Skiagraph and Plaster Cast of a Sub-astragaloid Dislocation of the Foot; (4) a Skiagraph of a case of Club Hand; (5) a case of Hypertrophic Osteo-periostitis following Gonorrhœa; and (6) a large Fibro-cystic Tumour of the Uterus removed by Kelly's operation.—Dr. T. Wardrop Griffith: (1) Premature Closure of the Foramen Ovale; (2) Fragilitas Ossium; (3) Raynaud's Disease associated with Ichthyosis; and (4) Lupus almost completely cicatrised.—Mr. Lawford Knaggs: Intestinal Obstruction resulting from an operation for Radical Cure of Hernia and depending upon a congenital abnormality.—Mr. Mayo Robson: Chronic Osteitis and Abscess of the Femur.—Dr. Barrs and Mr. Lawford Knaggs: A case of Duodenal Stricture in a youth, aged 17 years; pyloroplasty.—Dr. J. B. Hellier: (1) Pregnant Uterus with Myoma removed by Abdominal Hysterectomy; and (2) Bilateral Ovarian Abscess removed by Abdominal Section.—Dr. E. F. Trevelyan: (1) A case of Juvenile Phthisis in a girl, aged 14 years, who had been under observation for some years; and (2) A case of Hemiplegia of slow onset in a syphilitic subject; improvement under anti-syphilitic treatment.—Mr. H. Secker Walker: A case of Rodent Ulcer of the Orbit treated by removal and skin-grafting.—Mr. C. J. Wright: Parts from a case of Ectopion Vesicæ with Absence of the Large Intestine; the child lived five days.

PLYMOUTH MEDICAL SOCIETY.—A clinical meeting of this society was held on Oct. 27th, Mr. G. Thom, the President, being in the chair.—Staff-Surgeon W. M. Craig, R.N., showed a young man who four months previously sustained a Fracture of the Lower End of the Humerus and subsequently exhibited signs of Divided Musculo-spiral Nerve. This nerve was exposed between the supinator longus and the brachialis anticus, the distal portion being involved in callus; after freshening the ends they were connected by means of two inches of each sciatic nerve of a freshly-killed rabbit, laid side by side and fixed with fine silk. Now, two months after operation, there was a decided increase both in movements of wrist and sensation.—Mr. W. L. Woollcombe showed: 1. A man, aged 35 years, on whom he had operated four months previously for Malignant Disease of the Transverse Colon with almost Complete Obstruction, removing eight inches of the transverse colon with omentum and four inches of jejunum which had become adherent to, and infiltrated by, the growth. The small bowel was united by means of a Murphy's button and the large by Mayo Robson's bone bobbin. Several infected glands lay in the meso-colon, one close back against the pancreas, and this necessitated removal of a large wedge of meso-colon. The operation was completed in less than two hours, and during it five pints of saline solution with one ounce of brandy and ten minims of liquor strychniæ were given intravenously. Between the fifth and seventh days a slight leakage occurred from the colon and a localised collection of pus formed which was evacuated. The button passed on the nineteenth day. Five weeks after operation the patient weighed 8 st. 13 lb. He now weighed 11 st. 8 lb., a gain of nearly 3 st. Motions were formed and of the size of a working-man's thumb. 2. A coal porter, aged 35 years, the subject of Double Popliteal Aneurysm, each with a false sac. Pain was first noticed two weeks before coming under observation, when his leg resembled a large, rapidly-growing sarcoma of the head of the tibia with glazed and discoloured skin over it. However, a few days produced such a change that leaking aneurysm was diagnosed. The sac was laid open and the vessel was secured on either side of the opening. Blood had burrowed all over the calf and produced much disorganisation of muscles. It was subsequently found that a portion of vein had been removed with the artery, being intimately adherent, and a few days later gangrene of the tips of the toes set in. Three weeks later, whilst still in bed, stiffness was complained of in the left calf and a similar condition was found to be starting there. Three days produced a great increase, so that the femoral artery was tied at the apex of Scarpa's triangle. Now, three months later, the result was excellent. Both knees were freely moveable, painless, and free from swelling or pulsation. The toes had not yet completely separated, but there was no spread of gangrene. The man was healthy, with no sign of syphilis or kidney mischief. —Mr. F. E. Row showed two patients on whom he had operated for Radical Cure of Hernia by clearing and removing the sac through a small incision, tying it as high as possible and allowing the stump to fly back. There were no sutures in the canal or ring. The first man was 55 years of age and had had the operation done on both sides three years ago. The second was a young man operated on three months ago.—Mr. C. H. Whiteford showed: 1. A Breast removed by Halstead's Method in which the operation was followed by sloughing of part of the axillary flap. It was suggested that this flap should be reflected at the end instead of early in the operation, and that the preliminary incision should not be carried into the fat. *The operation lasted four hours,* was well borne, and was followed by neither shock nor sickness. 2. A Modification of Paul's Tube for Drainage of Distended Intestine, having an opening on either side instead of only at the end, thus obviating blocking of the opening by the mesenteric border of gut pressing against it.—Mr. R. H. Lucy read notes of a case in which whilst delivering a kidney for incision the pedicle tore through and the kidney (a useful one) was thus lost. The pedicle fortunately remained in the grasp of the *left hand and was secured without much* difficulty.—Dr. F. G. Bushnell showed: (1) Slides illustrating Diseases of the Uterus; (2) films illustrating Leucocythæmia, Pernicious, and Chlorotic Anæmia; and (3) lantern-slides of micro-photographs of Diseases of the Breast.—Mr. G. Jackson, secretary of the Devon and Cornwall Branch of the Incorporated Practitioners Association, drew attention to an attempt on the part of the Commercial Travellers Benevolent Association to establish a medical club in connexion with the local branch of the association with remuneration for the medical officer at the rate of 1*d.* per week per member, and gave notice that at the next meeting of this society he would move a resolution condemning their action and calling upon practitioners in the district to refuse to accept the *post of medical officer.* There was a general feeling that the rate of remuneration was totally inadequate to the status of the proposed members of the association and that gentlemen occupying the position of commercial travellers were not the class of persons who should be attended on contract terms at all.

BRITISH ORTHOPÆDIC SOCIETY.—A meeting of this society was held at the Royal Orthopædic Hospital, *London, on Oct. 27th.*—Mr. H. A. Reeves showed the following cases: (1) Contraction of Toes following Cauterisation of a Nævus of the Dorsum of the Foot, accompanied by Exostosis of the Tibia; (2) Paralytic Genu Valgum with Lateral Curvature of the Spine; (3) Congenital Talipes Equino varus, for which he had *removed* the *upper articular* surface of the astragalus; and (4) two cases of Talipes Calcaneo-valgus, *in one* of which he had performed Arthrodesis. It was important in such cases to straighten the contracted sole before proceeding to rectify the position of the os calcis.—Mr. Reeves also showed photographs of a case of Charcot's Disease of the Ankle in a woman 52 years of age. She could not walk at all. He removed the loose and degenerated articular cartilages and the patient left the hospital able to walk well with instrumental support.—Mr. Reeves also showed the Bones of the Foot and Lower Half of the Leg from a case of Congenital Absence of the Tibula, &c.—Mr. D'Arcy Power, Mr. Chisholm Williams, and Mr. Muirhead Little discussed the cases.—Mr. Reeves also showed photographs of a case of Paralytic Deformity of the Elbow and Wrist due to Congenital Hemiplegia. He divided the biceps and straightened the elbow, but a sharp attack of arthritis followed. The patient's age was 28 years. He divided the palmaris longus and flexor carpi radialis with excellent results. He wished to point out that it was seldom necessary to divide the deeper tendons in such cases, even when of long standing.—Mr. Muirhead Little showed a child, two months old, suffering from Congenital Talipes Calcaneo valgus and having a tumour (so-called hæmatoma) of the Left Sterno-mastoid. Labour had been tedious and difficult, but the head had presented and forceps were not used. He hoped to be able to keep the case in view to see if wry-neck followed.—Mr. D'Arcy Power referred to his investigation of this subject. Out of 50 or 60 cases of tumour of the sterno-mastoid only three or four patients came up for tenotomy afterwards.—Mr. Muirhead Little showed an apparatus designed to strengthen any group of Muscles of *the Ankle and Foot by means of Voluntary Exercises.* The resistance to be overcome was furnished by means of weights attached to cords running over pulleys. He demonstrated its use on a child and pointed out that it was useful in all cases of talipes, when there was not too extensive paralysis, and also for flat feet. To encourage children to use it an electric bell was fitted, which was so arranged as to ring when the weight was lifted far enough.—Mr. A. H. Tubby read a paper on the Treatment of Deformities of the Hand and Fingers. As regards Dupuytren's contraction, he had found that open incision and dissection of the thickened fascia and its removal as far as possible gave good results in suitable cases, but the surgeon himself must see that aseptic conditions were attained or the result would be bad. *All bleeding must be quite stopped before the* wound was closed. Careful asepsis must be persevered with until every scab had disappeared. As regards club hand, he had not operated on such cases, preferring to treat them by splints. If any operation were needed he should prefer M'Curdy's. Mr. Tubby then discussed the functional prognosis of tendon suture in the hand, &c.—Mr. Noble Smith and Mr. Little spoke, and Mr. Tubby replied.

NEWCASTLE-UPON-TYNE CLINICAL SOCIETY.—The first meeting of this society for the present session was held on Nov. 1st, the retiring President, Dr. H. Brunton Angus, being in the chair. The following officers were elected for the session:—President: Dr. Frank Hawthorn; vice-president: Dr. Ogden Watson Ogden; treasurer: Dr. W. E. Alderson; secretary: Mr. T. G. Ouston; committee: Dr. R. P. R. Lyle, Dr. T. Beattie, Mr. G. Foggin, and Dr. A. M. Martin.—Dr. Angus showed a man, 58 years old, with a large Pulsating Tumour on the Top of the Head. There was a history of severe blows on the skull eight years and one and three-quarter years before. At this latter period the growth was explored and removed by Mr. F. Page, who found it, after trephining the skull, to be outside of the dura mater. The growth was a pure angeioma but recurrence had gradually taken place. No primary cause, such as a thyroid tumour, could be found, but Dr. Angus considered the growth to be a secondary one.—Dr. R. A. Bolam, Dr. Beattie, and Mr. Ouston discussed the possible origin of the growth.—Mr. W. H. Vickery showed a child, *nine months old, from* whose thigh a Lipoma weighing 12½ ounces had been removed. The tumour (which was exhibited together with a photograph taken prior to operation) extended from the ischial tuberosity to the popliteal space. The only difficulties presented in removal were from its adherence to the great sciatic nerve and shock to the child.—Dr. Hawthorn, Dr. Angus, and Mr. Ouston commented upon the case.—Dr. Colles (for Dr. Coley) showed a boy suffering from symptoms resembling an advanced stage of Pseudo-Hypertrophic Paralysis. The feet were in a position of talipes equinus.—Dr. Beattie and Dr. Martin agreed in the above diagnosis as against anterior polio-myelitis.—Dr. Colles (for Dr. W. Beatley) showed a boy with Tumours in both Iliac Fossæ. *He also had enlarged lymphatic glands in the neck* which had suppurated previously and in one axilla. The tumours had remained of the same size for three months. There had been no rise of temperature for the same period and no alterations in the blood-cells or spleen could be made out.—Dr. Martin, Dr. Angus, and Mr. Ouston thought that the tumours were tuberculous glands, and Dr. Beattie, Dr. Bolam, and Dr. G. G. Turner favoured the view of lymphadenoma.—Mr. Foggin read a paper on Minor Eye Injuries and Antisepsis. Attention was drawn to the fact that no less than 12 varieties of bacteria had been isolated in the normal conjunctival sac, and to the many virulent organisms that caused inflammation with or without direct traumatism. The corneal epithelium should be treated as carefully as was the peritoneum. In treatment discs of atropine, cocaine, protargol, &c., were superior from an aseptic point of view to solutions kept ready made, whether used by surgeon or by patient, but gelatin discs were more liable to be septic than the compressed variety and were not so readily absorbed. Discs had the further advantage of exact dosage. Reference was made to fluorescine as a means of diagnosing actual corneal abrasions, also to the use and abuse of the eye-pad and bandage.

Sheffield Medico-Chirurgical Society.—A meeting of this society was held on Oct. 25th, Dr. Wearne Clarke, the President, being in the chair.—Dr. C. N. Gwynne showed a Large Growth, probably Papillomatous, removed from a Labium Minus.—Mr. R. Favell showed: (1) A specimen of Double Pyosalpinx; and (2) a Complete Cast of the Mucous Membrane of the Bladder passed per urethram six weeks after labour.—Mr. J. Menzies showed a large Branched Renal Calculus (oxalate of lime) removed together with the Kidney from a woman, aged 57 years. Special features of the case were the absence of hæmaturia and of characteristic attacks of pain during the six years which intervened between the onset of symptoms and the operation.—Mr. V. K. Blackburn showed the following specimens: (1) Duodenal Ulcer; (2) New Growth of Lung Perforating into a Pulmonary Vein; (3) Gastro-enterostomy for Dilatation of the Stomach; and (4) Primary New Growth of the Liver.—Dr. Sinclair White read a paper on the Operative Treatment of Pyloric Obstruction and illustrated it by exhibiting a series of patients on whom he had operated. Attention was called to the simple and safe way of demonstrating a dilated stomach by pumping air into it through a soft œsophageal tube. The differential diagnosis of the obstructing agency was often difficult or impossible until the abdomen had been opened, and even then certain cases of inflammatory thickening around the pylorus were liable to be taken for malignant disease. All patients showing definite symptoms of pyloric obstruction should submit to early operation if in a fit state to be operated upon. It had been conclusively shown that a large proportion of pyloric cancers remained for a considerable time strictly local growths capable of removal by pylorectomy at a risk to life which was not prohibitive having regard to the issues involved. In the treatment of non-malignant cases the surgeon had a variety of devices at his command, but the choice was gradually being narrowed to pyloroplasty and gastro-jejunostomy. While both operations gave excellent results pyloroplasty was theoretically the better of the two, but it was not sufficiently so to justify its adoption if it was less safe to life than gastro-jejunostomy. The ease, and to a large degree the success, with which pyloroplasty could be performed was influenced most of all by the mobility of the pylorus. If the pylorus could readily be withdrawn through the abdominal wound and isolated by gauze packing the operation was an ideal one and should be practised to the exclusion of all other methods; but if, owing to adhesions, the pylorus should be fixed at the back of the abdomen pyloroplasty became a tedious, difficult, and dangerous operation and should give place to gastro jejunostomy which could always be performed with the parts involved outside the abdominal wall.

Bristol Medico-Chirurgical Society.—The annual meeting of this society was held in the medical library of University College, Bristol, on Oct. 10th.—Dr. D. S. Davies gave the Presidential Address. After introductory remarks claiming the inter-relation of public health with medicine and surgery the address dwelt first on the problem of disease causation viewed from the several standpoints of the ancient and modern world—the ancient view, a superstitious dread of mysterious inexplicable disease; the modern view, a careful study of the life-history of causal parasitic organisms and of conditions causing or assisting their distribution—and epidemics as growth by geometrical increase along definite lines to be carefully traced back to initial cases, or, better still, to be checked first by making the conditions of life unfavourable to the parasitic habit, and secondly by dealing with individual first cases. The evolution of parasitic species was then discussed on the lines of Leuckart's and Payne's views, that these diseases originated from free living species, having adopted the parasitic habit under favourable environment and subject to the three parasitic laws of entrance, migration, and exit. Finally, the interacting causes, political, social, and medical, which were at work during the eighteenth century and led up to the modern conditions of life and labour, new social conditions under which the struggle with cholera had to be waged, unsuccessfully at first, but in time resulting—by continuance of the tendencies and altruistic endeavour of the previous century re-lighted by the pressing needs of the moment—in the beginnings of modern public health work, which meant far more than the mere care about communicable diseases, and had for its wider aims care of every class of the community, aims not yet fully realised but improving from day to day and full of promise for the future.—The honorary secretary (Mr. Paul Bush), the editorial secretary (Mr. James Taylor), and the honorary librarian (Mr. L. M. Griffiths) read their annual reports, the latter mentioning that there were at the present time nearly 20,000 volumes and 226 current periodicals in the Bristol Medical Library.—Dr. Barclay J. Baron was elected President-elect; Mr. Paul Bush was re-elected honorary secretary; Dr. J. Michell Clarke, Mr. J. Dacre, Dr. B. M. H. Rogers, Mr. G Munro Smith, Mr. James Taylor, and Dr. H. Waldo were elected to serve on the committee. Mr. Griffiths, Mr. Munro Smith, and Dr. Taylor were nominated to serve on the Library Committee.—Dr. Cyril H. Walker showed a patient with Sub-congenital Dislocation of the Lens, and Dr. A. Ogilvy made some remarks on this interesting case.

Rochdale and District Medical Society.—A meeting of this society was held on Nov. 1st. Dr. A. Wallace gave the presidential address on Medical Organisation and Reform. He pointed out how the medical student had impressed on him by his teachers the dignity and honour of his profession and how little he was told of the other side of the picture, quoting in illustration from a recent address by Sir Samuel Wilks to the students of Guy's Hospital. The consultant took little interest in the welfare of the general practitioner and knew little of the conditions under which general practice was carried on. Consequently, while the remedy for grievances lay in organisation, representatives chosen from the consulting class were likely to do little. Dr. Wallace thought that the number of organisations was overdone, and that the matter should be taken up by the British Medical Association, aided by small local societies. The dignity of the profession was all very well, but they could not live on dignity. With regard to the difficulties encountered in general practice there was, for example, the nurse with her thermometer and bag of dressings making irresponsible diagnoses and giving irresponsible advice. There was ambulance work helping to produce quack medical men. The unregistered man, said Dr. Wallace, had the best of it. Legislation, with few exceptions, was all in his favour. Coming to matters in which legislation was called for Dr. Wallace referred especially to death certification and the midwives question. These and other subjects could not be properly dealt with by the General Medical Council, itself composed of men who talked much of the dignity of the profession and little of its difficulties. More direct representation was wanted in the Council before it would recognise, for example, that the medical aid system, which might require a medical man to go three miles, pay a visit, and supply medicine for 3*d*., should be brought to an end. Credit was due to the Council for raising the standard of medical education, but it cared nothing for a man after he was qualified. The profession should organise, with small local societies as the units. Concluding, Dr. Wallace quoted from an eminent author: "Look not wistfully on the past, it cannot come back again. Wisely improve the present, it is thine. Go forth to meet the future without fear and with a manly heart."—Mr. J. Chadwick, Mr. R. B. Sellers, Mr. G. W. Malim, Mr. J. Rodley, and Dr. W. J. Kerr took part in the discussion which followed, and a cordial vote of thanks was then given to Dr. Wallace for his address.

Dermatological Society of Great Britain and Ireland.—A meeting of this society was held at 20, Hanover-square, on Oct. 24th, Dr A. J. Harrison, the President, being in the chair.—Mr. G. Pernet showed, for Dr. Radcliffe Crocker, a case of Acquired Syphilis in an infant, aged 15 months.—In the discussion which followed some difference of opinion was expressed as to whether this was really acquired or hereditary syphilis.—Dr. P. Abraham showed: (1) A case of Leprosy which had been previously brought before the society in which manifest improvement had followed treatment with chaulmoogra oil; (2) a case of Monilethrix, the hair of the scalp and eyebrows being affected; and (3) a case of Verruca of the Lips.—Dr. A. H. Stowers showed a case of Tertiary Syphilide of the Forehead and Face simulating Acne Rosacea.—Dr. A. Eddowes showed: (1) A case of Combined Psoriasis and Acquired Syphilis, eruptions characteristic of both diseases being present at the same time; and (2) a case of Acne Lupus.—Dr. Stowers deprecated the term "acne" being used to qualify this case which appeared to be lupus vulgaris with no relation to acne.—Mr. W. T. Freeman showed a case of Diabetic Eczema.—Mr. Pernet exhibited cultures and microscopical specimens illustrating (1) Ringworm, (2) Monilethrix Hairs, and (3) Sections of Skin from the case of Leprosy shown by Dr. Abraham in which the bacilli lepræ were numerous.

SOUTHPORT MEDICAL SOCIETY.—The annual meeting of this society was held on Oct. 10th.—The first annual report and balance-sheet were adopted, being considered highly satisfactory.—The following officers were elected:—President: Dr. Robert Harris. President-elect: Dr. Charles Pinkerton. Vice-President: Dr. G. C. Walker. Treasurer: Dr. F. J. Baildon. Honorary secretary: Mr. R. M. Little. Committee: Dr. Anderson, Dr. P. Ashworth, Mr. A. H. Baines, Dr. W. H. Barrett, Dr. Russel, and Mr. A. J. Popert.—The President then delivered an inaugural address entitled Some Observations on the History of the Profession in England during the Century. He described the gradual changes which had taken place in the position and status of the profession, the various enactments of Parliament, and the changes in the licensing bodies and their powers during this period.—The annual dinner was held at the Queen's Hotel on Oct. 31st, under the presidency of Dr. Harris. 40 gentlemen were present, including several distinguished guests from neighbouring towns, and the proceedings throughout were of a highly successful character.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—The inaugural meeting of this society was held at the General Dispensary on Oct. 10th; there was a large attendance of members and visitors, the President, Mr. G. B. Wray, being in the chair.—Dr. F. W. Mott, pathologist to the London County Asylums and physician to Charing Cross Hospital, gave an interesting address on the Selective Action of Poisons in Relation to Nervous Diseases, illustrating his lecture by means of limelight pictures and diagrams of neuropathic conditions.—At the conclusion of a pleasant evening a hearty vote of thanks, proposed by Dr. W. B. Ransom and seconded by Dr. C. H. Cattle, was accorded to Dr. Mott.

Reviews and Notices of Books.

Lectures on Medical Jurisprudence and Toxicology. By FREDERICK J. SMITH, M.A., M.D. Oxon., F.R.C.P. Lond., F.R.C.S. Eng., Physician to, and Lecturer on Forensic Medicine at, the London Hospital, Medical Referee to the Home Office. London: J. & A. Churchill. 1900. Pp. 396. Price 7*s.* 6*d.*

IN the preface the author explains that this book represents in detail, though not absolutely *verbatim*, the lectures which he has delivered at the London Hospital for some years. Dr. F. J. Smith writes the preface in an apologetic strain, but after a careful perusal of his work we can assure him that there was no need for him to adopt such a tone. The subject-matter is certainly condensed and we perfectly agree with him that "cram-books" are not to be encouraged, but in the book now before us the student will find all that he requires to know for the ordinary pass examinations. Not only so, but the busy practitioner will find it most useful for reference if he is suddenly called upon to give evidence before a coroner's or a magistrate's court in a difficult or obscure case. Should the case prove a serious or complex one experts will probably be requested to give to the counsel for the Crown the skilled help that is necessary.

Dr. Smith writes in plain and concise terms and there is no danger of misunderstanding his meaning. He introduces a new element into text-books of this nature and that is the frequent use of comparative tables or summaries. These are admirably put together and will enable the student to condense his knowledge in a satisfactory manner. A good example of such tables is found in one of the chapters on "Signs of Death." Difficulty not infrequently arises after death from violence in distinguishing between a bruise and a hypostasis; and, moreover, this point is frequently to be found in examination papers. By a careful study of the short explanatory notes given in the form of a table the student will easily be able to answer such questions, and in addition if he should require to make any practical use of such knowledge on a future occasion a glance at the table will at once recall the essential differences between the two conditions above alluded to.

In a similar manner are detailed the points to be noticed in making a post-mortem examination on a body found in the water and the principles which govern the management of "wounds" from a medico-legal standpoint. The portion of the book dealing with toxicology is also worthy of praise. This is always a subject of considerable difficulty to the student. The "method of occurrence," symptoms, fatal doses and post-mortem appearances are briefly (but at quite sufficient length) and succinctly recorded; Dr. Smith has wisely refrained from giving any but the most simple chemical tests. It is absurd for an ordinary medical practitioner to be expected to make a complete chemical examination in a case of suspected poisoning. Special aptitude and long years of experience are necessary before results can be obtained which would be of value in a court of law. This state of affairs is now generally recognised and expert chemists are delegated to make the required analyses.

We congratulate the author on the production of a useful text-book and can confidently recommend it to those for whom it is intended.

Practical Uranalysis and Urinary Diagnosis. By CHARLES W. PURDY, LL.D., M.D. Queen's University. Fifth revised and enlarged edition. Philadelphia, New York, and Chicago: The F. A. Davis Co. 1900. Pp. 392. Price $3.

THE fourth edition of this excellent manual was reviewed in these columns only about two years ago (Jan. 7th, 1899, p. 33), yet a demand for another issue has already arisen. This fact is the best evidence of its acceptation as a book of authority both on the clinical and practical sides of the subjects with which it deals. In the present edition some very important additions have been made. The work now contains an entirely new chapter on the microscope in its application to urinary analysis. In this we find careful details as to the management of the microscope and the preparation of the sediment for microscopical examination. Urinary casts are first described, epithelia and then the various forms of crystals met with in the urinary sediment, the study of the morphological features of pus and blood-cells in the urinary sediment being, of course, included. A short section upon bacterial examination concludes the chapter. Another feature of importance in the new edition is a description of the application of centrifugal analysis in urinary work. The author has devoted some years of labour to this interesting and rapid method of analysis and he regards centrifugal analysis as having now been elevated to the dignity of a scientific process which is justly entitled to rank amongst the so-called exact methods of analysis. New tables and improved methods have been introduced by means of which the determination of albumin, chlorine, phosphoric and sulphuric acids may be made "both relatively and absolutely with the degree of accuracy equal to that of any other method." In other respects the subject-matter of the which refer more particularly to the care of the insane" and is issued in a cheap and compact form. The key-note is struck in the first chapter: "the nurse for mental cases must clearly understand that the patients with whom she has to deal are suffering from bodily disease. ...... Mental derangement is as surely an indication of (brain) disease as are cough and expectoration in the case of lung affections." The post of nurse in charge of a mental case requires much tact and forbearance as well as nursing ability. Dr. Harding lays down the wise rule that for a private case of acute mania or restless melancholia with suicidal tendencies at least three nurses are required, though if the patient be very feeble two may be enough. Practical and judicious advice is given as regards the patient's rooms, clothing, and food, and with respect to feeding by the stomach tube. Symptoms of hernia, peritonitis, and distended bladder may be present without being as manifest as they would be in sane patients and should be regularly looked for. Unless compelled by necessity a nurse should never attempt to deal singly with an excited or violent lunatic but should always call for assistance. Instructions are given as to restraint, seclusion, the wet pack, the searching of suicidal patients at bedtime, and the bathing of patients. A short account of the forms of insanity brings to a conclusion a well-written, clear, and useful little work suitable for nurses and attendants.

JOURNALS.

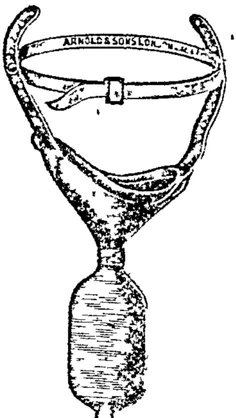
Edinburgh Review.—The October number contains a long article on "The Sick and Wounded in South Africa," based upon the debate which took place in the House of Commons on June 29th last on the management of hospitals in that country. The writer of the article concludes his critical and analytical history of the campaign in its medical aspects by claiming for his description that the truth, together with the lessons which it inculcates, has been set forth without fear or favour. He adds the expression of a hope that it may be for the last time that the officers of the Royal Army Medical Corps have to endure the most arduous labours and to battle with all the difficulties of an imperfect organisation. It is a thoughtful and well-balanced article, and if not altogether free from that "I told you so" spirit of wisdom which comes after events it is nevertheless written with an ability and a sense of responsibility which fully entitle it to serious and sympathetic consideration. And this is more especially the case because it does not deal with the subject in a merely destructive style of criticism, but in a constructive spirit also. It suggests for our imitation the system under which the Germans maintain the civil profession in touch with the army, and indicates some of the lines on which the Army Medical Service and the Royal Army Medical Corps might be remodelled with advantage. It would be impossible within any reasonable compass to take up all the points brought forward in the article in question. Nor is this necessary, for we make no doubt that those interested in the subject—and, considering its grave national importance and how it appeals to our common feeling of humanity, who is not?—will read it for themselves. Briefly summarised, the writer first takes up the question of unpreparedness. He refers to the evidence of the Director-General of Ordnance and others as to the total inadequacy of the medical reserve of stores and equipment in our possession immediately before the war to meet all the requirements of an army in the field; and mentions also the serious decline in popularity of the Army Medical Service. The service, he points out, is 60 below the figure which a late Director-General had already pronounced to be "perilously low" in numbers, while it has practically no reserve of medical officers for purposes of active service, so that the calling in of civil aid has been resorted to to an extent hitherto unparalleled. The writer next proceeds to give an outline of the situation in South Africa as far as it affected the hospital service. He refers to the eulogistic terms in which those who had been first of all sent out to the war had spoken and reported (and absolutely truthfully, we may parenthetically remark) of the hospital arrangements which they saw there. Then came the deplorable occurrences attributable to the epidemic outbreak of enteric fever, culminating in the appearance of Mr. Burdett-Coutts's letter in the *Times* of June 27th. The remainder of the article is taken up with the lessons inculcated by these occurrences and the remedial measures indicated. Here, while we agree with much of what is said, we consider the importance of the article detracted from because no stress is laid upon the fact that it was not until long after the campaign had begun that any correct notion had been formed on the part of the Government, the military authorities, or the nation itself, as to the probable nature, extent, and difficulty of the task that was being undertaken. It was consequently not upon one but upon all branches of the service that the results of our unpreparedness fell.

Bulletin of the Harvard Medical Alumni Association. Boston: Published by the Association. 1900. Pp. 67.—The objects of the Harvard Medical Alumni Association are "to advance the cause of medical education, to promote the interests and increase the usefulness of the Harvard Medical School, and to promote acquaintance and good fellowship among the members of the association." The tenth annual meeting was held in Boston at the Harvard Medical School on June 26th. The company at the annual dinner numbered 156. The president, Dr. David W. Cheever, in his address said that since the last meeting 119 new members had joined the society and that it now consisted of 1232 members. Dr. William T. Councilman delivered an address on the utility of laboratory work in the medical curriculum and on improved methods of teaching, especially of teaching pathology. Dr. James R. Chadwick gave a description and exhibited plans of the new building of the Boston Medical Library, now in process of construction, which is to be ready for occupancy on Dec. 1st next. The principal reading-room is 72 ft. long by 32 ft. wide; it is named Holmes Hall and contains a portrait and a bust of Dr. O. W. Holmes.

New Inventions.

AN INFANT'S REQUISITE.

The trouble and discomfort entailed on mother or nurse by the constant change of towelettes necessary for the proper care of an infant up to four months old can, I think, be avoided by the use of the appliance depicted in the accompanying illustration. Attached to a soft band round the waist and applied closely, so as to cover genitals and anus, the receptacle will contain both urine and fæces, and keep the infant from contact with either, no matter in what position the infant or appliance is placed. The contents cannot escape or flow upwards and there is no necessity to remove the child from the cot when the receptacle is full. The cap at the base can be unscrewed, which will allow the contents to escape. The appliance should be removed daily for cleansing, hot water with Condy's fluid being poured through. The saving of time and trouble and of the expense of the washing of dozens of diapers weekly should recommend the "Infant's Requisite." The makers are Messrs. Arnold and Sons, London.



Alexander Duke, F.R.C.P. Irel., &c.,
Cheltenham. Ex-Assistant Master, Rotunda Hospital, Dublin.

THE LANCET.

LONDON· SATURDAY, NOVEMBER 10, 1900

THE questions at issue between the medical staff of the National Hospital for the Paralysed and Epileptic and the board responsible for the management of the hospital are again before the public and must assuredly receive an early solution if irreparable damage is not to be done to the institution *And that this should occur would be a veritable* calamity, for the National Hospital for the Paralysed and Epileptic is known throughout the scientific world for its enlightened treatment of those whose afflictions it has been designed to meet If the work of this hospital be impaired the national prestige of this country in the world of medicine will suffer

Our readers may remember that the reply of the board of management to the circular letter issued by the medical staff to the general body of governors, wherein it was stated that the internal arrangements of the hospital were very unsatisfactory, was to call a general meeting of the governors of, and subscribers to, the hospital in the middle of the August holidays 16 persons attended this meeting, *and there is reason to suppose* that this small group was almost entirely composed of friends of the board of management, who received special invitations to attend The medical staff was not represented at the meeting, and the proceedings, which were reported *verbatim* in our columns, need no further comments from us than those which we have already made [1] No one who honestly desires to see harmony restored between the medical staff of the hospital and the board of management—a conjunction by which alone the effective working of the hospital will be secured—can fail to see that the meeting settled nothing The staff, when notice of the meeting was given, intimated the intention not to recognise the authority of a meeting so convened, and the board of management must since have found that the position then taken up by the staff meets with solid approval from all those best qualified to judge in the matter, But the board does not yet appear to understand the situation A letter addressed by Mr B BURFORD RAWLINGS, secretary director of the hospital, *to the editor* of the *Times* on Oct 18th states that the board now proposes that an inquiry into the management of the hospital by "an independent legal authority" should be undertaken at the earliest moment This is excellent well, as far as it goes, but such an inquiry does not in the least bit meet the case The charges made by the staff concerning the domestic condition of the hospital form only a part of the report which the staff has made to the governors, and the members of the staff have now intimated their intention not to consent to the investigation of one portion of the charges while the greater part are ignored *They refuse, and rightly,* to recognise that the decisions of the meeting of August 11th, *under which the inquiry by "an independent legal authority"* is to be made, have any weight with them, while the gist of their demands remains unnoticed The members of the medical staff demand representation upon the board of management, and if this representation is not conceded to them they will inevitably retire from their position as medical officers of the hospital, positions which they are proud to hold and which, we may add, they singularly adorn

That the determination of the members of the staff to be represented on the board of management of the hospital is not due to exaggeration of their own importance ought to be recognised by this time with the same clearness by the governors of the hospital and by the board of management as it is recognised by the medical world and all who are capable of forming a just opinion upon the situation A letter appeared in the *Times* of Nov 2nd, signed by the senior surgeons and senior physicians of all the hospitals in London having over 100 beds, by several past presidents of the Royal medical corporations by the medical men holding Court appointments, and by a few other leaders of medical thought, setting forth the opinion that the demand of the medical staff to be represented on the board of management of the hospital for which they give their scientific services is proper, and expressing a hope that the board and the governors will put an end to the controversy by granting the representation asked for The letter, which we reproduce this week in our columns, could have received the signature of every medical man of weight in the kingdom, but it was only desired that it should be signed by men able from their position to give their names as representatives of great public medical institutions or as occupants of some definite place in the public eye *We trust that those who* form the board of management will recognise the soundness of the advice that is offered them The time is come in the interests of the charity which they are presumed to administer for the public good when they should recognise the real state of affairs The contention is not about the cleanliness of a sheet on a certain bed or *the lunacy of a patient* on a certain date The effectiveness of a charitable institution of world wide renown and enormous public value is at stake The work of the National Hospital for the Paralysed and Epileptic can only be carried on properly if harmony is established between the medical staff and the board of management Such harmony will never exist until the board of management admits to its counsels representatives of the medical staff, so that the views of the lay and medical authorities can be properly exchanged without intermediary or risk of distortion upon any points whatsoever Never

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WHEN students are attending a course of lectures on forensic medicine the lecturer attempts to impress upon them the importance of always making a complete post mortem examination in any case submitted to them by the coroner, all the cavities of the body should be opened even though sufficient cause for death is found in the cavity just opened Too often, however, this advice is forgotten , certain parts of the body are not examined, and when the medical witness submits himself to the questioning of the coroner or of counsel opportunities for advancing knowledge offered by the hospitals, while they were misunderstood by the public, were not adequately laid hold of by the students. A section of the public said that hospitals ought not in any way to serve as theatres of investigation. There had been much misdirected talk about hospitals being used for the purposes of experiment, but every touch of the surgeon, every counsel of the physician was an experiment, because it was not possible to be absolutely sure of the result, though the surgeon and physician were prepared to profit to the utmost by the teachings of that result. The factor of uncertainty might in certain cases be insignificant, but it could never be wholly absent, and it therefore might be said that there were performed day after day, in every hospital, a multitude of scientific experiments. Every such experiment was directed to the welfare of the patients and the teaching derived therefrom tended to diminish that great factor of uncertainty and to make the science of medicine less and less experimental and more and more efficacious. Sir Michael Foster regretted that the analysis of the phenomena of disease at the bedside, no less than in the post-mortem room, was apt not to be carried out in hospitals as completely as it should be. Such analyses could, he pointed out, only be carried on by means of thoroughly equipped laboratories in connexion with the hospitals, and the cost of these was as proper a charge on the funds of a hospital as the bill for drugs or surgical appliances. Much was heard nowadays about post-graduate study, and he suggested that it would most properly take the form of training men in the true methods of research so as to satisfy not only the demands of any examination but the demands of nature itself. The American graduates complained that they received very little post-graduate aid at the London hospitals and that the special institutions failed to supply them with what they wanted. They had, in fact, to go away from London, often against their wish, because it was impossible to secure in the metropolis what they could get elsewhere. If post-graduate study was so organised that the men were properly trained in investigations and inquiries, that would meet the wants of all and the graduates from the other side of the water would not fail to find in London what was required. These graduates could be directed and trained in a number of important problems and thus be educated in the right way of looking at medical truths and the final result would be an immense addition to our medical knowledge.

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[1] THE LANCET, August 18th (p 492 and p. 551 et seq) and 25th, 1900 (p 590)

MASTERS, SERVANTS, AND MEDICAL MEN.

A NEWSPAPER report, erroneously as far as we know, has recently assigned to Mr. Fordham, one of the Metropolitan police magistrates, a dictum to the effect that employers are responsible for medical attendance upon their domestic servants. This, of course, is not the case, the employer only being liable who has called in the medical man or otherwise directly or indirectly undertaken to remunerate him. In 1795, it is true, Lord Kenyon was of another opinion, and held that a master was obliged to provide for his servant in sickness and in health and that he was therefore liable for medicines furnished to his servant while in his service. Eleven years before, however, Lord Mansfield had said in a case of this kind: "I don't applaud the humanity of the master. ...... I think, in general, a master ought to maintain his servants and take care of them in sickness, but the question now is, What is the law?" and the rest of the court had agreed with the Chief Justice in holding the master not to be liable. In 1802 one of the judges, hearing an appeal in which the above-mentioned judgment of Lord Kenyon was cited but not followed, expressed his belief that the humanity of his lordship had misled him, and that it must have occurred to him that if the master was not bound to provide medical assistance for his servant the latter would be left wholly destitute, while another judge who was a member of the same tribunal summed up the situation by saying, "It must be left to the humanity of every master to decide whether he will assist his servant according to his capacity or not." The view of the law laid down in this case[1] has, we believe, not been disputed, and we must accept it, qualified as it is by the opinions expressed as to the moral obligation upon the employer to see that proper medical aid is afforded to the servant, even if his doing so involves a demand upon his own pocket. We are aware that a servant earns higher wages nowadays and is upon a different footing with regard to his employer than when, as we find from the report of the case above mentioned as decided by Lord Kenyon, he was "part of his family," but the servant of either sex is not always even now able to defray the cost of proper treatment in illness, and is often unwilling to procure the best, or indeed any, medical advice, in cases where medical advice is a necessity and the intrusion of the quack or unqualified adviser may be fraught with serious consequences. Medical men, however, must not treat the domestic or other servant under any mistaken impression that the employer, as such, is legally bound to pay for the medical attendance or the medicine.

MEAT INSPECTION AND THE USE OF STERILISED MILK.

MUCH interesting information on the subject of meat inspection as conducted in four great centres of population will be found in a report recently presented by Dr. Henry O'Neill to the Markets Committee of the county borough of Belfast. This gentleman was appointed by the corporation of Belfast as a delegate to represent them at the Congress of Hygiene and Demography held in Paris last August, and he therefore devotes several pages to meat inspection as carried out in Paris, where there are no private slaughter-houses and where all animals intended for food must be slaughtered at the public abattoirs at La Villette, Grenelle, Vaugirard, or Villejuif. The abattoir at La Villette covers 67 acres, and in it 3000 oxen and cows, 1000 calves, and 10,000 sheep are slaughtered weekly, employment being thereby provided for about 1000 persons. The meat is examined by qualified inspectors under the superintendence of a veterinary surgeon, and if found to be healthy and good it is stamped with the letters "P.P.," meaning Prefecture of Police. Meat obtained from animals killed outside Paris, no matter how near the city, can only be brought into Paris through the appointed city toll gates and must be taken for inspection to the public slaughter-houses or to certain specified markets, where it is stamped if found satisfactory. Meat improperly admitted for human consumption is seized and either destroyed at the owners' expense, or if claimed for use in manufacturing processes it is subjected to appropriate treatment before being returned to them. In Berlin the method is somewhat the same. All cattle to be offered for sale in the city must be brought to the public abattoir, and the slaughtering of cattle anywhere else within the municipal boundary is absolutely forbidden. All dead meat slaughtered in the country or abroad and intended for human food in the city must be brought to the public abattoir and meat market for inspection. No butcher in Berlin may offer meat for human food which does not bear the official stamp. In London, on the other hand, there is no regular inspection of meat except in the market at Smithfield and all meat is held to be fit for food unless it has been condemned by the officers of the sanitary authorities. There is, in fact, no doubt that London receives diseased meat sent up from all parts of the country. In Manchester meat inspection in the abattoir and meat-market is conducted much in the same manner as in the City of London: there is no complete inspection of all meat and the meat which is inspected is not stamped. Dr O'Neill embodies in his report a number of useful suggestions for an improved method of inspection. In a separate report presented to the Public Health Committee of the county borough of Belfast he mentions the method of milk-inspection followed in Manchester and discusses the question of the municipal supply of sterilised milk as practised at St. Helens in Lancashire for rather more than a year past. These reports will be found useful by anyone in search of information on the subjects of which they treat.

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[1] Wennall v. Adney, 3 Bosanquet and Puller's Reports, 247.

THE LATE PRINCE CHRISTIAN VICTOR.

THE death of Prince Christian Victor from that most insidious of diseases, enteric fever, at the age of 33 years, was announced in a telegram from Lord Roberts at a time when London was rejoicing at the return of the City Imperial Volunteers, but, in accordance with the wish of the Queen and of other members of the Royal family, the public announcement of the sad fact was delayed in order that a gloom might not be cast over these rejoicings. Although the Prince was known to be seriously ill the announcement of his decease came as a shock to the country, and his death is sincerely mourned not only by the army but by every subject of our beloved sovereign whose grandson he was By strict attention to duty he earned the praise of all who came in contact with him, and during the operations in Natal under General Hildyard he was twice mentioned in despatches. In accordance with his wishes the deceased Prince has been laid to rest among his comrades at Pretoria.

TREATMENT OF SUPPURATIVE PERICARDITIS: "IDEAL PERICARDOTOMY."

THE *Boston Medical and Surgical Journal* of Oct. 18th contains an important paper on this subject by Dr. C. B. Porter. The line of reflexion of the pleura and pericardium is very variable. Even at the level of the fifth space the pleura will often be found behind the sternal border. Hence some of the methods which have been used for opening the pericardium—trephining the sternum approach through an intercostal space and epigastric incision—should be discarded as there is danger of wounding the pleura or diaphragm. After experiments on the cadaver Dr. Porter devised the following "ideal operation" to meet the following indications: (1) to avoid opening the pleural cavity; (2) to open the pericardium opposite the point where drainage will remain good after the sac has contracted; and (3) to secure free permanent drainage. An incision is made from the middle of the sternum outwards over the fifth costal cartilage to its junction with the rib. The soft parts are reflected from the cartilage with a periosteal elevator, care being taken not to wound the pleura on the under surface. The cartilage is divided with a bone forceps near the rib and sternum The internal mammary vessels thus exposed are ligatured in two places and divided. The triangularis sterni is separated from the sternum and pushed to the left. If fat is encountered a little careful dissection with a director exposes the pericardium, which is much thicker than the pleura An aspirating needle is introduced (if this has not previously been done) to corroborate the diagnosis. If this is confirmed the knife should follow the needle. The pericardial incision is best made downward and outward, beginning close to the sternum. An operation essentially identical with this has been performed in five cases by Brentano.[1] The edges of the incision should be stitched to the soft parts. The writer recommends that irrigation should be used in all cases to remove masses of fibrin which may lie at the bottom of the cavity. The fluid must be warm and have a free exit, under which conditions no harm has been done in the reported cases—half of the total cases The wound should be irrigated daily, and if the patient's strength permits it he should be turned on to his abdomen to facilitate drainage. 51 cases of incision of the pericardium have been reported. The pericarditis was purulent in 46 cases, rheumatic sero-fibrinous in two, hæmorrhagic from trauma in one case, and serous in two cases. The etiology was as follows: pneumonia with and without empyema (14 cases), broncho-pneumonia—in a child—(one case), osteomyelitis (five cases), wounds (four), blow on the chest (one), periostitis (one), necrosis of nasal bones (one), septic arthritis of knee (one), septic throat (one), abscess of buttock (one), empyema without pneumonia (five), pleurisy of doubtful origin (two), typhoid pleurisy (one), influenza (one), tuberculosis (two), rheumatic fever and endocarditis (three). In the 51 cases there were 31 deaths—a mortality of 60 per cent. Recovery took place in the two cases of serous pericarditis. In the 14 cases of pneumonia there were four recoveries. Dr. Porter's conclusions are as follows: 1. Pericardotomy is indicated in all cases of suppurative pericarditis. 2. Because of the varying relations of the pleura and the anterior position of the heart when the pericardium is distended aspiration is a more dangerous operation than open incision. 3 Pericardotomy can be done quickly and safely by resection of the fifth cartilage, in many cases under local anæsthesia. 4. In many cases of serous effusion open incision offers less risk and a speedier cure than aspiration.

THE REGISTRATION OF NURSE-CHILDREN.

THERE is a defect in the statute-book to which we, and not we alone, have repeatedly directed attention. It is the absence of any provision for regulating the boarding-out of single nurse-children. For some reason, probably more imaginary than real, it has been assumed that the interference of law is required only where two or more children are concerned. The case is one in which logic has been too little regarded. For the interest of one child is in no wise different from that of several, and though it may appear at first sight that the danger of neglect or other form of malpraxis is less in the former than the latter case experience has often shown, and still continues to show, that it may be equally great in both. Infant children are not very often sent out to board in this country. When it happens that they are so boarded the motive is to be found only too commonly in the apathy or the ill-will of parents to whom their mere existence is a disgrace. It is now generally recognised that, as a rule, the child is illegitimate which becomes the prey of the baby-farmer. If these two be brought together no second infant is needed to insure the inevitable result. In a case recently unearthed by the National Society for the Prevention of Cruelty to Children a child, aged six months, was found in the possession of a drunken "nurse" the mother of three children, all of whom, as well as the nurse child, were shamefully neglected. The woman was very properly condemned to six months' hard labour, but it is noteworthy that her conviction was only indirectly due to her farming the nearly starved infant. This most important part of the delinquency would probably never have been known but for the inquiries of a School Board officer after her own children. Such a fact—and it is by no means an isolated example of its kind—should go far to convince any doubter that the registration of single nurse-children is both necessary and just. What objection can be brought against this needful provision it is difficult to see. We feel certain that if enacted it would meet with approval in all classes of the community, and we trust that it will not be forgotten among the earlier domestic measures of the new Parliament.

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[1] Deutsche Medicinische Wochenschrift, 1898, Band xxxii., S. 606.

COMPLIMENTARY DINNER TO SIR GEORGE HARE PHILIPSON.

AT a meeting of the Southern Council of the Durham University Medical Graduates' Association held at the rooms of the Medical Society on Nov. 1st it was unanimously resolved to invite Sir George Hare Philipson to a complimentary dinner at the Café Royal, Regent-street, on Thursday, Nov. 29th. All graduates of the University who are members of the association in the south are invited to join in honouring the guest of the evening, who is one of the founders of the association and one of its strongest supporters. Full particulars may be obtained from the honorary secretary for the south, Dr. T. Outterson Wood, 40, Margaret-street, Cavendish-square, W.

DOWLING *v.* DODS.

TOWARDS the end of last June an action was brought by Miss Agnes Dowling, a nurse, against Mr. Louis Ferdinand Dods, a medical man, for libel. The circumstances were reported in THE LANCET and may be remembered by our readers. The alleged libel was contained in a document purporting to be a certificate of lunacy and addressed to the local relieving officer. The defendant pleaded justification and privilege. The learned judge before whom the case was tried, Mr. Justice Darling, held that the occasion was privileged, but the jury found for the plaintiff, awarding her damages to the amount of £100. The plaintiff in her evidence showed herself to be the victim of dangerous hallucinations, so that the result of the trial surprised the medical profession and the public considerably, and a different issue upon appeal was anticipated. This week, before the Master of the Rolls, Lord Justice Collins, and Lord Justice Stirling, an application was made by Mr. Dods for judgment or a new trial. An attempt was made on Miss Dowling's part to show that Mr. Dods had been actuated by malice, but the judges held that there was no evidence of malice and judgment was entered for the defendant with costs. We congratulate Mr. Dods upon this result. We are satisfied that his conduct in the matter had its origin in a well-founded belief that Miss Dowling was of unsound mind and a source of danger to the community.

GENERAL PARALYSIS IN THE NAVY.

IN the November number of the *Edinburgh Medical Journal* Surgeon F. H. A. Clayton, R.N., assistant medical officer at the Royal Naval Hospital, Yarmouth, publishes an analysis of the statistics of general paralysis as observed in the Royal Naval Asylum for a series of years, and discusses the question of its etiology, with especial reference to sexual excess, syphilis, and alcoholism. An investigation of this disease as it occurs in the navy possesses the advantage that the inquiry is limited to a distinct class of men who are particularly subject to it, whose medical history since entry has been recorded, and whose physical condition, environment, and even mental characteristics are much alike. That seamen are more liable than officers to this disease appears from the fact that of 274 officers admitted in the last 25 years only 48 were paralytic cases, 12 of whom were warrant officers coming originally from the seamen class, whereas of 839 men 188 were paralytic cases. At present among 27 commissioned officers in the asylum there is no case, but, on the other hand, four out of six warrant officers and 18 out of 97 men come under that head. With respect to etiology Surgeon Clayton summarises his conclusions as follows: "Altogether, one inclines to accept the view that although syphilis or its toxins in many cases, by interference with nutrition, render liable to general paralysis many persons otherwise free, there is no evidence of direct connexion. The influences which act remotely are usually conditions tending to interference with nutrition and to promoting the growth of less highly organised tissues while the proximate influences probably act by lowering vitality. A 'specific' cause, as yet unknown, capable of developing the disease *per se*, though often aided by various factors, and which usually selects those apparently most healthy and vigorous both in mind and body, seems to be indicated by all the evidence." As is well known, general paralytics always become bed-ridden and in the concluding paragraphs of his article Surgeon Clayton gives some useful hints for the prevention of bed-sores.

HUXLEY MEMORIAL LECTURE.

To commemorate the anthropological work of the late Professor Huxley the council of the Anthropological Institute of Great Britain and Ireland has decided to found a public lecture, which will be called the "Huxley Memorial Lecture," and will be given annually at the opening of the winter session of the institute. The first Huxley Lecture will be delivered by the Right Hon. Lord Avebury, D.C.L., LL.D., F.R.S., and is announced to take place on Tuesday, Nov. 13th, at 8.30 P.M., in the Lecture Theatre of the Museum of Practical Geology in Jermyn-street, S.W., which as the scene of so much of Huxley's most impressive teaching, was felt to be the most appropriate place for such a ceremony, and has been placed for the occasion at the disposal of the Anthropological Institute. It is understood that Lord Avebury will take as the subject of his discourse Huxley's own contributions to anthropological science: a theme on which as a friend and colleague of Huxley, as himself a distinguished anthropologist, and as the first President of the Anthropological Institute he has peculiar authority to speak. Applications for tickets of admission should be addressed to the secretary, the Anthropological Institute, 3, Hanover-square, W., as early as possible.

DEATH UNDER NITROUS OXIDE.

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COMPLIMENTARY DINNER TO SIR GEORGE HARE PHILIPSON.

AT a meeting of the Southern Council of the Durham University Medical Graduates' Association held at the rooms of the Medical Society on Nov. 1st it was unanimously resolved to invite Sir George Hare Philipson to a complimentary dinner at the Café Royal, Regent-street, on Thursday, Nov. 29th. All graduates of the University who are members of the association in the south are invited to join in honouring the guest of the evening, who is one of the founders of the association and one of its strongest supporters. Full particulars may be obtained from the honorary secretary for the south, Dr. T. Outterson Wood, 40, Margaret-street, Cavendish-square, W.

DOWLING *v.* DODS.

TOWARDS the end of last June an action was brought by Miss Agnes Dowling, a nurse, against Mr. Louis Ferdinand Dods, a medical man, for libel. The circumstances were reported in THE LANCET, and may be remembered by our readers. The alleged libel was contained in a document purporting to be a certificate of lunacy and addressed to the local relieving officer. The defendant pleaded justification and privilege. The learned judge before whom the case was tried, Mr. Justice Darling, held that the occasion was privileged, but the jury found for the plaintiff, awarding her damages to the amount of £100. The plaintiff in her evidence showed herself to be the victim of dangerous hallucinations, so that the result of the trial surprised the medical profession and the public considerably, and a different issue upon appeal was anticipated. This week, before the Master of the Rolls, Lord Justice Collins, and Lord Justice Stirling, an application was made by Mr. Dods for judgment or a new trial. An attempt was made on Miss Dowling's part to show that Mr. Dods had been actuated by malice, but the judges held that there was no evidence of malice and judgment was entered for the defendant with costs. We congratulate Mr. Dods upon this result. We are satisfied that his conduct in the matter had its origin in a well-founded belief that Miss Dowling was of unsound mind and a source of danger to the community.

GENERAL PARALYSIS IN THE NAVY.

IN the November number of the *Edinburgh Medical Journal* Surgeon F. H. A. Clayton, R.N., assistant medical officer at the Royal Naval Hospital, Yarmouth, publishes an analysis of the statistics of general paralysis as observed in the Royal Naval Asylum for a series of years, and discusses the question of its etiology, with especial reference to sexual excess, syphilis, and alcoholism. An investigation of this disease as it occurs in the navy possesses the advantage that the inquiry is limited to a distinct class of men who are particularly subject to it, whose medical history since entry has been recorded, and whose physical condition, environment, and even mental characteristics are much alike. That seamen are more liable than officers to this disease appears from the fact that of 274 officers admitted in the last 25 years only 48 were paralytic cases, 12 of whom were warrant officers coming originally from the seamen class, whereas of 839 men 188 were paralytic cases. At present among 27 commissioned officers in the asylum there is no case, but, on the other hand, four out of six warrant officers and 18 out of 97 men come under that head. With respect to etiology Surgeon Clayton summarises his conclusions as follows: "Altogether, one inclines to accept the view that although syphilis or its toxins in many cases, by interference with nutrition, render liable to general paralysis many persons otherwise free, there is no evidence of direct connexion. The influences which act remotely are usually conditions tending to interference with nutrition and to promoting the growth of less highly organised tissues while the proximate influences probably act by lowering vitality. A 'specific' cause, as yet unknown, capable of developing the disease *per se*, though often aided by various factors, and which usually selects those apparently most healthy and vigorous both in mind and body, seems to be indicated by all the evidence." As is well known, general paralytics always become bed-ridden and in the concluding paragraphs of his article Surgeon Clayton gives some useful hints for the prevention of bed-sores.

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DRY DISINFECTION OF THE HANDS.

IN a recent annotation[1] we mentioned some methods of disinfecting the hands. Yet another method is that devised by Dr. Vollbrecht and described by him in the *Archiv fur Klinische Chirurgie*, 1900, p. 554, the detergent medium in this case being a kind of solidified emulsion of soap and alcohol. The mode of preparation seems simple. 60 grammes of good "almond" soap having been scraped into a mortar standing in a hot-water bath enough alcohol at 97° is added to dissolve it. As soon as the solution has taken place the remainder of the alcohol (one litre in all) is added and the whole is then allowed to stand until the contents of the mortar have become solid. The product having been cut into cakes should then be wrapped in tin-foil and stored for use. 35 grammes (about one and a quarter ounces) of the soap (price two centimes) are enough for one detergent operation, and as the melting point is 110° F. it can be carried in the pocket. The process of disinfection is thus described. The soap having been carefully spread over the hands should be rubbed in vigorously with a sterilised brush during five minutes. The alcohol gradually evaporates but the amount of soap left behind is not enough to make the hands feel greasy or to interfere with the handling of instruments. No lather is produced unless water be added. The texture of the skin is in no wise injured by the soap which, on the contrary, preserves and renders it soft. According to the inventor, who describes an elaborate system of testing, the results from the point of view of disinfection are quite equal to those obtained by the Mikulicz method. If need be the soap can be used for sterilising instruments by heat as it is readily inflammable.

THE QUESTION OF THE COMMUNION CUP.

WE are glad to see that the question of the danger of infection which arises from the use of a common chalice at the administration of the Holy Sacrament, to which reference was made in THE LANCET of Oct. 13th (p. 1088), has been taken up by our ecclesiastical and other contemporaries. The *Church Times*, the *Guardian*, the *Pilot*, and the *Record* have all referred to the matter. The *Guardian* suggests that a committee of Convocation which might select physicians as assessors might "profitably consider the point"; the *Church Times*, in its leading columns, suggests simply the appointment by the bishops of a commission of inquiry upon which medical men might serve, to be followed by a commission of liturgical experts; and the *Pilot* says: "If medical science proves that the danger is more general than was formerly supposed the Church must be prepared to advance *pari passu* to greater precaution." Whatever the constitution of the inquiring body may be we hope that the authorities of the Church will not delay to take the matter into consideration. Instances of latitude from the strict letter of the Prayer Book as formulated some 300 years ago have already received the sanction of more than one of the bishops and if the times are not ripe for a revision of the Book of Common Prayer we may yet hope to see the Ordinaries of the respective dioceses giving directions to their clergy by means of which the weaker brethren may be saved from offence. A somewhat similar question arose in the Roman Communion not so very long ago with reference to infection by the use of common holy water stoups. An ingenious delivering apparatus was invented by Mr. J. J. Bruns of Arnhem[1] to overcome this difficulty and this apparatus was submitted to the Archbishop of Utrecht and approved by him. There are always those who delight in putting difficulties in the way of reforms, but we cannot but hope that in this matter the importance of the question may serve to emphasise the need for its thorough consideration.

THE SOCIETY OF APOTHECARIES OF LONDON: THE TITLE OF LICENTIATES.

SINCE the resolution of the Court of Assistants of June 19th, 1900, was communicated to the medical journals constant applications have been made by Licentiates in reference to the titles which they may adopt and suggestions have been offered as to particular letters and signs descriptive of the qualification of L.S.A. 1886. By a further resolution of the Court of Assistants of Oct. 8th it has been resolved that the only titles which the Society can authorise as a proper description of the qualification L.S.A. 1886 are those of Physician and Surgeon, either added to the title of L.S.A. 1886 or used alone. And it was further resolved that the Society should discourage in every possible way the use of any other titles or letters on the ground of its tending to cause confusion and to destroy uniformity. The clerk of the Society, Mr. J. R. Upton, from whom we obtained this information, adds that the Society trusts that its Licentiates will coöperate in adopting a course which, it is believed, will prove beneficial to themselves.

MR. MANSERGH ON WATER-SUPPLY.

THE inaugural address to the Institution of Civil Engineers was delivered by Mr. James Mansergh on Tuesday, Nov. 6th. It appears from the abstract published in the *Times* that the speaker in the course of his remarks covered a great deal of ground and expressed with some freedom his views on potable water. An idea may be obtained of the variety of the matter brought under review when we say that the orator quoted largely from an American translation of the well-known work of Frontinus on the water-supply of ancient Rome and from the Transactions of the Society for Psychical Research on the question of "water-finders." These interesting matters are of less importance to medical men than are questions concerning the purity of the water that we drink. And on this subject Mr. Mansergh may be considered an authority, for he was a member of the Balfour Commission which was appointed to investigate the quantity and quality of the metropolitan water-supply. Mr. Mansergh's views on pathogenic organisms, according to the *Times* report, are as follows:—

> "We were" he said, "still groping in the dark as to the work these ubiquitous micro-organisms were designed to do in the economy of nature. Might it not be wiser to assume the majority of them to be actively beneficent instead of being simply harmless? In removing from the water drunk in London 98 per cent. of those found in the river in order to capture a stray typhosus or Löffler's bacillus (neither of

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[1] Ps. xci.

[1] THE LANCET, Jan. 27th, 1900, (p. 252).

which had ever been found in the raw water) might we not be doing harm rather than good? Still this pessimistic view need not trouble us much, for health statistics proved that the risk of harm arising either from the presence in the water of so-called pathogenic organisms or from the removal *of the harmless ones was so small that it might be calmly* disregarded."

These comfortable words of Mr. Mansergh with regard to pathogenic germs were followed by a warning as to the danger which may be apprehended from water derived from sources hitherto considered pure. "A word of warning might, however, be said about water obtained from elevated and sparsely-populated moorlands, for," he said, "the danger was greater if such water became infected, especially if not passed into impounding reservoirs, than if the supply were taken from a large river." We hope that the members of the Institute of Civil Engineers and the distinguished guests passed a pleasant evening and returned home reassured by the fact that the water of London with its pathogenic germs which can be calmly disregarded is still derived chiefly from the Thames and the Lea, uncontaminated with any water from "sparsely-populated *moorlands*"—*the* "*pure nectar from Wales*," as it was characterised by Lord Llandaff.

THE USE OF TOBACCO ON ACTIVE SERVICE.

THE war in South Africa has taught many things of greater and *of less importance. Perhaps nothing that it has* demonstrated has been more marked than the important part which tobacco plays in the soldier's existence. Whether this is to be reckoned as a great fact or a small one there can be no doubt about the truth of it. Yet the Duke of Wellington's armies had no tobacco worth speaking of. If they did not forbid its use, at any rate the Iron Duke's officers were directed to advise their men strongly against it. What a curious contrast with the campaigning in South Africa, where marches and privations as long and as stern as any suffered by our great-grandfathers were borne by the volunteers and soldiers of to-day with a grumble only when their "smokes" failed them. We have it from many who took part in the forced marches leading to Paardeberg, to Bloemfontein, to Pretoria, and beyond, that when rations were but two or three biscuits a-day the only real physical content of each 24 hours came with the pipe smoked by the smouldering embers of a camp fire. This pipe eased the way to sleep that might otherwise have lingered, delayed by the sheer bodily fatigue and mental restlessness caused by *prolonged* and *monotonous exertion. It is difficult, then, to* believe that tobacco is anything but a real help to men who are suffering long labours and receiving little food, and probably the way in which it helps *is* by quieting cerebration—for no one doubts its sedative qualities—and thus allowing more easily sleep which is so all-important when semi-starvation has to be endured. The cases of acute mental derangement in the course of campaigns such as the present are many. There have indeed been many in South Africa. It would be most profitable and interesting could medical officers have taken special note of the capacity for sleep previously evidenced by those who broke down and also of their indulgence or non-indulgence in tobacco. We are inclined to believe that, used with due moderation, tobacco is of value second only to food itself when long privations and exertions are to be endured. Two features are to be noted with regard to the smoking practised on active service. It is almost entirely in the open air and it is largely on an empty stomach. The former is always an advantage; the latter we generally reckon a most unfavourable condition. Shall we see in the near future patients with tobacco amblyopia or smoker's heart acquired while the trusting friend of tobacco thought that he was enjoying unharmed the well-earned solace of a hard day's march? We believe not, and that the open air will have saved what might have been the untoward results of smoking when unfed.

MEETING OF THE GENERAL MEDICAL COUNCIL.

SUMMONSES have been issued for a meeting of the General Medical Council on Tuesday, Nov. 27th, at 2 P.M. *The Penal Cases Committee will* meet on the preceding Saturday and the Executive Committee on Monday, Nov. 26th.

THE INSPECTION OF CONVENTS.

A LETTER which appeared in the *Times* of Nov. 5th raises a most important point. We are not among those who consider that convents are dens of iniquity, that the bricking up of recalcitrant nuns is of daily occurrence, or that excavations in the back-gardens of convents would reveal facts such as those which horrified the pious inhabitants of Cologne when, in 1106, they dug anew the foundations of their walls and came across the bones of the 11,000 virgins and others. But the correspondent to whose letter we refer mentions facts, which so far have not been denied, which reveal a most dangerous state of things. The doors (of the convent to which the writer refers) into the street are *locked at night and the keys are handed over to the reverend* mother, there being no means of exit until she is communicated with. An outbreak of fire occurred which fortunately did not end in disaster; but how easily it might have done so. To our minds, as regards sanitary and hygienic conditions, the palace, the ordinary dwelling-house, the convent, and the tenement house should all be under the same regulations. Epidemics and fire are no respecters of persons or of religious communities, and though the promise of angelic protection still holds good, yet it was only given to those in a way[1]—namely, in a definitely marked out path, a point which the Devil omitted when he quoted the passage for his own purpose. Not to use means which have been provided for our safety is universally recognised as demanding that punishment which is allotted for those who tempt God. True, there must be discipline, but discipline must not be such as to combine presumption.

THE annual dinner of the Aberdeen University Club, London, will be held at the Trocadéro Restaurant on Wednesday, Nov. 21st, at 7 P.M. Sir William McGregor, K.C.M.G., Governor of Lagos, will take the chair, and members intending to dine should communicate with the honorary secretaries, Mr. J. A. Robson and Dr. James Galloway, at 54, Harley-street, W.

DR. JOSEPH PRIESTLEY, medical officer of health of Lambeth, who was recently selected by the Municipality of Bombay for the appointment of Executive Health Officer to the City of Bombay, has not seen his way to accept the position. The borough of Lambeth is to be congratulated upon retaining the services of Dr. Priestley.

MR. HUTCHINSON, F R S, has offered, and his offer has been accepted, to build and fit out an educational museum in connexion with the Friends' School at Ackworth, near Pontefract, Yorkshire. Museums on similar lines have been provided by Mr. Hutchinson's generosity at Haslemere, Surrey, and at his native town, Selby, Yorkshire.

PROFESSOR A. H. YOUNG, M.B. Edin., F.R.C.S. Eng., has been appointed Representative of the Victoria University for five years on the General Medical Council in succession to the late Dr. D. J. Leech.

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[1] THE LANCET, Oct. 27th, 1900, p. 1220.

PROFESSOR CALMETTE ON PLAGUE.

PROFESSOR A. CALMETTE, Director of the Pasteur Institute at Lille, in the course of the first Harben Lecture of the Royal Institute of Public Health, delivered at the Examination Hall of the Royal Colleges of Physicians of London and Surgeons of England on Nov. 7th, said that the recent appearance of plague at Glasgow had decided him to choose the study of this disease as the subject of his lectures. Plague now menaced all the maritime nations of the globe and it had become necessary to take rigorous measures to stop its extension. The progress of hygiene and the knowledge acquired during the last five years on the etiology, treatment, and prophylaxis of the affection enabled it to be combated very efficaciously and its centres to be rapidly circumscribed. It was known that the plague bacillus was found in the buboes and sputa of the patient, that it was also frequently found in the blood, that it had the form of a short bacterium, slightly ovoid, that it was easy to stain by the ordinary laboratory methods, and that it could be cultivated on the usual media.

From a clinical point of view the plague assumed two clinical forms—bubonic plague and plague without buboes, the former being more commonly observed. Persons attacked by bubonic plague ordinarily suffered at the commencement of the illness from a sensation of great weakness with heaviness of the head and painful pricking or tingling at the place where the buboes would appear. The patient was suddenly taken with repeated shivering, of short duration at first but getting longer and longer. Intense pain, great thirst, alimentary or bilious vomiting, and diarrhœa afterwards occurred. Glandular congestion, ordinarily limited to a single group of glands, appeared on the same day or on the day after. A bubo appeared with little delay; it was accompanied by a painful tumefaction, the least pressure on which caused the patient to cry out. The temperature rose very quickly, the pulse was rapid, full, often dicrotic, but regular, and the breathing was quickened. The facies was typical: red, haggard, weeping eyes with an expression of agony and terror, and the tongue dried, furred, and red at the edges and point. Sometimes at the commencement the patients, after a short period of excitation and mad terror, were smitten suddenly with an overpowering somnolence and collapse; they then resembled subjects struck with serious adynamic typhoid fever. The head was thrown back, the eyelids were half closed, the mouth was slightly open. When they were spoken to in a loud voice they looked around with a stupefied expression, replied with much difficulty, and dragged their words like intoxicated persons. When exciting phenomena dominated them the patients suffered from hallucinations of sight or hearing, believing themselves to be surrounded by extraordinary animals, as in alcoholic delirium. Sometimes they showed very clear symptoms of meningitis, opisthotonos, converging strabismus, dilatation of the pupils, delirium, cramp of the arms, flexion of the legs, and fibrillary movements of the muscles of the face. The localisation of the glandular lesions determined the special attitude of the patients. The least movement caused them to shriek; the skin was frequently covered with petechiæ; in grave cases turbid sero-sanguineous pustules formed. or even actual carbuncles, which latter characterised the special type to which ancient authors gave the name of "black plague." On auscultation signs were constantly found after the third or fourth day of broncho-pneumonia. The cough was dry and painful, terminated by the expectoration of frothy sputa, slightly viscid, yet streaked with blood and containing the plague bacilli in great quantities. In grave cases the heart presented signs of an alteration of the myocardium, with prolongation of the first sound and other cardiac symptoms. In these grave cases the patients scarcely micturated at all and the urine, at times containing blood, was very acid and albuminous. Except in entirely benign cases, suppuration of the buboes was the rule and was generally of good augury, as it indicated that the system was defending itself against the plague infection and that the infection remained localised. Convalescence was always long. The forms of plague without buboes and without apparent glandular congestion were much rarer than the forms of classical bubonic plague which he had just described. The primary pneumonic plague resulted from the penetration of the microbe into the respiratory channels and it was to this exceedingly grave form that Dr. Müller and his laboratory assistants succumbed in 1898 at Vienna. Another and still rarer form of plague without buboes was plague septicæmia or pesticæmia which developed with extreme rapidity and was caused by the intense pullulation of the plague bacillus in the blood and in the organs. It was not exactly known where the virus first effected an entrance in these cases; perhaps the microbe penetrated by the intestine or directly into the blood through some little open sore or cut. Post-mortem examinations of patients who had succumbed to this particularly severe form showed very congested mesenteric and retro-peritoneal glands of a characteristic purplish colour like dregs of wine, which fact seemed to support the hypothesis of penetration of the virus by the gastro-intestinal channels. When the plague was studied in an epidemic centre all the forms above described were found, but it sometimes happened that the first cases did not present clear characteristics and it was thus possible that they might be incorrectly diagnosed. At Calcutta Dr. Simpson and Dr. Cobb reported the presence of the plague bacillus in cases of inguinal glandular congestion which had been noticed with extraordinary frequency among the men of a certain regiment stationed at Hong Kong during the epidemic of 1894. An official Commission appointed to investigate the evidence of Dr. Simpson and Dr. Cobb declared that they were cases of simple non-venereal buboes. In reality the commission was wrong. It was dealing with an exhausted nonmalignant form of plague that ancient writers had already recorded under the name of *pestis mitior*, as frequent at the commencement and the end of great epidemics. Such facts proved how little the best clinical examination alone could suffice to make a diagnosis of plague. Such diagnosis could only be determined when the bacteriological examination demonstrated the presence of the microbe of Yersin in the glandular fluid in the blood or in the sputum. At the commencement of a case of bubonic plague, in order to ascertain whether the plague microbe was present or not, it might be feared that to make a puncture with Pravaz's syringe right into the lymphatic tissues to extract therefrom some drops of fluid to be fertilised in the usual manner and examined immediately after colouration would spread the infectious germs beyond the glands in which they had been localised. But to-day with the aid of sero therapy there was no foundation for that fear, because to put the patient beyond the danger of any possible reinfection it was only necessary, directly after the puncture with Pravaz's syringe, to inject a small quantity (about five cubic centimetres) of anti-plague serum into the middle of the gland or at a short distance from it. The extracted fluid should be placed immediately in tubes of nutritive gelose and in tubes of bouillon of beef or of veal at a temperature of from 25° to 30° C. for a period of 24 hours. At the same time a small quantity should be spread out on glass slides coloured with methylene blue or thionin. On gelose the appearance of the microbe colonies did not present any very specific characteristics, but their number indicated the degree of gravity of the infection. In the meat bouillon the specific characteristics were more precise. The bouillon remained clear and transparent and contained some slight whitish clots floating on the surface, which sank to the bottom of the tube at the least movement. If the bouillon was turbid it was evident that some microbe other than the plague bacillus, perhaps of a mixed infection, was present. In such circumstances the diagnosis should be made more precise by inoculating susceptible animals with the culture. The mouse especially took the plague and it was only necessary to prick this little animal in the thigh with a needle dipped in the culture on gelose in order to give it the disease and cause its death in from 36 to 48 hours. When the inoculated animals succumbed very characteristic lesions were found on the bodies and the plague bacilli were in great quantities in all the organs, especially in the glands, the spleen, and the liver. To diagnose a case of suspected pneumonic plague it was necessary to collect as much as possible of the rusty sputum, to dilute it with a small quantity of boiled water, and to fertilise several tubes of gelose with platinum wire, the temperature not exceeding from 20° to 23° C. At this relatively low temperature the pneumococci did not germinate, the streptococci germinated badly and very slowly, while the plague bacilli developed rapidly. At the end of two or three days the plague colonies were very numerous. They must then be examined and transferred to fresh gelose tubes in order to get them in a pure state.

THE TWENTY-NINTH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD (1899-1900).

A SOMEWHAT melancholy feature of the annual report of the Local Government Board this year, which was issued last week, is the record of the fact that since the last report was issued death has overtaken no less than six of the important officers of the staff. Towards the close of the official year ending March 31st, 1900, Sir Richard Thorne Thorne, K.C.B., F.R.S., the medical officer, died after a brief illness, and the opportunity is taken in the present report of placing on record the sense of the staff of the Local Government Board "of his eminent services in relation to the public health and of the loss which the country has sustained by his death." The Local Government Board also have to regret the loss through death during the year of the services of Major-General A. de Courcy Scott, R.E., as examiner under the Metropolis Water Acts, and of Professor Sir Edward Frankland, K.C.B., F.R.S., as water analyst. Mr. Charles Perrin, M.I.C.E., has succeeded Major-General Scott as water examiner and the duties performed by Sir Edward Frankland are now carried out at the Government Laboratory under the superintendence of Dr T. E. Thorpe, F.R.S.

In some respects it may be taken, therefore, that death, which has been so conspicuously busy in this State department, accounts for the incompleteness of certain sections of the report. Mr. Perrin, in his report, for example, on the metropolitan water-supply, deemed it desirable "to compile a report in the usual form with a view to maintaining continuity in the statistical information available for future reference." As he admits, this information could not in any degree be based on personal knowledge of the incidents of the year, but has been compiled from facts already on record and "from information kindly supplied by the officers of the water companies." Similarly the chemical examination of the metropolitan water-supply lacks continuity. The reports for the first seven months of the year were made by the late Sir Edward Frankland, those for August and September were made by Dr. Percy Frankland, F.R.S., and those for the rest of the year by Dr. T. E. Thorpe. Under these circumstances no general report could be made, but a memorandum based on the monthly reports was prepared in the department. The diagrams thus compiled are not complete and a note at the bottom states that the Board do not possess the information necessary (in some respects) to complete the table (or tables) with regard to the months of October, November, and December. There are no bacteriological records at all and the quality of the London water-supply according to chemical examination is not referred to in the synopsis. Mr. Perrin reports, however, in regard to filtration that the year 1899 was on the whole favourable for the operations of the companies supplied from the Thames and Lea, the Thames water being in good condition during 314 days, moderately discoloured and turbid during 40 days, and exceptionally muddy and turbid on only 11 days of the year.

In regard to the working of the Food and Drugs Act it appears that the number of samples secured for analysis is steadily increasing and with this increase, as might be expected, there is a reduction in the percentage of the samples reported against. In some districts still there were no samples taken. The proportion of samples taken in 1899 was two per 1000 of the population. The interesting and important observation is made that in the large number of districts where the proportion of samples taken did not reach three per 1000 of the population the samples reported against averaged 10·1 per cent.; in those where the proportion taken was between three and four per 1000 the adulterated samples were 8·7 per cent.; while in the districts where samples were taken at the rate of over four per 1000 the rate of adulteration fell to 7·5 per cent. These results surely justify the opinion of the Select Committee on Food Products Adulteration, 1894-96 that a proportion of samples much in excess of one per 1000 of the population should each year be taken for analysis in the district of every local authority. The proportion of adulterated samples was slightly higher this official year than last year, the figures being respectively 8·7 and 9·4 per cent. Milk was adulterated to the extent of 10·5 per cent. of 21,964 samples examined, which is an increase on the previous year. Three or four years ago London had shown an improvement in its rate of milk adulteration but the percentage, which had been 14·6 in 1897 and 12·9 in 1898, rose in 1899 to 15·4. Only nine of the "32 great towns" of the Registrar-General's weekly returns had a more unsatisfactory rate of milk adulteration than London in 1899. The percentage of adulteration of drugs was greater than that of food, no less than 17·8 per cent. being classed as adulterated. Nearly one-fifth, however, of the samples taken were of camphorated oil and camphor liniment, of which 28 per cent. were condemned generally because of a deficiency in the proportion of camphor present but sometimes because (in addition) mineral oil was substituted for the olive oil prescribed by the British Pharmacopœia.

A large sum of money represented in loans to the joint Boards has been sanctioned in respect of systems of sewerage and sewage disposal, the provision of waterworks and of cemeteries, the provision and equipment of hospitals, and the purchase of land in connexion with those objects. Many applications have been made to the Board for sanction to loans for the execution of works of sewage disposal involving the adoption of the bacterial processes. In view of the fact that a Royal Commission is inquiring into the subject it is interesting to hear the decision of the Local Government Board on this question of loans to be devoted to new processes of sewage disposal which are thus *sub judice*. Although these processes, it is stated, must in many respects be regarded as in the experimental stage the Local Government Board have not declined to consider these applications where the process was to be supplemented by land treatment of the effluent from the bacterial filters. In each case, however, a local inquiry has been held and full evidence has been required to show that the process contemplated is likely to prove of considerable assistance in the purification of the sewage. Where such loans have been sanctioned it has been the usual practice of the Board to require an undertaking from the local authority that, in the event of the method adopted not proving satisfactory some other approved method of sewage disposal would be substituted.

The returns relating to the new by-laws and regulations under the Public Health Acts afford evidence of continued activity on the part of local authorities in making by-laws on the more important matters—such as scavenging, the prevention of nuisances, the regulation of offensive trades, the regulation of common lodging-houses, and the construction of buildings.

As to vaccination returns, these will be published *in extenso* in the report of the medical officer for the year 1899-1900 which will appear as a supplement to the present volume and will contain information as to some of the inspections which are only briefly referred to in the present report, as well as to other sanitary questions which have specially engaged the attention of the medical staff during the year.

In regard to the control of the manufacture of alkali and chemicals it appears that the supervision exercised by the staff of special inspectors continues to be attended with good result. On the whole, however, there has been a slight increase in the proportion of nuisances arising from chemical trades which may be referred perhaps to the extra strain put upon the manufacturing plant in consequence of the satisfactory expansion of general trade. Numerous chemical businesses have been supervised, and care appears to be taken as far as possible to utilise such improvements as the growth of scientific knowledge suggests with the view of preventing nuisance from the discharge into the atmosphere of deleterious chemical compounds.

It is interesting to notice that pauperism steadily declines and that during the last official year it reached the lowest figure on record. Again, the report, referring to the returns of deaths from starvation, states than in few instances was death ascribed solely to want of sufficient or proper food. For the most part the deaths appear to have been due to disease consequent upon, or accelerated by, want or exposure, or both, and in some instances to self-neglect. Complaints are made in respect to the sick-wards of certain workhouses which are said to be structurally very bad as well as bad from a sanitary standpoint, comparing most disadvantageously with hospitals erected by voluntary movement and organisation.

The report teems with the usual statistics in regard to the relief of the poor and the poor-rate, and local taxation and valuation.

Obituary.

WILLIAM ANDERSON, F.R.C.S. ENG., L.R.C.P. LOND.,

SURGEON TO ST. THOMAS'S HOSPITAL; PROFESSOR OF ANATOMY TO THE ROYAL ACADEMY OF ARTS.

WILLIAM ANDERSON was born on Dec. 18th, 1842, in London—as he used to say, within the sound of Bow bells. He was educated at the City of London School. On leaving school he did not immediately enter on the study of medicine, but became an art student at the Lambeth School of Art. There he attained considerable proficiency as a draughtsman and acquired an interest in art which he retained through the whole of his life and which was a great source of pleasure to him besides being useful in his anatomical teaching. In 1864 he entered St. Thomas's Hospital where he obtained college prizes in three successive years, and in 1867 carried off the Cheselden medal—the highest prize in surgery. He obtained the qualifications of M.R.C.S. Eng., and L.S.A. in 1867, that of L.R.C.P. Lond., in 1868, and in 1869 became Fellow of the College of Surgeons. After qualifying, Anderson was for a time house surgeon at the General Infirmary, Derby, but returned to St. Thomas's Hospital, where he was appointed surgical registrar and demonstrator of anatomy on the opening of the new hospital in 1871. As a demonstrator of anatomy he was a popular and indefatigable teacher till an event occurred which altered for a time the whole course of his life. The Japanese Government having founded a Naval Medical College at Tokio wished to place an English surgeon at its head. The selection was intrusted to some eminent members of the profession in London, by whom Anderson was appointed, not without competition. He sailed in 1873 with his newly-married wife to take up his duties and remained in Japan nearly seven years.

With the position of Director of the Naval Medical College Anderson had to combine the duties of an almost universal professor. He lectured on anatomy, physiology, and surgery, and presumably on medicine also. In his earlier lectures he had the assistance of an interpreter, a Japanese student who knew English and translated his lectures orally, but afterwards (how soon we cannot say) he lectured in Japanese. Few Europeans it is said acquired the language more rapidly or spoke it more accurately. His lectures, judging from the reports of some students who afterwards came over to England, were highly valued by his Japanese pupils, some of whom became deeply attached to him. The position was in many ways a very pleasant one to Anderson. His unprejudiced and genial nature rapidly adapted itself to its new surroundings. He lived on intimate terms with the diplomatic circle and the English colony and became acquainted with Japanese life also. Soon after his arrival he was appointed medical officer to the English Legation at Tokio.

In one respect especially his residence in Japan was fortunate as giving him a rare opportunity for the exercise of his critical knowledge of works of art. His early art education had given him the tastes not only of an artist but of a collector. Indeed, he took out with him to Japan a small collection of old engravings, etchings, and illustrated books of anatomy, in which he took great delight. This collection was, however, swept away by a fire, from which he himself, his wife, and infant child escaped with little more than such clothes as they had on, and a valued microscope, the parting present of his students at St. Thomas's Hospital, which was snatched from the flames by a faithful domestic. The same calamity occurred a second time, but Anderson more than made up his losses by his valuable collections of Japanese art. Most foreigners collected curios, and no doubt at that time got them there on much easier terms than in the present day. But Anderson did more than amass a miscellaneous collection of beautiful objects. He made a serious study of the history of Japanese pictorial art; and with his practised eye and good judgment was able to collect a series of drawings and paintings of different periods which is said to have been in some respects unequalled and which was more carefully housed than his earlier collection.

In 1880 a vacancy occurred at St. Thomas's Hospital owing to the much regretted retirement through ill health of Mr. W. W. Wagstaffe, and it was resolved to invite Anderson back to take the place of assistant surgeon and joint lecturer on anatomy. He thus re-joined his old hospital and again was highly valued as a teacher. In teaching anatomy he had one advantage which it is not given to all anatomists to possess—namely, his power of drawing. His sketches on the blackboard were the wonder of his pupils. Beginning with a bold but unerring outline he would gradually fill in the details till a finished picture, more instructive than a ready-made diagram, was before the class. The same power he displayed, and before more critical spectators, when lecturing on anatomy to the Royal Academy.

The course of Anderson's life at St. Thomas's Hospital much like that of other hospital surgeons. From assistant surgeon he became full surgeon in 1891, having in 1887 added to his general work the charge of the Department for Diseases of the Skin, a subject in which he took much interest; but he never gave up teaching anatomy till he was appointed in 1898 joint lecturer on surgery. He belonged to no other hospital or school and all his professional interests were connected with St. Thomas's Hospital. In one other capacity he was, however, very active—namely, as an examiner. In the Royal College of Surgeons of England he was examiner in surgery for the Conjoint Board and held this office up to the time of his death. Indeed, he was examining during the last week of his life. He was also examiner in surgery for five years in the University of London.

Anderson was interested in the history of surgery and especially in the application of fine art to its illustration. He wrote a paper, excellently illustrated, on "Art in Relation to Medical Science" in the fifteenth volume of the St. Thomas's Hospital Reports, which is the best sketch of that subject accessible in the English language. An interesting lecture on the "History of Surgery since the Middle Ages" in the eighteenth volume of the same Reports should also be mentioned. His strictly surgical papers were not very numerous, but he published in 1896 a work on Deformities of the Fingers and Toes and contributed three articles to "Heath's Dictionary of Surgery." He wrote also the section on the Genito-Urinary Organs in "Morris's Treatise on Anatomy," and contributed several surgical papers to the St. Thomas's Hospital Reports, THE LANCET, *British Medical Journal*, &c. In the "Nomenclature of Diseases," published by the Royal College of Physicians of London in 1896, he wrote, in conjunction with Mr. Shattock, the section on Malformations, a laborious and recondite piece of work.

No account of Anderson's career would be complete without reference to his work in connexion with the fine arts. When he was appointed, in succession to the late Professor Marshall, professor of anatomy to the Royal Academy it was generally recognised that by his knowledge of art and anatomy alike he was a worthy successor of the eminent men who have filled that chair. But it was chiefly in connexion with Japanese art that his name was known. When the greater part of his collection of Japanese pictures and drawings was bought for the British Museum and exhibited in the gallery of the Print Department it attracted general attention among connoisseurs, both English and continental. The general judgment was that, even if some more brilliant and costly specimens might be found elsewhere, no collection so important historically had ever been brought together in Europe, and possibly not even in Japan itself. His "Descriptive and Historical Catalogue" became an authority on the subject. Anderson was still better known by his splendid work on "The Pictorial Arts of Japan," in two folio volumes, published in 1886. He also wrote a monograph on "Japanese Wood Engraving" in 1895. Anderson kept up his interest in Japanese matters other than artistic and was one of the most active founders of "The Japan Society," of which he was at one time president. He was well known to, and highly esteemed by, the Japanese colony in London, and received from the Japanese Government the distinction of "Commander of the Order of the Rising Sun."

In the various circles in which he moved, medical, artistic, and Japanese, Anderson's wide knowledge, unaffected geniality, and modesty made him an attractive personality, but naturally of a retiring disposition he did not go much into society. In all professional relations he was esteemed for his sincerity and thoroughness and for the strict conscientiousness with which he fulfilled all duties devolving upon him. Whether in the dissecting room or in a tedious examination, or in going through a long list of operations, he never allowed himself to be tired till the work was done. Of late years he found the labour of examinations, together with

WILLIAM ANDERSON, F.R.C.S. ENG.,
SURGEON TO ST. THOMAS'S HOSPITAL; PROFESSOR OF ANATOMY TO THE ROYAL ACADEMY OF ARTS.

the ever increasing amount of operative work now expected of hospital surgeons, press somewhat hardly upon him But he suffered from no serious illness since an attack of enteric fever some years ago During the last week of his life he complained of severe dyspeptic troubles, such as he had suffered from before, but there was nothing to prepare his friends for the lamentably sudden termination of his life On the morning of Oct 27th he described himself to one of his colleagues as better, but still complained of indigestion In the afternoon he went for a drive and while in his carriage was seized with sudden and alarming syncope, and though able to reach home he rapidly sank The cause was found to be a rare and unlooked for accident, rupture of a cord of the mitral valve, without any other morbid condition of the heart or other organs

His funeral on Oct 31st was attended by the Treasurer and many members of the staff of St Thomas's Hospital, representatives of the Royal College of Surgeons of England, of the Japan Society, and by numerous private friends Thus passed away a man of singularly sweet nature, of perfect integrity, and of great attainments, whose loss will be felt, not only in his own hospital, but in the surgical profession of London and elsewhere Anderson was twice married—first to Miss Margaret Hall, who accompanied him to Japan, and by whom he has left a son and a daughter, and, secondly, to Louisa, daughter of the late Mr F W Tetley, of Leeds, who survives him

Our portrait is a reproduction of a photograph by Mr C T Dent

Mr R Clement Lucas sends us the following tribute to Mr. Anderson's memory —

"I cannot refrain from writing a few lines in appreciation of one whom I held in the highest esteem There are men whom we respect but who do not touch our hearts, men whom we admire who scarcely command even our respect, and men whom the world calls great who fail to raise in us the slightest sense of admiration Yet another, on whom, perhaps, the world smiles less kindly, catches at once our sympathy, and in a moment we feel instinctively that we are in the presence of a friend Such was the feeling inspired in me when I first met William Anderson And on what did this personal fascination depend? The rough pioneers who hack and hew their way into notoriety are not of this mould, nor are the laborious compilers of many volumes of ill assorted word heaps, nor the still more to be pitied collectors of endless figures they call statistics—all useful men, but all uninteresting It was Anderson's great good fortune to be always interesting To the mass of humanity a dead wood pigeon represents so many feathers towards a pillow and so much flesh for dinner, but to Anderson, whose gentle spirit had been fired by the light of genius, those iridescent plumes reflected beauty, those coral feet drawn to the grey bosom taught harmony in colour, and the half opened bill and dimmed and up-turned eye revealed the struggle of the fleeting spirit He was in sympathy with the beauties of Nature and his eye saw not form merely but the contour of a thought, and his ear heard not sound merely but the cadence of music Where Art reflected Nature truly there Anderson's mind found rest and pleasure Schooled to science his thoughts gravitated always in the direction of art, so that all felt when he was elected Professor of Anatomy to the Royal Academy of Arts that no better selection could have been made. His long sojourn in Japan made a lasting impression on him and his collection of Japanese art treasures became renowned and was purchased for the nation. His love of art and beauty we find reflected in his writings, and anything abnormal, unsymmetrical, or ugly caused in him a feeling of distress and a desire to remedy it So we find him editing Brücke's 'Beauties and Defects of the Human Figure' and publishing a small work on 'Deformities of the Fingers and Toes' I remember once when a very handsome but ignorant student appeared before him at an examination he drew the attention of his colleagues to this Apollo, and, as he did his duty, with a sigh said, 'Some woman has spoilt him' On another occasion when discussing a gentleman little favoured by nature he said, 'His ugly face has soured his life and spoilt his manners, I should like to try the effect of a wig and a beard' Thus to Anderson's æsthetic eye all ugliness excited pity and his imagination rose to suggest a remedy Though neither of commanding height nor of stalwart figure Anderson had a very distinguished appearance Only within the last three weeks I was strolling down Wimpole street with a friend when we met Anderson walking on the other side of the road 'Who is that very handsome man?' inquired my friend 'He has a very distinguished and somewhat foreign look' This was how Anderson struck a perfect stranger His somewhat prematurely whitened hair, worn rather long, and his full white moustache, contrasted with his darker eyes and brows Sensitive and retiring in disposition he nevertheless had a most courteous manner and a winning smile Not only by his own hospital and by her southern sister will his loss be mourned, but by many friends widely scattered who have known and appreciated his worth Our profession, so rich in men of surpassing industry, so full of men of mechanical genius, abounding, too, happily, in men of great self denial and benevolence, but bare—how sadly bare—of men who can with professional distinction carry with them an atmosphere of literary refinement and a true appreciation of beauty in Nature and Art can ill spare a man of Anderson's wide sympathies and will long feel the shock which his sudden death has caused"

ALFRED WILLIAM HUGHES, M B, C M, F R C S EDIN, F R C S ENG,

PROFESSOR OF ANATOMY, KING'S COLLEGE, LONDON

THE war in South Africa has occasioned many deaths in the medical profession, and the Welsh Hospital in particular has to mourn the loss of no less than five out of the staff of 23 a proportion greater than that ordinarily experienced in the fighting line. The death of Professor Hughes is peculiarly sad, since he had carried through with complete success the work which he had undertaken, and was already on his way home before the first symptoms of typhoid fever developed Some of those associated with him had thought that he was not in his usual health for two or three days before leaving Pretoria, while to others his unflagging cheerfulness masked the insidious onset of the disease Shortly after starting his temperature was found to be raised, but the chart kept during a bad passage showed no abnormal severity of fever On reaching home, however, his restlessness, delirium, and feeble pulse caused much anxiety, which was later increased by thrombosis of the femoral vein Although the obstruction to the circulation was comparatively slight the rapid feeble action of the heart persisted and signs of engorgement of the lung developed The end came a fortnight after landing at Southampton, and apparently on the twenty seventh or twenty eighth day of the fever During his illness after his return he was attended continuously by Dr Nestor Tirard and by Dr Frederick T Roberts

Professor Hughes was born at Fronwen, Merionethshire, and was the son of Mr Robert Hughes of that place He was educated mainly in Edinburgh, but he also studied in London and in Leipsic While he was an undergraduate at Edinburgh he gained a medal in anatomy and was junior demonstrator in anatomy and in physiology After graduation in 1885 he became in 1889 a Fellow of the Royal College of Surgeons of Edinburgh, and two years later he became a Fellow of the Royal College of Surgeons of England For a short time after graduation he was engaged in private practice at Flint but he gladly availed himself of an opportunity of returning to Edinburgh to resume work as an anatomist, at first as a senior demonstrator and afterwards as a lecturer At this time his writings and researches were numerous and important and he established a reputation as a teacher which led to his election to the chair of anatomy at University College, Cardiff Here his teaching was facilitated by his large private collection of anatomical preparations and the number of entries of students soon increased Owing to the continued illness of his wife he was compelled to remove from Cardiff after four years of successful work and he was then elected professor of anatomy at King's College, London Here he speedily won friends and became dean of the medical school in which capacity he represented the interests of King's College upon numerous committees He was peculiarly adapted to public life, and at one time he was a candidate for Parliamentary honours He had the instinct of the true sportsman which led him safely through difficulties, gaining friends even amongst those whose opinions might be at variance with his own, and part of the secret of his success appeared to lie in the invariable geniality and courtesy which never allowed him to say an unkind word of anyone It is needless to say that with students he was deservedly popular, not only were his teaching powers appreciated by them, but they also recognised in him one who could be counted upon to give them his sympathy and assistance in all their interests, and he accordingly figured frequently as chairman at concerts, sports, and dinners. Some of his colleagues and many of the students having gone in a surgical capacity to South Africa, Professor Hughes threw himself heart and soul into raising a fund for a Welsh military hospital. He was successful in collecting over £12,000, and the hospital was duly equipped and sent out in the middle of April. Within a few weeks, however, several of the staff died and Professor Hughes immediately volunteered to go out to assist in the work. In South Africa, as in England, his magnetic influence soon made itself felt, and the Welsh Hospital was so much appreciated that it was taken to Pretoria at the request of Lord Roberts. Professor Hughes has, since his return, received a further compliment to his successful organisation, Lord Roberts having sent a request that the Welsh Hospital might continue in work for another three months.

From the foregoing sketch of the more recent events in a life of stirring activity it must not be inferred that the progress of science was neglected. Professor Hughes has made numerous and valuable contributions to the advancement of the science of anatomy, and before he became engrossed in the interests of the Welsh Hospital he had been busily engaged upon a new book on anatomy which was nearly completed. In one sense his work is done, but he has left behind him an example of energy, of devotion to work and of interest in the well-being of students and of all who came within his sphere of influence, which will long continue to serve as a stimulus to all who have been privileged to know him.

We have received the following appreciatory remarks from the Chairman of the Welsh Hospital:—

Few persons are aware of the debt which the Welsh Hospital owes to Professor Hughes. Although several civil hospitals had been equipped and sent out to South Africa there was still need of more hospital accommodation; and in March Professor Hughes decided to send out a Welsh hospital. He gathered around him a few friends who supported him and, what was of far greater value, a number of ladies who worked admirably and successfully in furthering his efforts to collect funds and obtain hospital furniture and equipment, but the mass of the work fell on Professor Hughes. It was at a time when the country had liberally responded to large demands upon its benevolence in the cause of the war and when the prospect of success in obtaining the necessary funds was not of a cheering kind, but Professor Hughes's untiring energy, hopeful disposition, buoyancy of spirits, and enthusiasm drove away any doubts or misgivings about the ultimate result. In April the hospital was successfully equipped and sent out. On landing the staff was ordered to Bloemfontein to help to cope with the outbreak of typhoid fever which had broken out there after the battle of Paardeberg. They obeyed but suffered severely, for several of them died within five weeks of their arrival in South Africa. At this crisis Professor Hughes, who, as secretary and organiser, had worked with untiring zeal in the cause of the hospital, offered to go out to South Africa to undertake its management and to relieve the staff of all care and anxiety respecting the non-medical affairs of the institution. The committee accepted his generous and noble offer and within 48 hours he was steaming for Cape Town on his way to Springfontein where he remained until the hospital was removed to Pretoria. Under his management the hospital became such as to command general admiration from Springfontein to Pretoria. In September he received an intimation that the hospital would not be required as a medical and surgical hospital after the end of the month, but that Lord Roberts wished it to remain until Nov. 17th as a convalescent hospital. He made complete arrangements to carry it on in accordance with the Field Marshal's wishes and left Cape Town on Oct. 3rd, reaching home on the 19th to die for the Welsh Hospital.

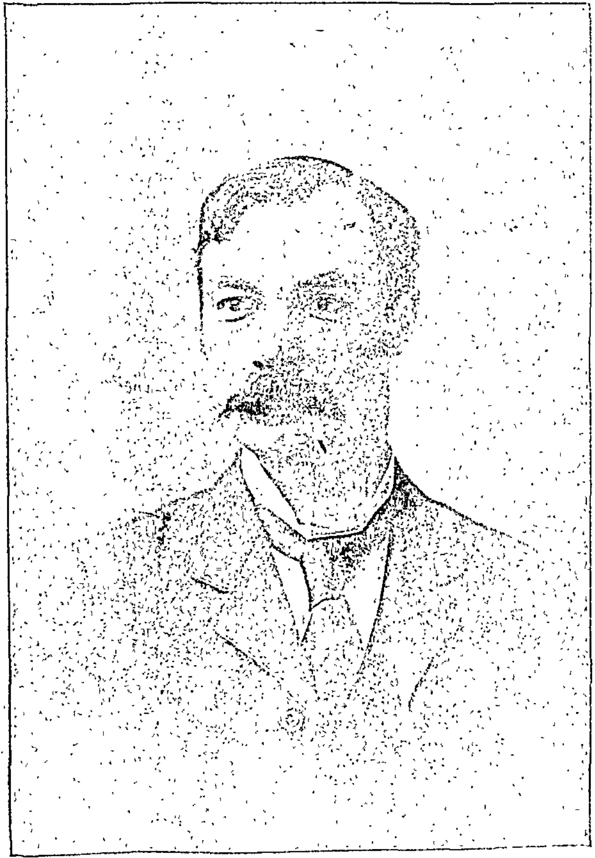
DAVID YOUNG, M.D., M.S. ABERD., L.R.C.P., L.R.C.S. EDIN.

THE death of Dr. David Young, at the age of 61 years, which occurred on Oct. 18th at Ventnor, in the Isle of Wight, has already been announced in our columns. Dr. Young received his professional education in Edinburgh and at the University of Aberdeen, where he graduated as B.A. and as M.S. in 1865, taking the degree of Doctor of Medicine in 1869. He became a Licentiate of the Royal College of Physicians and of the Royal College of Surgeons of Edinburgh in 1865. He made a special study of botany at the beginning of his medical career and in 1867 was appointed professor of botany in the Grant Medical College, Bombay. He also held a teaching appointment in the University of Bombay in obstetric medicine, but finding the climate of India very trying to his health he resigned these appointments and went to live at Florence, whence 10 years later—i.e., in 1882—he removed to Rome, where he continued to reside until quite recently when he retired to the Isle of Wight. When Dr. Young took up his residence in Italy there was scarcely a place in that country known to foreigners as a suitable health-resort during the summer months. Dr. Young visited the higher Apennines and other parts of Italy with a view to discover some place where invalids might pass the summer and he embodied the results of these observations in a book entitled "Rome in Winter and the Tuscan Hills in Summer." By this work, the gist of which appeared as a series of articles in the *Practitioner*, he did much to popularise Italy as a health-resort for English and American invalids.

Dr. Young was exceedingly popular among his patients and the following tribute to his merits from one of them shows why this was the case. "Dr. Young of Rome," writes an old friend, a layman, "was thorough. His patients came from everywhere, but whether they came once or for 'repairs' your individual case was for the moment the 'hobby,' and with soft sympathetic voice, gentle but firm persistency, he would dig through symptoms to the root of the matter. Many things combined to make Dr. Young an ideal continental practitioner. He had a charming personality, a fund of dry humour, a gift for languages, and was a wide reader and a travelled man who had seen and observed. But undoubtedly the chief factor in his success was his unusual powers of concentration upon the case before him. Adaptation of particular means to a particular end found a ready exponent in the old Piazza d'Spagna and the Via Venti Settembre. Dr. Young was wont to say that one of the greatest advantages and privileges of his early life had been to come under the favourable notice of Sir James Simpson. To him he owed not only example and precept, but his first professional appointment as surgeon to one of the preliminary search parties after the remains of Sir John Franklin and subsequently his connexion with the Grant Medical College, Bombay, which furnished experience peculiarly valuable to an Anglo-Italian medico. Invalided by a severe attack of dysentery in 1871, Dr. Young, almost by accident, settled in Florence until in 1882 he removed to Rome. Owing to the shortness of the season practice when it comes at all in the capital of Italy comes all at once, and for some few years the Embassy, under Sir Clare Ford, had been added to already too heavy and responsible work. In 1897, unmistakeable warning in the form of heart trouble suggested retirement. He fixed upon Ventnor as a haven of rest and passed the short time that remained happy among his flowers, full of interest to the last in works of charity and benevolence. By a coincidence, hard by his grave is the tomb of the late Professor Wharton Jones, who re-wrote the last edition of Sir James Clark's work on the climate of Rome—the only treatise on the subject until 1886 when Dr. Young published his 'Rome in Winter and the Tuscan Hills in Summer.' Any notice of Dr. Young would be inadequate if no allusion were made to his strong and deep religious convictions, his labours on behalf of the now demolished 'Ghetto,' or his self-forgetfulness and professional modesty. Reputation, honour, and esteem, indeed came, but they came from what he was and wrought, and came unsought."

JOHN TILSLEY, L.R.C.P. LOND., M.R.C.S. ENG.

MR JOHN TILSLEY died at the residence of his father, George-street, Bath, on Oct. 28th, from dysentery, in his thirty-second year. The deceased received his medical education at University College, Bristol, and took several prizes and scholarships. He qualified L.R.C.P. Lond. and M.R.C.S. Eng. in 1894, and after holding resident appointments at the Bristol General Hospital proceeded as a medical missionary to Kiu-Kiang, China. On the outbreak of the recent disturbances there he was



ALFRED WILLIAM HUGHES, F.R.C.S. ENG.,
PROFESSOR OF ANATOMY, KING'S COLLEGE, LONDON.

the Transvaal who have employed the apparatus indicate that, either for reasons of portability or owing to defects they were unable to use them in some instances where they might have been advantageously employed, there is little doubt that the majority of all such difficulties will by patient labour and preparation be avoided in the future

Speaking generally, we may say that critics of the military and medical operations in South Africa have not, we think, sufficiently kept in mind that the troops were fighting some 7000 miles from home and over an area of 160,000 square miles of territory.

In the War Office return issued on Nov. 2nd, showing the total reduction of the field force in South Africa, we find that up to, and including, October, there were 391 officers and 3795 men killed in action or died from their wounds, and that 155 officers and 6115 men died from disease out of a total of 10,698 deaths. Some 1422 officers and 33,077 men have been sent home as invalids, and among the latter only 1030 have left the service as unfit. These figures do not include those missing and prisoners or those who died in captivity or as invalids since leaving South Africa

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We have received the following appeal from Lord Roberts, to which we refer in another column.

To the Editors of The Lancet.

Sirs,—Will you kindly allow me, through the medium of your paper, to make an appeal to my countrymen and women upon a subject I have very much at heart and which has been occupying my thoughts for some time past.

All classes in the United Kingdom have shown such a keen interest in the army serving in South Africa, and have been so munificent in their efforts to supply every need of that army, that I feel sure they must be eagerly looking forward to its return, and to giving our brave soldiers and sailors the hearty welcome they so well deserve when they get back to their native land.

It is about the character of this welcome and the effect it may have on the reputations of the troops whom I have been so proud to command that I am anxious and that I venture to express an opinion. My sincere hope is that the welcome may not take the form of "treating" the men to stimulants in public-houses or in the streets, and thus lead them into excesses which must tend to degrade those whom the nation delights to honour and to lower the "soldier of the Queen" in the eyes of the world—that world which has watched with undisguised admiration the grand work they have performed for their sovereign and their country.

From the very kindness of their hearts, their innate politeness, and their gratitude for the welcome accorded them, it will be difficult for the men to refuse what is offered to them by their too generous friends. I therefore beg earnestly that the British public will refrain from tempting my gallant comrades, but will rather aid them to uphold the splendid reputation they have won for the Imperial army.

I am very proud that I am able to record with the most absolute truth that the conduct of this army from first to last has been exemplary Not one single case of serious crime has been brought to my notice—indeed, nothing that deserves the name of *crime*. There has been no necessity for appeals or orders to the men to behave properly. I have trusted implicity to their own soldierly feeling and good sense, and I have not trusted in vain. They bore themselves like heroes on the battlefield and like gentlemen on all other occasions.

Most malicious falsehoods were spread abroad by the authorities in the Orange Free State and the Transvaal as to the brutality of Great Britain's soldiers, and as to the manner in which the women and children might expect to be treated We found on first entering towns and villages doors closed and shops shut up, while only English-born people were to be seen in the streets. But very shortly all this was changed. Doors were left open, shutters were taken down, and people of all nationalities moved freely about, in the full assurance that they had nothing to fear from "the man in khaki," no matter how battered and war-stained his appearance. This testimony will, I feel sure, be very gratifying to the people of Great Britain, and of that Greater Britain whose sons have shared to the fullest extent in the suffering as well as the glory of the war, and who have helped so materially to bring it to a successful close.

I know how keen my fellow-subjects will be to show their appreciation of the upright and honourable bearing as well as the gallantry of our sailors and soldiers, and I would entreat them, in return for all these grand men have done for them, to abstain from any action that might bring the smallest discredit upon those who have so worthily upheld the credit of their country.

I am induced to make this appeal from having read, with great regret, that when our troops were leaving England and passing through the streets of London their injudicious friends pressed liquor upon them and shoved bottles of spirits into their hands and pockets—a mode of "speeding the parting" friend which resulted in some very distressing and discreditable scenes. I fervently hope there may be no such scenes to mar the brightness of the welcome home.

I remain, Sirs, yours faithfully,

Roberts, F.M.

Headquarters of the Army in South Africa, Pretoria, Sept. 30th, 1900

THE SIEGE OF MAFEKING FROM A MEDICAL POINT OF VIEW.

By W. A. Hayes, M.R.C.S. Eng., L R C.P. Lond.,

PRINCIPAL MEDICAL OFFICER (BASE) DURING THE SIEGE; RAILWAY MEDICAL OFFICER (C G R.), SURGEON-LIEUTENANT, BECHUANALAND RIFLES.

It was my intention some time ago to have given the readers of The Lancet a slight sketch of the siege of Mafeking, but as I left that town immediately after the siege was raised with the column that went to the Transvaal and only returned a short time ago I could not manage it. The following may be of interest, however, to your readers, not so much from a scientific point of view as from a working one.

In August, 1899, I was in England on business, and knowing that war was a certainty I hurried back to Mafeking, arriving late in September. On my return I endeavoured, through the railway medical board in Buluwayo, to obtain as much in the way of surgical dressings as I could. Unfortunately, the order given was never executed, the time available being too short before the Boers declared war and cut us off both north and south. Major L. E. Anderson, of the Protectorate Regiment, was at that time stationed at Ramathlabama, in the Bechuanaland Protectorate, the Cape Government, for some reason best known to themselves, having refused to allow the force to remain here in Colonial territory. He also endeavoured to obtain supplies of various sorts from Cape Town, but failed. In his case, however, I believe there was no excuse, for the military authorities had large supplies there. As soon as Mafeking was invested by the enemy (at that time numbering about 6500) it was wonderful the way in which dressings, antiseptics, &c., appeared. A few packets of wool here, a bundle of bandages there—in fact, all we wanted turned up in all sorts of funny ways, and in a short time we had a decent collection.

Early in October, by order of the town commandant, I organised a number of dressing stations and appointed ladies to take charge of them. There were four of these stations with a Red Cross flag over each. Cronje, however, sent in word that he objected to the number of these flags flying in the town, so by the order of "the colonel" (Baden-Powell) I removed all but two. The enemy were informed where these two stations were, and where the hospital was, and also that the Convent was going to be used as a convalescent home. As, however, Cronje, and afterwards Snyman, were intent, not on shelling the forts but on merely sitting down round the place and trying to smash up the buildings in the town, including the hospital, the women's laager, and the Convent, and pumping shells and bullets promiscuously into the town, we did away with all Red Cross flags except those at the hospital and the Convent. At both of these places they were of no use as a protection against shell- and rifle-fire, but rather drew it, especially when Snyman was in command. During his *régime* the Convent was daily shelled so that we could only use the two south rooms for patients. No nurse or anyone else dared to appear outside the hospital or Convent without a volley being fired at them. Several patients were wounded on the hospital stoep. Those whose duty brought them to the Kaffir ward ran the greatest dangers. On one occasion Major Anderson and I were examining a patient there close to the open door when a volley was fired at us from about 1500 yards. Several of the bullets entered the ward, one passing between us and burying itself in the wall The sniping at the hospital got so bad at last that sandbags had to be put up all round the place I take this opportunity of stating that on no single occasion when an ambulance wagon, accompanied by a Red Cross flag, moved about inside our lines did it escape both wilful shelling and rifle fire, and on many occasions the Boers used their 15 lb high velocity gun and their "pom pom" for this purpose

At the commencement of hostilities the number of medical men in Mafeking was six Unfortunately, Mr Holmden of the British South Africa Police was ill and continued so for the greater part of the siege, so that he could do but very little Mr Elmes joined the ranks of the Bechuanaland Rifles The part played by Mr Sidney Smyth is explained by the orders of the day dated Nov 5th, 1899 Without going into further detail, therefore, I may say that the available number of qualified men was three—namely, Major L E Anderson, Mr T W Hayes, and myself The trained nursing staff at the hospital consisted of Miss K G Hill (Adelaide Hospital, Dublin), the matron (Miss J Gamble), Mrs Parminter, Mrs McCallum, Miss Cramer, and Miss Sheasby (a probationer) The following ladies also gave their help when required—namely, the Sisters of Mercy under Mother Theresa, Mrs Stuart, Mrs Girdwood, Mrs Adams, Miss Wyatt, and Miss Friend At the convalescent home which varied in its situation from time to time—the site having to be constantly changed on account of the enemy's shelling—the work was done all through the siege by Mrs More, Mrs Gemmell, and Mrs Hayes At first the Railway Institute was used as the hospital, but the enemy completely destroyed it one afternoon with a 94 lb shell which burst on the billiard table Both this hospital and the Convent were particularly dangerous on account of the shell fire and also from the constant sniping that went on at the nurses going and coming to the place When the bush had been cut down to a large extent for firewood all round the town we had to stop the ladies going to the Convent as it was too dangerous One lady had five shots sent at her when going along on her bicycle The sergeants' mess at the camp of the British South Africa Police was used as a hospital for the women's laager and Miss Crawford was placed in charge On May 12th the enemy took possession of the fort and all the buildings They brought their wounded to the hospital Mrs Buchan was there with her sister (Miss Crawford) assisting her As several of the Boers were dying from wounds Mrs Buchan came up to my house in the railway camp, a distance of 900 yards, under a heavy cross fire to get me to go down with her to their assistance As we did not ask the enemy to come there and as I personally had very little sympathy for people who had all along broken every rule of civilised warfare and sent their heavy shells into both of our hospitals, I at first thought the best thing was to leave them alone However, as Mrs Buchan would not remain away from her sister I returned with her The fire was extremely warm on the way there I amputated an arm and a leg for a couple of the enemy who were *in extremis* and after some time returned, bringing with me one of our men, a man of the Cape Police who had been sent to the fort before it was known that the enemy were there and who was badly wounded The journey there and back was not a pleasant one Neither of the two ladies in the hospital had the least idea of the dangerous position which they were in—not from the Boers so much as from the cross fire to which the building was subjected the whole day and which could not be avoided All through the siege every lady in Mafeking engaged in nursing the sick worked under conditions such as I hope no woman will ever have to live or work under again Ill fed (but with the best we could give them) and hard worked, in constant danger from shell and bullet, their true British pluck came out No order given was disobeyed, month after month was passed in the terrible heat and when we were constantly being disappointed by rumours of relief being close at hand, but no murmur was ever heard Every day women unaccustomed to such work or to the sights incident on war braced themselves together and held bleeding and mangled limbs whilst myself or my colleagues operated I am afraid that the public have heard very little of those ladies who did the really hard and dangerous work in attending the sick and wounded during the siege Like all true nurses they are satisfied with the thanks of their grateful patients and prefer not to see themselves figuring as heroines in the daily prints,

To give details of all the interesting cases would take too much space, so I will only give brief notes of a few of the most striking

Perhaps the most interesting case was that of one of the men in the railway division who was washing one evening after returning from his duties in the trenches He suddenly, as he describes it, "got knocked silly by a tremendous blow on the head" A Mauser bullet had entered the left side of his skull and had made an exit through the right side in a line as near as possible in the centre of each inferior frontal convolution measuring from before backwards When he was brought to the hospital he assisted to remove his clothing and answered questions and spoke quite rationally both then and at various times during the night, though he slept rather uneasily On the next morning when I saw him he had no recollection of all that had happened to him from the time he had felt the blow of the bullet to the moment I spoke to him He had a severe headache which lasted for a week Diplopia, which was well marked at first but gradually diminished, lasted for 10 days, at the end of which time he was quite well and his wounds had healed

Another interesting case was that of a man of the Cape Police He was injured by a Mauser bullet which entered the body at the level of the junction of the sixth rib and the costal cartilage about two inches to the outer side After having passed through the liver it must have gone through the right kidney and then through the muscles and integuments of the back, making its wound of exit just above the posterior superior iliac spine He complained of very severe pain in the right knee and on the inner aspect of the thigh, which lasted for 34 hours, but hardly any abdominal pain was present There were no lung symptoms Hæmaturia was well marked for two days and then disappeared On the third day the patient was to all intents and purposes well We kept him in bed for a week, greatly against his will, as he was anxious to return to duty and 'wipe out the insult"

The following case of a native is also interesting A "pom pom" shell came through the wall of the hut in which he was sitting and exploded A piece of the shell struck him, but so slight was the pain caused by the blow that he was not quite sure "if it had gone in" There was a small wound in the flank, and from that a contused line led downwards, in the middle of which was a lump such as would be caused by a blow, A probe would not pass beyond this point on the first day Two days after on account of the appearance of pus at the lower wound I probed again, when suddenly the probe slipped along and struck metal, and I sent for Major Anderson to have a look at the patient with me We decided to cut down on the end of the probe and we did so I made an opening large enough to pass my little finger, and at once recognised the point of a "pom pom" shell Nearly half of the shell, must, after having passed the lower opening, grooved the brim of the pelvis, then turned downwards and inwards along the outer surface of the ilium and afterwards turned directly upwards and outwards Having enlarged the wound I made a hook on the end of the probe and, passing it into the powder chamber of the shell by steady pulling and enlarging the wound, got it out It was remarkable that the probe would not pass with ease the first time considering the size of the wound The fact that the point of the shell was pointing outwards was a thing we constantly noticed with bullets They were nearly always found where they were lying under the skin opposite the wound of entrance in a position pointing towards that wound During the removal of the fragment of shell the patient was not under an anæsthetic He apologised to me afterwards for making so much noise during the operation; as a matter of fact he had only given one or two grunts On May 10th or 11th the patient went out of hospital and arranged a looting tour through the Transvaal He and his party got ambushed, however, too close to a Maxim and suffered the penalty

Amputation we found to give the best results from a surgical point of view In spite of the want of proper dressings towards the end of the siege and the overcrowded state of the hospital, we never had a wound which became septic Two cases of gangrene occurred but they were the consequence of the tremendous injuries inflicted, not from failure of antiseptics The hospital, constructed for 47 patients always had from 50 to 70 and more often 100

Of wounds those from the Mauser and Mannlicher bullets, which are indistinguishable, did best We had many cases in which the bullets had passed through joints, which all did well, and after healing regained good movement under massage and calisthenics We had some few cases in which bones had been drilled perfectly cleanly, with no splintering or fracturing accompanying. The Lee-Metford bullet gives more trouble, but, speaking generally, inflicts an easily treated and clean wound. The Martini bullet gives an ugly wound and when it strikes bone does great damage. The enemy used the true explosive bullet as well. We had from time to time several cases which we suspected to be due to explosive bullets, and at last we got one where a bullet, exploding in the loophole, tatooed a man's face with powder and peppered him with lead. Major Anderson attended the man on admission to hospital. I afterwards saw him with Major Anderson and there was no shadow of doubt about it. Mauser, Lee-Metford, and Martini expanding bullets (soft-nosed) were used constantly. Shell-wounds were the most troublesome wounds, even when they were very slight. Of two cases of enterostomy we performed for shell-wounds one recovered. In each case the abdominal wall was badly damaged. Bullet-wounds of the abdomen we left alone and treated by opium and feeding. These patients all died. In spite of opinions expressed by high authorities I think we might have saved one or two by operating, as in the case of the shell-wounds mentioned above. No argument can convince me that a hole in the bowel, or two or three of them, would not give the patient a better chance by being closed. All our patients so wounded died from septic peritonitis or hæmorrhage.

STATEMENT OF ADMISSIONS, DISCHARGES, AND DEATHS AT THE VICTORIA HOSPITAL, MAFEKING, FROM OCT. 13TH, 1899, TO MAY 16TH, 1900, INCLUSIVE.

	Protectorate Regiment.		British South Africa Police.		Cape Police.		Bechuanaland Rifles.		Town Guard.		Inhabitants.		Natives and Cape Boys.		Staff.	Medical staff.	Boer prisoners.	Total.	
	Sick.	Casualties.	Sick.	Casualties.	Sick.	Casualties.	Sick.	Casualties.	Sick.	Casualties.	Sick.	Casualties.	Sick.	Casualties.	Sick.	Sick.	Casualties.	Sick.	Casualties.
Admissions ...	170	78	39	11	52	13	39	4	73	13	30	6	78	136	5	4	16	490	277
Discharged ...	149	50	34	5	46	9	38	3	61	5	26	4	41	87	5	4	9	404	172
Deaths	5	19	1	6	3	2	1	1	6	8	3	2	31	36	—	—	1	50	75
In hospital on May 16th ...	16	9	4	—	3	2	—	—	6	—	1	—	6	13	—	—	6	36	30

Medical cases, especially typhoid fever and dysentery, we had some trouble in treating owing to the scarcity of milk. Everyone, with a few exceptions, gave up all his fresh milk to the hospital, for which we were deeply grateful, but even so the supply was shorter than the demand. Commandeering only made matters worse. Malarial fever was bad and of a bad type. This was to be expected, as the men had to live all day in newly-dug trenches; besides we had extremely heavy and "out of-season" rains. In 1898 we had the same condition practically along the Bechuanaland Railway north of Mafeking, and never before or since has there been so much fever in the immediate vicinity of the railway, where at that time a great deal of virgin soil was disturbed followed by heavy "out-of-season" rains. The fever then also was of a bad type.

The food-supply, composed of various army rations, and an occasional ox, was nourishing enough, but the amount was limited. Towards the end of the siege horses, mules, and donkeys were eaten. A quart of "sowens" was daily given out as an addition to the half ration. "Ryan buns" (from Captain Ryan) were the salvation of the place. They were made from the Scotch oats imported for the horses. After being ground and the husks sieved off a six-ounce bun was made of the flour to which a very small portion of lard was added. Owing to no proper wire gauge being available the flour was a little coarse and husky, but it was nutritious, and, in spite of grumbling amongst unreasonable people it was eaten by all. There is no doubt we all knew what hunger was, and there was no one who was not constantly in a state of longing for a "good feed." Personally, about the last two months of the siege I got a terrible craving for white bread and would have purchased flour at any price could it have been obtained. I was not alone in this feeling, which I ascribe to a systemic starvation from the want of wheat-flour supplies. Of the three meats, horse, mule, and donkey, the latter is by far the best and most palatable. Horse and mule flesh is most indigestible and unsatisfying, especially when almost skin and bone. A brawn made of the skins of these animals with scrapings of the heads and bones highly flavoured with spices was absolute filth, but nevertheless was sold rapidly by the military authorities at 1*s.* per pound, and was eagerly eaten by the defenders as a means of "filling up the cracks" in a half-ration diet. Constant watching—and there were none who did not watch to a large extent—and short rations, however, were bound to tell on us sooner or later. We could defend our town, but I feel quite certain that to march three miles and fight could never have been done at any time after the middle of February. It was remarkable how little time it took to get the defending force fit to march when full rations were dealt out, which I ascribe to the removal of anxiety as much as anything else. We knew what our fall meant to the nation, and our anxiety was for that, not for ourselves. No one would ever have been taken alive here. The word "surrender" was never once heard during our long siege in Mafeking. When it is understood that with 1200 men at the end of the siege we defended a front of 13 miles against a much shorter front at the beginning of the siege with 1500 men it will be realised what mental and bodily strain there must have been. No post had a decent body of men to defend it and some had only four or five men. At one point we were 65 yards from the enemy, near enough to throw stones into their trench and to have them sent back to ours.

I append a table from which you will see the numbers of sick and wounded respectively that we dealt with during our seven months' enforced retirement and the mortality, which considering everything is extremely light. In all 767 of the working garrison passed through hospital out of roughly speaking 1500 men.

Mafeking, Rhodesia.

THE IMPERIAL YEOMANRY FIELD HOSPITAL AND BEARER COMPANY.

By CHARLES STONHAM, F.R.C.S. ENG.,

CHIEF SURGEON AND OFFICER COMMANDING THE IMPERIAL YEOMANRY FIELD HOSPITAL, SENIOR SURGEON, WESTMINSTER HOSPITAL, ETC.

I feel sure that you and our friends and colleagues at home will be interested to hear something of the doings of the Imperial Yeomanry Field Hospital and Bearer Company, occupying as they do a unique position as being the only field hospital and bearer company which has ever left the country under civil auspices. Let us hope that we shall but prove to be the pioneers of many such should the needs of the Empire unfortunately require their services.

Before leaving England I heard it asserted more than once that although civilians would prove of inestimable benefit in supplying the needs of stationary and base hospitals they could not succeed in the more arduous and hazardous duties of caring for the wounded on the field, nor would they themselves be fitted to withstand the fatigues and hardships necessarily entailed by marching with an army at the front. The career of our field hospital and bearer company has abundantly proved that doubts such as these are unfounded, and I venture to express the opinion that when the final verdict is passed upon our work even the most captious must fain admit that the Imperial Yeomanry Field Hospital and Bearer Company have fully justified the most sanguine hopes of those who so patriotically equipped and sent them out

I have the good luck to have associated with me Major G E Hale, D S O , R A M C , who is in command of the bearer company No man could be more agreeable as a companion and fellow worker, and his expert knowledge of transport and camp life has been of the utmost service, if all men of the Royal Army Medical Corps had the excellent personal and professional calibre of Major Hale, we should hear, instead of carping censure, unqualified admiration for the corps to which he belongs Non commissioned officers and men have, as a whole worked hard and well, comparing most favourably with men of the regular army, and as the majority of them are but 'prentice hands they are much to be commended

In this and in my succeeding letters I propose to give a brief outline of the work which we have done On leaving England our great anxiety was that the war would be over before we could reach Cape Town, now our aspirations are in an opposite channel and our thoughts are turned homewards Our mental condition has undergone much the same change as did the lady's on her first voyage—for the first 24 hours she expressed fears that the ship would go down and during the next few days she was afraid it would not By the way our voyage was not propitious, for, as is well known, our transport, the *Winkfield*, collided with and sank the Union liner *Mexican* 70 miles from Table Bay

Had we known the country to which we were going we should not have had any anxiety as to the speedy termination of the war The British are fighting physical geography rather than a people, and those who have been out here and have seen what we have seen will be the most lenient in their judgment of reverses and checks, which are so easily condemned by some who have only the morning paper as a source of information and know only the physical character of their own country

Since we left England we have marched from Bloemfontein on May 28th up to the present date 1150 miles, have been present at 11 engagements, and have afforded relief to 1850 patients; we have admitted 650 men into hospital who have been carried by the bearer company's ambulances, sometimes for days and for long distances, until they could be sent by sick convoy to the nearest stationary or base hospital

We arrived in Table Bay on April 6th, and as our ship was considerably damaged in the collision we were at once sent into the dock instead of waiting our turn to disembark I need not dwell upon the difficulties which we experienced in Cape Town in being sent on, at last they were overcome and we entrained on April 29th to proceed north, although our actual destination was apparently unknown However, in due course we arrived at Bloemfontein on May 2nd, having stopped a few hours at Deelfontein to see the Yeomanry Base Hospital and to have breakfast with our numerous friends there At fever stricken Bloemfontein we were allotted camping ground in the foulest place which I have ever seen, and here we waited till May 28th before we could get transport animals We here packed our wagons and made all ready for a start as soon as we should get orders On May 28th we marched under orders to proceed to Kroonstad We were quite alone and had no escort, indeed, we marched alone as far as Pretoria, a very different condition of things as we were to find later, to forming part of an advancing army We arrived at Kroonstad on June 4th, drew four days rations and started on the next morning for Johannesburg, but we were not destined to reach there so quickly as we thought It is now well known from my telegrams and letters that we were present at the action on June 7th when the Boers, under General C de Wet, destroyed the line at Rhenoster river, cut up the 4th Derby Militia, and destroyed our mails, stores, warm clothing, and ammunition at Roodevaal station which they eventually blew up It was here that we first came under fire, the Boers, mistaking us for a convoy and reinforcements, firing on our wagons but fortunately doing no harm They, however, made us prisoners, but gave us every facility for carrying on our work and showed us many kindnesses until they were driven back by Lord Methuen on June 11th after which action we admitted to our hospital 12 wounded Yeomen

On June 7th we had 29 killed and 91 wounded, the latter keeping us hard at work for two days, many of these men had been injured by fragments of shell, the wounds in some cases being exceedingly severe, the soft structures being lacerated and the bones much comminuted Our arrival on the scene was providential Dr Buchanan, the regimental medical officer attached to the Derbyshires was singlehanded, and had not the necessary equipment with him for dealing with so many severe cases, even if it had been in the power of one man to do so

Our experiences at Rhenoster river were most interesting and I think I may say unique, but as my letters already referred to have given a short account of them I need not dwell on them further It was most unfortunate that we had to move on June 9th, a step rendered imperative by the impending action (June 11th) as De Wet meant to occupy the kopje beneath which we were, and moving the patients necessarily entailed considerable suffering and, I regret to say, cost some lives which would, I think, have otherwise been saved On June 11th, after the action, Lord Methuen came round the hospital, saw all the wounded men, and expressed his satisfaction with our arrangements With the advent of such a large force we of course became very busy, as it soon became known that our equipment was all that could be desired

On June 14th we sent a sick convoy of 108 by road to Kroonstad, our ambulances taking them all under Major Hale's command He returned on June 18th, and on the following day I took a further convoy of 102 by train, returning on the next day

On June 22nd we struck camp and proceeded on our way to Johannesburg arriving there on the 27th and encamped in the grounds of the Wanderers' Club

On June 29th we set out for Pretoria and reached there on the next day, when I had an interview with Lord Roberts in reference to our experiences at Rhenoster river, as the result of which he wrote to General de Wet thanking him for his kindness to us during the time we were in his hands We remained at Pretoria until July 7th (camping at Arcadia), when we received orders to march and join General Mahon's brigade which was at Reitfontein, near Irene Failing to come up with him there we were to continue our march until we found him Accordingly we marched to Reitfontein, but the brigade had left, so the next day we determined to push on although we had no means of finding out where General Mahon was but an officer commanding a detachment of Irish Fusiliers who were holding a position near our camp told us he thought Mahon was at Baasfontein We eventually found the brigade, which had joined General Hutton, at Reitfontein No 6, but on our way we nearly marched into the Boer lines, for we had taken a wrong road and only discovered our mistake when we saw and questioned our own advanced outposts whose line we had passed through

On July 9th, 10th, and 11th we sent out ambulances as fighting was in progress, but we had very few casualties, the Boers being strictly on the defensive

On July 12th the camp broke up and the force marched back to Pretoria, we, however went with 50 sick to Springs where we arrived late in the afternoon and were lucky enough to be able to send the sick to Johannesburg on the same evening by train On the following day we telegraphed to the principal medical officer, Pretoria for instructions and received orders to return to Pretoria at once We marched on July 15th, arriving at our destination on the 17th Up to this time we had been marching by ourselves, but we were to become part of an advancing force particulars of which I shall give you in my next letter

Barberton Sept. 20th

NOTES FROM SOUTH AFRICA

(FROM OUR TRAVELLING CORRESPONDENT)

I arrived at Pretoria four days ago (Oct 1st) after an uneventful journey from Kroonstad Nearly two months have elapsed since my previous visit and during that time the aspect of the town has considerably changed The pretty little capital of the Transvaal has been so beautified by the advent of the South African spring that I should hardly have known it again The stately blue green trees and the enormous weeping willows which adorn the chief streets and avenues are now clothed in vivid green and the gardens of the numerous villas are filled with flowers The cloudy sky and the misty atmosphere—heralds of the approaching rainy season—have softened the sharp outlines of the surrounding hills, and the general effect produced is more that of an English than of an African landscape Though the nights are fairly cool the heat at noon-day is now somewhat oppressive, the climate is more "relaxing" than ever, and most newcomers complain of indefinable languor and indisposition to exertion.

The military medical arrangements are now, and have been for some time, complete and in full working order. The hospitals are fairly full, but chiefly with mild or convalescent cases, and they can be readily depleted at any moment by the hospital train service and the convalescent camps. The following is a complete list of the military hospitals now established at Pretoria and in its environs. For convenience of administration the town is divided into an eastern and a western section. In the eastern section are comprised No. 2 General Hospital, the Welsh Hospital (this has just been amalgamated with No. 2 General Hospital), Langman's Hospital, the Imperial Yeomanry Branch Hospital, No. 2 Infectious Hospital, the Nursing Sisters' Hospital, and a convalescent camp. In the western section there are No. 1, No. 2, and No. 3 Model School Hospitals, the Palace of Justice Hospital (which includes the *personnel* of the Irish Hospital), the Racecourse Hospital, the Railway Rest Hospital, No. 1 Infectious Hospital, and the Native Followers' Hospital. Of these the three large hospitals—No. 2 General Hospital, the Imperial Yeomanry Hospital, and the Palace of Justice Hospital—can take nearly 2000 patients. Including the smaller hospitals and the convalescent camp, Pretoria has now accommodation for upwards of 4000 sick men. The total number of patients in hospital four days ago was 1997. Of these 242 were suffering from enteric fever, 180 from "other fevers" (including malarial fever, simple continued fever, and a few cases of measles and diphtheria), and 149 from gunshot wounds. The comparatively small number of cases of enteric fever and "other fevers" is a cheering sign, but old residents prophesy a recrudescence of fever after the rains.

The Princess Christian Hospital train came into Pretoria on the day after my arrival, and through the courtesy of Dr. Percy Lowe, the medical officer in charge, I was enabled to take a short trip to Charlestown, in the north of Natal, and back in this beautiful train. Our route lay *viâ* Elandsfontein, Heidelberg, and Standerton, through a pretty country of rolling downs. This part of the Transvaal much resembles the Wiltshire downs in its general features. The line between Elandsfontein and Charlestown is closely guarded, as small bodies of the enemy are still lurking in the neighbourhood. At Standerton is No. 4 Stationary Hospital, a large marquee hospital of, I should think, some 400 beds, but time did not permit of a visit. Charlestown, where the train unloaded, is a tiny town just within the Natal border. No. 1 Stationary Hospital is established here, a beautifully laid out hospital of 500 beds. A stay of a few hours at Charlestown just allowed me time enough to visit Majuba Hill and Laing's Nek, names which recall sad memories to English ears.

On our return to Pretoria we found both No. 3 (under Major Russell) Hospital train and No. 5 Hospital train (under Major M. T. Yarr) in the station, and I had an opportunity of comparing these trains, which may be considered types of the five Government trains proper, with the Princess Christian train. The Princess Christian train, unlike the others, was specially designed and built as a hospital train. As it has been frequently described with great minuteness I merely give a general sketch of its arrangements here for the purpose of comparison. It is composed of seven "bogey" cars, each painted white outside and adorned with red crosses and "Princess Christian Train" in gold letters. The first car contains a foul linen store and two beds for nursing sisters in one room and two beds for sick officers in another. The second car has two beds for medical officers, a mess-room, a dispensary, and a pantry. The position of the foul linen store is, on the face of it, a most undesirable one and is a grave blot on the general design. I think, personally, too, that the presence of sick officers in the staff carriages is an objectionable feature. The third, fourth, fifth, and sixth cars are for patients. Each car carries 18 patients and four orderlies. Including two sick officers the whole train thus carries 74 patients (22 less than the Government trains). The wards are fitted with removeable iron cots in three tiers. The whole interior is beautifully decorated, the beds have pretty coverlets, and the general effect is wonderfully bright and cheery. Each ward has a fixed wash-basin, a pretty stove, and a water closet. The moveable cots are a very great advantage, as they enable patients to be transferred from stretchers into cots outside the train, but I think that three tiers are a tier too many. The seventh and last car is the kitchen car; it is beautifully fitted up, but is in a most inconvenient position at the extreme end of the train. There is no pack-store car—a very serious omission. An ordinary short railway truck has had to be added to receive men's kits, but there is no through communication between it and the rest of the train so that kits cannot be sorted *en route*. There should, of course, have been a special pack-store car, part of which could have been used as a foul linen store, as in the Government trains. The position of the foul linen store, the absence of a pack-store, and the three-tier arrangement of the cots are the main defects in the design of the Princess Christian train. Apart from these defects it is a beautiful hospital on wheels in which patients enjoy every luxury and comfort that money can buy. The staff is practically the same as that of the Government trains—two medical men (at the present moment there is only one), two nurses, one civil compounder, one *chef*, and 19 rank and file.

Speaking generally, the five Government hospital trains are of the same type, and they are all composed of converted passenger cars. Each train is made up of seven "bogey" cars—longer and wider than in the Princess Christian train—arranged in the following order. First the staff car, a first-class saloon car of five compartments, two of which are occupied by the medical staff and two by the nursing staff, the fifth being used as a staff mess room. The second is the kitchen car, with orderlies' bunks on one side of the kitchen and the dispensary on the other. The third, the fourth, the fifth, and the sixth are long corridor cars gutted and fitted with bunks, each car containing 24 beds in two tiers, with a water-closet and a lavatory at each end. The seventh is the pack-store, linen store, and stewards' store. Four beds in each ward are screened off by curtains and may be used for officers. Each train thus carries 96 patients, of whom 16 may be officers. The carriages might be better ventilated. The cots—except in No. 4 train—are fixed, and the trains, though scrupulously clean, are not so prettily got up, either internally or externally, as the Princess Christian train. On the whole, however, they are very practical and have worked exceedingly well throughout the campaign, and many people prefer their general arrangement to that of their beautiful rival. The so-called "Boer Ambulance" train is composed of two captured Boer ambulance carriages—large and well-ventilated, but without water-closets and roughly put together—to which an indefinite number of ordinary saloon cars are added; it is only used for convalescents.

Pretoria, Oct. 4th.

THE MEDICAL STAFF AND THE BOARD OF MANAGEMENT OF THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

THE following important communication has been addressed to the editor of the *Times*:—

SIR,—The controversy which has been carried on in your columns between the board of management of the National Hospital for the Paralysed and Epileptic and its medical and surgical staff is of public importance. The main point for which the staff of the hospital is struggling is a moderate representation on the board of management, the absence of which has led to irritating friction and to the present unhappy state of affairs.

It is impossible that the inclusion of representatives of the staff could do otherwise than strengthen the board of management in wisely carrying on the great charitable work with which it is entrusted by the governors.

From long experience of hospital administration we desire to record our firm conviction that the demand of the staff for representation on the board of the hospital is a perfectly reasonable one and one which in other hospitals has conduced to harmonious working and efficient administration.

We venture to express the hope that the board of management and the governors will put an end to this controversy by granting the representation asked for, in order that the hospital, whose reputation is more than national, may continue its career of usefulness,

We are, Sirs, yours, &c.,

Lister; William H. Broadbent, M.D., F.R.C.P., F.R.S.; John Williams, M.D., F.R.C.P.; J. Fayrer, K.C.S.I., F.R.S.; Henry Thompson, F.R.C.S.; William MacCormac, K.C.V.O., F.R.C.S.; J. Burdon Sanderson, F.R.S.; R. Douglas Powell, M.D., F.R.C.P.; Samuel Wilks, M.D., F.R.C.P., F.R.S.; Walter Foster, M.P., M.D.; John Batty Tuke, M.P., M.D.; W. B. Dalby, F.R.C.S., St. George's Hospital; Dyce Duckworth, M.D., F.R.C.P., St Bartholomew's Hospital; T. Lauder Brunton, M.D., F.R.C.P., F.R.S., St Bartholomew's Hospital; Hermann Weber, M.D., F.R.C.P., German Hospital; T. Clifford Allbutt, M.D., F.R.C.P., F.R.S., University of Cambridge; W. H. Allchin, M.D., F.R.C.P., Westminster Hospital; Arthur E. Barker, F.R.C.S., University College Hospital; Thomas Barlow, M.D., F.R.C.P., University College and Great Ormond-street Children's Hospitals; A. Boyce Barrow, M.B., F.R.C.S., Royal Free Hospital; William H. Bennett, F.R.C.S., St George's Hospital; John Astley Bloxam, F.R.C.S., Charing-cross Hospital; J. Mitchell Bruce, M.D., F.R.C.P., Charing-cross Hospital; Thomas Bryant, F.R.C.S., Guy's Hospital; Robert W. Burnet, M.D., F.R.C.P., Great Northern Hospital; William Cayley, M.D., F.R.C.P., Middlesex Hospital; W. B. Cheadle, M.D., F.R.C.P., St. Mary's and Great Ormond-street Children's Hospitals; H. H. Clutton, M.A., F.R.C.S., St Thomas's Hospital; Alfred Cooper, F.R.C.S., St. Mark's Hospital; William Ewart, M.D., F.R.C.P., St George's Hospital; George P. Field, M.R.C.S., St. Mary's Hospital; T. Henry Green, M.D., F.R.C.P., Charing-cross Hospital; Warrington Haward, F.R.C.S., St. George's Hospital; Christopher Heath, F.R.C.S., University College Hospital; Donald W. C. Hood, M.D., F.R.C.P., West London Hospital; Henry G. Howse, M.S., F.R.C.S., Guy's Hospital; C. B Keetley, F.R.C.S., West London Hospital; D. B. Lees, M.D., F.R.C.P., St Mary's and Great Ormond-street Children's Hospitals; Stephen Mackenzie, M.D., F.R.C.P., London and Royal Ophthalmic Hospitals; J. Macready, F.R.C.S., Great Northern Hospital; Howard Marsh, F.R.C.S., St. Bartholomew's and Great Ormond-street Children's Hospitals; Henry Morris, M.A., F.R.C.S., Middlesex Hospital; William M. Ord, M.D., F.R.C.P., St. Thomas's Hospital; Edmund Owen, F.R.C.S., St Mary's Hospital; F. W. Pavy, M.D., F.R.C.P., F.R.S., Guy's Hospital; Bernard Pitts, M.A., F.R.C.S., St Thomas's and Great Ormond-street Children's Hospitals; James E Pollock, M.D., F.R.C.P., Brompton Hospital; Sydney Ringer, M.D., F.R.C.P., F.R.S., University College Hospital; Frederick T. Roberts, M.D., F.R.C.P., University College Hospital; William Rose, F.R.C.S., King's College Hospital; Seymour J. Sharkey, M.D., F.R.C.P., St. Thomas's Hospital; Walter G. Spencer, M.S., F.R.C.S., Westminster Hospital; Waren Tay, F.R.C.S., London and Royal Ophthalmic Hospitals; Frederick Taylor, M.D., F.R.C.P., Guy's Hospital; Frederick Treves, F.R.C.S., London Hospital; Samuel West, M.D., F.R.C.P., St. Bartholomew's and Royal Free Hospitals; Alfred Willett, F.R.C.S., St Bartholomew's Hospital; C. Theodore Williams, M.D., F.R.C.P., Brompton Hospital; I. Burney Yeo, M.D., F.R.C.P., King's College Hospital.

THE PLAGUE.

PLAGUE IN GLASGOW.

SIX weeks have now elapsed since any fresh case of plague was notified in Glasgow. The last plague patients in the Belvidere Hospital were discharged on Nov. 3rd, so that if no fresh case should arise in the interval Glasgow will be able to be officially declared free from plague at the expiration of 10 days from that date—namely, on Nov. 13th.

PLAGUE IN BREMEN.

A fatal case of plague is reported from Bremen. It occurred in the person of a seaman on board a steamer trading from Buenos Ayres. The steamer arrived at Bremen on Oct. 27th and from that date to Oct. 30th the patient was in a private house from which he was removed to the hospital, where he died on Nov. 5th. All necessary precautions as to disinfection and isolation of "contacts" are being taken.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6379 births and 3908 deaths were registered during the week ending Nov. 3rd. The annual rate of mortality in these towns, which had been 17·1, 17·1, and 17·3 per 1000 in the three preceding weeks, further rose last week to 17·5. In London the death-rate was 16·7 per 1000, while it averaged 18·1 in the 32 provincial towns. The lowest rates in these towns were 9·1 in Norwich, 10·3 in Croydon, 13·4 in Cardiff, and 13·6 in Leicester; the highest rates were 21·2 in Sheffield, 22·4 in Gateshead and in Manchester, 23·4 in Liverpool, and 25·5 in Salford. The 3908 deaths in these towns included 425 which were referred to the principal zymotic diseases, against 468 and 485 in the two preceding weeks; of these, 121 resulted from diarrhœa, 94 from diphtheria, 81 from "fever" (principally enteric), 49 from measles, 44 from whooping-cough, and 36 from scarlet fever. The lowest death-rates last week from these diseases occurred in Plymouth, Bristol, Cardiff, and Bradford; and the highest rates in West Ham, Leicester, Birkenhead, Burnley, Blackburn, and Sheffield. The greatest mortality from measles occurred in Brighton and Swansea; from whooping-cough in Gateshead; from "fever" in Portsmouth, Birmingham, Birkenhead, and Blackburn; and from diarrhœa in Manchester, Burnley, Huddersfield, and Halifax. The mortality from scarlet fever showed no marked excess in any of the 33 towns. The 94 deaths from diphtheria included 42 in London, seven in West Ham, seven in Leicester, four in Portsmouth, four in Liverpool, and four in Sheffield. No fatal case of small-pox was registered last week either in London or in any of the 32 large provincial towns; and only one small-pox patient remained under treatment in the Metropolitan Asylums hospitals on Saturday last, Nov. 3rd. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2619, against numbers increasing from 1703 to 2489 on the nine preceding Saturdays; 336 new cases were admitted during the week, against 322, 328, and 320 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 164 to 236 in the four preceding weeks, further rose last week to 267, but were 108 below the corrected average. The causes of 57, or 1·5 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Bradford, Leeds, Newcastle, and nine other smaller towns; the largest proportions of uncertified deaths were registered in Portsmouth, Birmingham, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·5 and 19·6 per 1000 in the two preceding weeks, was again 19·6 during the week ending Nov. 3rd, and was 2·1 per 1000 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 11·3 in Leith and 15·1 in Edinburgh, to 22·4 in Glasgow and 24·6 in Paisley. The 607 deaths in these towns included 24 which were referred to diarrhœa, 18 to whooping cough, 12 to "fever," eight to measles, eight to scarlet fever, and seven to diphtheria. In all, 77 deaths resulted from these principal zymotic diseases, against 67 in each of the two preceding weeks. These 77 deaths were equal to an annual rate of 2·5 per 1000, which was 0·6 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had decreased from 53 to 25 in the four preceding weeks, further declined last week to 24, of which 14 occurred in Glasgow, four in Dundee, and three in Edinburgh. The deaths from whooping-cough, which had increased from 13 to 18 in the three preceding weeks, were again 18 last week, and included 15 in Glasgow. The deaths referred to different forms of "fever," which had been six and four in the two preceding weeks, rose again last week to 12, of which eight were registered in Glasgow and two in Greenock. The fatal cases of measles, which had been two and four in the two preceding weeks, further rose to eight last week, and included five in Aberdeen and two in Edinburgh. The deaths from scarlet fever, which had been five and eight in the two preceding weeks, were again eight last week, and included five in Glasgow and two in Paisley. The fatal cases of diphtheria, which had been eight and six in the two preceding weeks, rose again last week to seven, of which three were recorded in Edinburgh and two in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had increased from 98 to 139 in the four preceding weeks, further rose last week to 148, and showed an excess of 31 over the number in the corresponding period of last year. The causes of 34, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·4, 24 9, and 20 0 per 1000 in the three preceding weeks, rose again to 21·9 during the week ending Nov. 3rd. During the past four weeks the death-rate in the city has averaged 23 3 per 1000, the rate during the same period being 15 8 in London and 15 2 in Edinburgh. The 147 deaths belonging to Dublin registered during the week under notice were 13 in excess of the number in the preceding week, and included 13 which were referred to the principal zymotic diseases, against numbers declining from 36 to 12 in the four preceding weeks; of these, five resulted from diarrhœa, three from whooping-cough, three from "fever," one from measles, and one from scarlet fever. These 13 deaths were equal to an annual rate of 1·9 per 1000, the zymotic death-rate during the same period being 1·4 both in London and in Edinburgh. The fatal cases of diarrhœa, which had decreased from 27 to six in the four preceding weeks, further declined last week to five. The deaths from whooping-cough, which had been two in each of the two preceding weeks, rose to three last week. The fatal cases of "fever," which had been five and four in the two preceding weeks, further declined to three last week. The 147 deaths in Dublin last week included 26 of infants under one year of age and 35 of persons aged upwards of 60 years; the deaths of infants showed a decline, while those of elderly persons considerably exceeded the number in the preceding week. Six inquest cases and six deaths from violence were registered, and 69, or nearly one-third, of the deaths occurred in public institutions. The causes of seven, or nearly 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

Royal Navy Medical Service.

Fleet Surgeon (retired) Alfred Gideon Delmege, M.V.O., has been allowed to assume the rank of Deputy Inspector-General of Hospitals and Fleets.

The following appointments are notified:—Fleet Surgeon E. W. Luther to the *Hood*. Staff Surgeons; J. H. Whelan to the *Hood* and J. McElwee to the *Pioneer*. Surgeons: A. H. H. Vizard to the *Boscawen* for the *Agincourt*; H. I. Rogers to the *Northampton*; E. O. Cridland to R.M. Depôt, Deal; M. H. Knapp to the *Wildfire*; H. R. Gardner to the *Hood*; A. J. Laurie to the *Cambridge*; O. S. Facey to the *Vivid*; W. K. Hopkins to the *Wye*; and J K. Raymond to the *Wildfire*.

Royal Army Medical Corps.

The under-mentioned officers of the Royal Army Medical Corps are granted the local rank of Surgeon-General whilst Principal Medical Officers, Lines of Communication, South Africa:—Colonel W H. McNamara, C.B., and Colonel J. A. Clery. Colonel J. F Supple is granted the local rank of Surgeon-General whilst Principal Medical Officer at the Base, Cape Town. Colonel T. Gallwey, C.B., is granted the local rank of Surgeon-General whilst Principal Medical Officer, Natal. The undermentioned officers are granted the local rank of Colonel whilst Principal Medical Officers of Divisions, Field Force, South Africa:—Lieutenant-Colonel S. H. Carter, Lieutenant-Colonel C. Todd, Lieutenant-Colonel G. T. Goggin, Surgeon-Lieutenant-Colonel J. Magill, Coldstream Guards, and Major B. M. Skinner The undermentioned officers are granted the local rank of Colonel in charge of General Hospitals, Field Force, South Africa:—Lieutenant-Colonel Morgan D. O'Connell, Lieutenant-Colonel A. Keogh, Lieutenant-Colonel H. Martin, Major T. R. Lucas, Major H. J. Barratt, and Major S. Westcott. The undermentioned officers are granted the local rank of Colonel whilst Principal Medical Officers of Divisions in South Africa:—Lieutenant-Colonel J. D. Edge Lieutenant Colonel W. Donovan, Lieutenant Colonel R W. Mapleton, Lieutenant-Colonel, J. A. Gormley, and Lieutenant-Colonel W. A. May. The undermentioned officer is granted the local rank of Colonel whilst Principal Medical Officer of a Division and Principal Medical Officer of the Field Army, Natal:—Lieutenant-Colonel W. B. Allin. The undermentioned officer is granted the local rank of Colonel whilst Principal Medical Officer of a Division and Principal Medical Officer at Pretoria:—Lieutenant-Colonel W. L. Gubbins. The undermentioned officers are granted the local rank of Colonel whilst in charge of General Hospitals in South Africa:—Lieutenant-Colonel O. G. Wood, Lieutenant-Colonel J. O Dorman, Lieutenant-Colonel J. F. Williamson, Lieutenant-Colonel B. W. Somerville-Large, Lieutenant-Colonel R. T. Beamish, Lieutenant-Colonel J. G. MacNeece, and Major W. T. Swan.—*The London Gazette*.

Captain W. A. Ward has joined the home district (London) for duty.

Volunteer Corps.

Artillery: 1st Gloucestershire: Surgeon-Major J. S. Carleton to be Surgeon-Lieutenant-Colonel. *Rifle*: 9th Lanarkshire: William Jones Mackinnon to be Surgeon-Lieutenant 3rd (Renfrewshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Wallace Ainsworth Pride to be Surgeon-Lieutenant. 1st Tower Hamlets: John Frederick Fitzgerald Parr to be Surgeon-Lieutenant. 2nd Volunteer Battalion the East Yorkshire Regiment: Surgeon-Captain A. F. A. Fairweather to be Surgeon-Major.

Volunteer Medical Staff Corps.

The London Companies: Henry Fulham Turner to be Surgeon-Lieutenant.

Deaths in the Services.

Fleet Surgeon Richard John Barry, R N. (retired), on Nov. 5th, aged 54 years. He entered the service as surgeon in 1871, was promoted to staff surgeon in 1883, and retired after obtaining the rank of fleet surgeon in 1891.

Transvaal War Notes.

At the request of Lord Roberts the Welsh Hospital will remain in South Africa for a further period of three months.

Major S F. Freyer, R A.M.C., Lieutenant-Colonel Johnston, R A.M.C., and Lieutenant-Colonel Harvey, R.A.M.C., have been discharged from hospital to duty.

Food on Board Transports.

Mr. J. Keir Hardy, M.P., sends to the *Times* a complaint from three members of the force ordered from South Africa to China with reference to the food supplied. Among other things they complain of the following, and if a *primâ facie* case can be made out certainly some inquiry into the matter is demanded. "The food given us was bad and insufficient. …… The bread was black, sour, and heavy; the biscuits naturally hard and very oily. The biscuits bore date 1870 …… and some of them bore even an earlier date. …… The salt beef was simply abominable. It is kept in rough-looking tubs and was dated 1873. …… The meat had to be thrown overboard, and we did not receive anything in lieu thereof. …… The accommodation was also limited; two-thirds of the ship was reserved for the officers and sergeants, who numbered in all about 50, roughly, and one-third for the rank and file, non-commissioned officers and men, numbering about 500, and who have the fore part of the ship allotted them, with nowhere to sit or lie down during the day except on the dirty and rusty iron deck."

Mentioned in Despatches.

In the despatches from the general officer commanding in China and Hong-Kong Major Watson, R.A.M.C., is mentioned as having "performed excellent work under great difficulties" The following paragraph also appears: "The medical arrangements for the treatment, care, and removal of the wounded reflected great credit on Major Watson, R.A.M.C., and his subordinates. Not only were those arrangements sufficient for the British wounded, but he was also able to take medical charge of American, French, and Japanese patients and to send them into hospital. Captain Prynne, R A.M.C., and Assistant-Surgeon Pullen, I.S.M.D., were in the advanced fighting line all day dressing cases under fire. They are both valuable officers, always cool and collected."

THE CRISIS IN CHINA.

"For the first time in history the civil medical profession as a whole has had its position officially recognised by the military on a great historical occasion." Thus writes Dr Wykeham Myers, who as representing the whole body of the civil medical profession was granted permission by General Gaselee to accompany the troops in their triumphal march into the Imperial Palace at Pekin. It is gratifying to learn from the *North China Daily News* that Dr. Wykeham Myers will probably be mentioned in despatches for his excellent work when in charge of the wounded after the battle of Yangtsun, when the junk sank in the Peiho at dead of night with 25 wounded on board, all of whom were safely got out by Dr. Myers.

NATIVE AFRICAN REGIMENTS

In the *Times* of Nov. 7th there is a very interesting interview with Dr. G. Douglas Gray, P.M.O. of the British Central African Protectorate, who has just returned from Kumassi having accompanied, as medical officer the force of Central African Rifles dispatched to the Gold Coast. Apart from the usefulness of the coloured man in such cases as the late expedition to the Gold Coast the interview brings out very clearly the great good which the influence of the British officer has upon the character of practically savage native races.

THE NAVAL BRIGADE HONOURS AND PROMOTIONS.

The Queen has been graciously pleased to approve of the following appointment to the Distinguished Service Order: Surgeon Charles Clarke Macmillan.

Fleet-Surgeon James Porter to be Deputy-Inspector-General of Hospitals and Fleets; Staff Surgeon Frederick J. Lilly to be Fleet Surgeon; and Surgeon Ernest O. Lomas to be Staff Surgeon.

UGANDA.

The following telegram has been received at the Foreign Office from Colonel Ternan, Zanzibar:—"Oct. 27th.—Following received to-day from Acting Commandant of Uganda Rifles:—'Fort Ternan, Oct. 21st.—Regret to say that Dr. J. L. Sherlock, Uganda Medical Department, was killed in action with the Nandi on night of Oct. 13th.'"

Colonel Davis, I.M.S., has been appointed Principal Medical Officer of the China Field Force under General Gaselee, Colonel Bookey having vacated his charge in consequence of ill-health.

Correspondence.

"Audi alteram partem."

THE TEACHING OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—Your valuable leading article in THE LANCET of Oct. 27th (p. 1215) dealing with the question of the teaching of the art of producing anæsthesia will be welcomed by all who are attempting to give adequate instruction in this subject.

The two points which stand out as the most important are—(1) the absolute necessity for students actually to give the anæsthetic under supervision during their instruction; and (2) the further recognition by physicians and surgeons of the importance of the subject of anæsthetics.

During my own student days the system adopted at my *alma mater* was that the budding anæsthetist stood by the side of the responsible chloroformist or etherist and saw or failed to see, as the case might be, that gentleman's procedure. In most cases he saw nothing, as his attention was riveted upon the steps of the operation. We did not in those days recognise the importance of the study in which we were engaged and were keenly alive to the importance of operative surgery. Systematic lectures on anæsthetics or even demonstrations were not given, so that beyond the most crude notions we had no grip of what we should look for and what to do and what not to do. At the best the attendance was wholly uninteresting and therefore made perfunctorily, whereas now in some hospitals the students actually give the anæsthetics and are asked the reasons for this and that, are made to examine their patients before and after the administration of the anæsthetic, they learn to appreciate that the subject is literally one of vital interest and has a connexion not only with the operation theatre but with the ward—has, in fact, a clinical as well as a practical aspect. They learn that with patients whom they have personally examined and found to show noteworthy departures from the normal a careful choice of anæsthetics has to be made and a definite line of procedure taken. They recognise the phenomena of anæsthesia as they occur and are ready to meet with and combat complications or dangers should such arise. The study becomes a fascinating one if the teacher chooses to show its possibilities, its width and importance. There is, however, the personal equation of the student to be reckoned with. I can usually tell on the first day whether a man will make a satisfactory anæsthetist. The manner in which he holds an inhaler and the way in which he attacks his subject give one a tolerably accurate idea of this. Some never learn and never go beyond the rule-of-thumb stage of giving anæsthetics. These men are always a danger to their patients and their own peace of mind. As you say, much of this failure to acquire the rudiments of their subject is due to the lack of interest taken in the matter by the profession at large and the heads of the profession. When the subject of anæsthetics, using that term as a brief one to connote the science and art of producing anæsthesia, is relegated to a wholly subsidiary position, unrecognised in the curriculum which includes such abstruse studies and arts as practical pharmacy and vaccination, it is not surprising that the lazy and the careless student should absent himself from the classes which teach a non-scheduled subject. At present the individual teacher of anæsthetics may by his personal handling of students infuse enthusiasm, but usually he does so by dint of self-denial and strenuous endeavour and not infrequently in the teeth of cool indifference and even worse from many of those who sit in the seats of the mighty. He is told that the students have too much to think of already, are over-taught and over-examined, and to add yet another subject to their curriculum is to attempt the placing of that last straw which must render laminectomy the only hope of salvation for the camel student. Although most of the ablest surgeons admit the necessity of skilled anæsthetists and many loyally support those of us who are striving to teach our subject as it should be taught, yet many fail to help us and have not cast the slough of those old days when the house surgeon, the ward nurse, or anyone, in fact, was considered a competent chloroformist and was taken with the surgeon "to give chloroform" while he did the operation and "kept an eye on the patient."

Medical men frequently send to us strange messages with patients—e.g., "A B must on no account take 'gas' but may take chloroform," A B being a fit subject for the former, not for the latter. This would seem to show that the anæsthetist is looked upon as a "giver of an anæsthetic." But he should be, and in many cases is, far more. His knowledge of medicine should be adequate to enable him to conduct a most accurate physical examination, including that of the blood and secretions, and his familiarity with surgery should enable him to know what the operator requires and what will be the effect of the operator's manipulations upon the patient under anæsthesia. Again, his knowledge of anæsthetics should be such that he can adapt the anæsthetic to the necessities of the patient and the requirements of the surgeon. Of course, such a counsel of perfection cannot be attained to by the average student, but even he can at least enter the vista at the end of which he may dimly see the possibilities of perfection for which his teacher is daily striving. The tremendous responsibility of the anæsthetist, whose want of knowledge, of skill, or of courage may jeopardise the patient's life or frustrate the surgeon's most skilful endeavours, should be most fully recognised, his facilities for teaching increased, and his place in the system of the hospital training conceded, while his subject should be scheduled and made compulsory. Were this done much would be accomplished and the student of the future would be better equipped than have been many of his predecessors.

I am, Sirs, yours faithfully,

DUDLEY W. BUXTON,
Lecturer on, and Teacher of, Anæsthetics in
University College Hospital.

Mortimer-street, Cavendish-square, W., Oct. 30th, 1900.

"ON THE CONFUSION OF TWO DIFFERENT DISEASES UNDER THE NAME OF RUBELLA (ROSE-RASH)."

To the Editors of The Lancet.

Sirs,—There can be no question that this subject has not received the discussion which its importance deserves. Criticism is always wholesome and necessary in the attainment of truth, but it does not alter facts.

After a close study of rubella now for 30 years, with several hundred cases for investigation, I think that I may claim to know the disease in all its phases when I see it, and I could come to no other conclusion than that two diseases have been confused under its name.

I base my conclusions on these facts:—1. That all four epidemics referred to in The Lancet of July 14th, 1900, were the same disease. 2. That in the epidemic of 1896, where there were two definite diseases, the one was scarlet fever and the other what I then regarded as a variety of rubella. This second disease, occurring concurrently with scarlet fever, proves that it could not be scarlet fever. 3. That the disease is not a variety of rubella but a distinct disease is further proved by the fact that nearly 50 per cent. of the cases occurring in April, 1900, had previously passed through an attack of rubella within a year or more. This makes it clear that there is a "fourth disease" which has hitherto been included under the head of rubella by the profession, myself included.

In reply to my kind critic Dr. C. K. Millard, who raises the question whether the epidemic of 1900 was not after all scarlet fever, I would urge:—1. That I have never seen a case of scarlet fever with a very full rash without having a markedly accelerated pulse, whereas in this fourth disease with the fullest rash the pulse is generally not increased in frequency. 2. That I have never seen a case of scarlet fever with an abundant rash without a marked rise in temperature, whereas in this disease, with the fullest rash, the temperature usually is not raised above 99° F. 3. That I have never seen a case of scarlet fever in the young with a copious rash where the tongue did not peel on the fourth day, whereas in this disease with the fullest rash, which so much resembles the scarlet fever rash as to be, considered alone, indistinguishable, I have never seen the tongue peel. 4. That I have never seen a case of scarlet fever with a very full rash where the skin did not desquamate freely, whereas in this disease I have seen the very fullest rash not followed by any peeling, or the merest dryness of skin. 5. And, lastly, it is scarcely conceivable that were cases of scarlet fever removed from bed after five days, permitted to go out on the eighth day, and, after thorough disinfection on the fourteenth day, regardless of desquamation, allowed to go home to all parts of the country, various sequelæ would not have arisen, and scarlet fever have been spread from one end of the land to the other—even with the few cases I have recorded as the "fourth disease"—were they in reality scarlet fever.

I am, Sirs, yours faithfully,
Rugby, Nov. 3rd, 1900. Clement Dukes.

"APPENDICITIS."

To the Editors of The Lancet.

Sirs,—I am much obliged to Sir Samuel Wilks for his kind letter in The Lancet of Nov. 3rd (p. 1303). The quotations he gives from the writings of Bright and Addison and the references to his own teaching at Guy's will interest, and be appreciated by, all your readers.

I, however, still feel that it is only during the last 15 or 20 years—and I am almost inclined to say the last 10 years—that the profession has fully realised that it is in the appendix itself that probably more than 95 per cent. of inflammatory changes in the cæcal region have their origin. Before this time, I believe, in most minds the appendix occupied the background of the picture, and when a medical man saw a case of "typhlitis" he imagined, in the large majority of cases, an inflammation in and around the cæcum which had started in the walls of this part of the intestinal tract, the appendix being scarcely thought of. Now the appendix occupies the centre and dominating part in the picture, and inflammatory changes originating primarily in the cæcum are relegated to an inconspicuous background.

I am, Sirs, yours faithfully,
Nov. 5th, 1900. H. Littlewood.

THE DURATION OF THE INFECTIOUSNESS OF DIPHTHERIA.

To the Editors of The Lancet.

Sirs,—I should be glad of your opinion as to when a case of diphtheria ceases to be infectious. I take it that if there are no true Klebs-Löffler bacilli to be found on bacteriological examination, then the usual post-card may be sent to the sanitary authority stating that infection has ceased and the house may be disinfected and isolation withdrawn. Again, is it advisable in all cases to have a second bacteriological examination for a negative result?

I am, Sirs, yours faithfully,
Nov. 5th, 1900. T. W. Heywood, M.R.C.S. Eng., D.P.H.

⁂ It is difficult to state with any exactitude when a case of diphtheria ceases to be infectious. Klebs-Löffler bacilli have been stated to have been detected in the mucus of the pharynx six months after the primary attack. As a general rule if six weeks after the disappearance of the membrane no Klebs-Löffler bacilli can be found the usual post-card may be sent. A single examination may as a rule be accepted.—Ed. L.

"PNEUMOCOCCIC PERITONITIS."

To the Editors of The Lancet.

Sirs,—Your annotation in The Lancet of Nov. 3rd (p. 1290) upon pneumococcic peritonitis and the remark that it does not often attract attention in England suggested the following brief reference to two cases which have come under my notice. A girl, aged eight years, was admitted into the Bristol Royal Infirmary in 1899 with acute peritonitis of five days' duration. Abdominal section was performed but no cause for the peritonitis was discovered. She died the following day and at the necropsy no lesion of the abdominal or pelvic viscera or in the bones could be found from which the suppurative inflammation of the peritoneum present could have originated, neither was any septic focus discovered elsewhere in the body. Cover-slip preparations of the pus showed encapsuled diplococci associated with streptococci, and cultures showed the presence of the diplococcus pneumoniæ. In February of the same year a girl, aged 17 years, died in the infirmary from lobar pneumonia complicated by pericarditis. In this case acute peritonitis of a milder type was also present.

I am, Sirs, yours faithfully,
Nov. 6th, 1900. Theodore Fisher.

"THE ETIOLOGY OF RHEUMATIC FEVER."

To the Editors of The Lancet.

Sirs,—The letter of Dr. F. J. Poynton and Dr. A. Paine published in The Lancet of Nov. 3rd, p. 1306, at length does justice to the early observations of British practitioners in the bacterial origin of rheumatic fever, and admits Dr. Alfred Mantle's claim to the honour of being the first to give optical demonstration of the micrococci of rheumatic fever. That Dr. Poynton and Dr. Paine do not corroborate my observations of the existence in the blood of vast quantities of these micrococci at the onset of the disease is also definitely enunciated; it will be my duty to exhibit my proofs at the Pathological Society at the earliest opportunity possible. The stimulus given by the valuable observations of Dr. Poynton and Dr. Paine will no doubt speedily put us in possession of the true facts concerning the origin of this destructive disease.

I am, Sirs, yours faithfully,
Southwick, Nov. 5th, 1900. Edw. F. Grun.

THE TERM "INFLAMMATION" AND THE SUFFIX "ITIS."

To the Editors of The Lancet.

Sirs,—In The Lancet of Nov. 3rd (p. 1288) there appears a paragraph in which, referring to the suggestions of Dr. A. H. Smith of New York, you appear to advocate the disuse of the term "inflammation" and the suffix "itis." May I be allowed to point out a few objections to this course which seem to me to be insuperable? 1. The nomenclature suggested is to be formed by adding the suffix "osis" to the name expressing the agent that causes the disease, but it is not stated how we are to apply this suffix to names such as, for example, "staphylococcus pyogenes aureus" and "bacillus coli communis." 2. A name which has an etiological significance cannot describe a pathological process or an anatomical condition. For instance, the term "traumatosis of bone" will not tell us whether we are concerned with a bruise, a fracture, or a periostitis. 3. If we are to have an etiological nomenclature instead of an anatomical one, we shall not only have to drop the term "inflammation" but also many other terms, such as "fracture," "abscess," "hypertrophy," &c. 4. If a purely etiological nomenclature is adopted it will have the effect, contrary to the statement in the paragraph referred to, of diverting the attention from the patient to the disease, since it will imply that the only cause of the disease is that which is expressed in the name, and that, in consequence, the only method of treatment is to remove this cause, whereas many of the most successful methods of treatment at present in use have for their object the improvement of the general condition of the patient so as to enable him to combat the disease. 5. Inflammation is a distinct pathological process, as distinct, in fact, as hypertrophy or atrophy, and has a definite object, and that object is to remove or neutralise the irritant. If this fact were properly appreciated it would be an immense advantage to medicine. 6. If we are to do without the term "inflammation" and the corresponding suffix "itis," how are we to describe a condition like fibrinous pericarditis, since exactly the same condition may be caused by many different causal agents? Lastly, the term "tuberculosis" is cited as a precedent. Surely a more unfortunate precedent could not very well have been found. The name "tuberculosis" was given to a disease which was characterised by a definite anatomical lesion—the "tubercle." Since the discovery, however, of the tubercle bacillus the term has been divorced from its anatomical (and true) meaning and now has a purely etiological significance, with the result that diseases which would have been rightly included in the old sense of the term are now assigned the unsatisfactory term "pseudo-tuberculosis," and the form of inflammation which used to be called "tubercular" is now termed "nodular." Similarly, if other terms are altered in the same way and an etiological nomenclature is adopted we may expect a like confusion to be the result

By all means let us have an etiological nomenclature and, if necessary, let us apply the terms "traumatosis," "streptococcosis" (not "traumosis," "streptocosis") to diseases caused by the respective agents, but this system can never replace an anatomical nomenclature such as is implied in the suffixes "itis," "oma," &c Both systems are necessary, but neither can take the place of the other.

I am, Sirs, yours faithfully,

Charles Powell White, M D Cantab., F.R C S. Eng

Medical School, Leeds, Nov. 6th, 1900

THE ETIOLOGY OF CANCER.

To the Editors of The Lancet.

Sirs,—A patient of mine is thinking of investing a sum of money for the purpose of stimulating investigation into the etiology and cure of cancer Would some of your readers kindly assist by giving their ideas on the subject?

I am, Sirs, yours faithfully,

Nov. 6th, 1900 T. S. F.

Notification of Phthisis.—At the meeting of the Bath Sanitary Committee held on Oct. 29th the sub-committee recommended the voluntary notification of phthisis, with the usual fees for such notifications.

Municipal Elections and Medical Men in the West of England—As the result of the recent municipal elections Mr. Colston Wintle, M.R.C S. Eng., L R.C P. Lond., was elected at Bristol; Mr. W. Hadwen, M.D. St. And., L.R C.P Lond, M.R.C S Eng., at Gloucester; Mr. G. A Rae, L R.C P, L R C S., L.M. Edin., J.P., at Devonport; Mr. Elgar Down, L R C P. Lond., M.R C S. Eng., at Stoke, Plymouth; Mr E J Domville, L R.C.P. Lond., M.R C.S. Eng., at Exeter; Mr G M Winter, L R C.P. Lond., M R C.S. Eng, D.P.H. Camb, at Torquay; and Mr. R. V. Sutton, L.R C P., L.R C S Edin., L F P.S. Glasg., at Newport, Mon.

THE UNIVERSAL EXHIBITION OF PARIS.

(From our Special Correspondent.)

(Continued from p. 1311)

The Pasteur Saloon.

There was a hitch with regard to the French sanitary exhibits. In the various financial calculations made no special credit was voted for a French sanitary section. This gave rise to protests, prolonged negotiations, and loss of time. But beyond the fact that this occasioned a regrettable delay the question was finally settled in a satisfactory manner. The money was forthcoming and a special building was erected on the banks of the Seine, opposite the Press Pavilion and at the extreme eastern end of the gallery for the Army and Navy exhibits. Thus, by a sort of logical sequence, the French sanitary section merges into the French military, medical, and ambulance services which precede the purely military exhibits. The building commences with an ornamental tower. The circle is divided into four parts and in the centre there is an ornamental case surmounted with the bust of Pasteur. This, the Salon Pasteur, conveys in a small space and in compact form instructive indications of some of the most beneficent discoveries of the nineteenth century. In the centre there are relics of the great investigator and teacher. Here are the instruments, the flasks for culture broths, the microscopes, the now old-fashioned and very simple implements with which Pasteur himself worked, which he handled for many long years and to such good purpose. The bottles which he had filled and re filled stand there as silent motionless witnesses. And there are little bits of paper, so insignificant in themselves and yet so eloquent, for on these Pasteur, with his own hand, rapidly scribbled down the simple unpretentious record of his laboratory observations. They relate to his studies on rabies. It is easy to note with what method, deliberation, tidiness, and order this master mind proceeded in his investigations. First there is the indication of the method to be followed, then underneath, in a very small, neat, and legible handwriting, there is a brief account of the results of the experiments, of the fate of the inoculated animals and their symptoms, and then, well detached from the rest, are the conclusions arrived at.

The case under the bust of Pasteur is placed horizontally so that the visitors can bend over the glass and examine the contents of its eight compartments. Here the whole work of Pasteur is set forth as it were in eight chapters. In the first compartment there are models of crystals made by Pasteur himself, labeled with his own handwriting, and some of the crystals themselves in the very bottles where he placed them many, many years ago. In those days he was studying pure chemistry and established the existence of asymmetric arrangements. From this grew the idea that the molecules formed in space a geometric body with three dimensions. The study of this crystallisation led to the study of ferments and to the discovery that ferments were living organisms. This phase is shown in the second compartment. Then comes the contest against the believers in spontaneous generation set forth in the third division. Here the little balloon-shaped bottles show the proofs given by Pasteur, for there is also his apparatus for purifying the air by heat and method of filtering it, so that no fermentation took place when the air was sterilised. Then there are bottles which were opened on the summit of the Montanvert in 1860 and which to this day remain perfectly sterile The next two compartments show how these discoveries were applied to the preservation of wine and to preventing the spread of disease among silkworms. The sixth compartment deals with the germs of the atmosphere and here is the very simple, almost rudimentary, but effective apparatus which Pasteur devised so as to destroy all living organisms in the atmosphere. Pasteur was now beginning to study animal pathology and then he took up the discovery of the bacteria of anthrax, made in 1850 by Devaine and Rayer, and in the seventh division is shown how this idea of the living virus was applied to other diseases. Here are test-tubes containing the blood of animals suffering from anthrax and the method of isolating and of attenuating the virus. Here is a rabbit inoculated with rabies, the spine being exposed; there are specimens of anti-rabic vaccine, and among these samples of the way these studies were pursued is the following laconic note: "Number of cases treated in 13 years, 21,631; died, 99; mortality percentage, 0·45." Over these glass cases crowds of people bend reverently. They look at the strange things here shown, in themselves so little to look at, and they try to understand. Peasants from the country in their native costumes, simple town and country folk, most of them quite ignorant, utterly unable to grasp the meaning of what they see, and yet all spellbound by the word written above—Pasteur. It is astonishing how long they will tarry, how they will strain to read some inscription, striving, longing to understand; and then how grateful they are if anyone is able and ventures to give a little explanation. The explanation, however, must be brief or there would soon be such a crowd as to cause serious inconvenience. It is indeed an edifying sight to see daily these crowds of poorer visitors, simply dressed, but always neat and tidy, throng into the Pasteur Saloon. Perhaps no better homage could have been rendered to this great *savant* than the sincere respect shown by the masses for his noble work. However vague their conceptions of bacteriology they displayed wonderful interest and anxiety to know more, and it does credit to the French people that so many of the poorest classes should care to tarry so long in this highly scientific section of the Exhibition.

On each side of the main entrance there are shelves loaded with bottles. These contain gelatin in which colonies have been planted so as to form designs. Some are red, others are yellow or violet, and spell out the names of Pasteur's pupils, such as Roux, Chamberland, &c. These microbe cultures are not repugnant in appearance; some of them, are rather pretty like mushroom growths, and yet they represent pneumonia, plague, cholera, tuberculosis, and other diseases. Then there is a case containing illustrations of the researches of Behring and Roux on diphtheria, and Calmette's anti-venom serum for the bites of reptiles and vipers. The latter come from the Pasteur Institute of Lille.

Foreign Nations in the Pasteur Saloon.

The idea was to collect from all nations whatever testimony was available to show the results of the applications of Pasteur's theories in these various countries. This, however, was undertaken too late, so that the response has been incomplete. Nevertheless, those nations that have answered the appeal were sufficiently numerous to constitute a fairly good exhibition. On entering, and to the left, there is the exhibit that Austria has sent. This comprises fine large photographs of bacteria from the Hygienic Institute of the Vienna University. These include full details of the five cases of plague that recently occurred at Vienna. There are photographs of the patients showing the buboes, two of which have ulcerated. The Sero-therapeutic Institute of Vienna and the Anti-rabic Institute at the Rudolfstiftung Hospital also send specimens. There are many large coloured photographs and drawings of the microbes of plague and statistics as to the immunisation of horses, plans of hospitals, and the means employed for preparing serum, vaccine, and the like. Immediately opposite Germany has a splendid exhibit and the wooden model of the Gesundheitsamt has gained the Grand Prix. Here are a great number of statistics and various methods by means of coloured cubes and cones for showing how epidemic diseases have decreased by the use of antitoxin, vaccine, and similar preparations. Thus two brown cones marked D represent the reduction of deaths from diphtheria observed in Germany since the introduction of anti-diphtheritic serum. During the years 1892 and 1893 in the six states contributing to these statistics 113,259 children from one year to 15 years of age died from diphtheria. Then began the use of anti-diphtheritic serum, and in spite of the increase of population the deaths from diphtheria among children of these ages during 1896 and 1897 only amounted to 45,942. Thus the height of the two cones, which have the same diameter at the base, is in the proportion of 7 to 3.

The third side of the room contains the information forwarded from Italy and Switzerland. This includes a large map indicating the distribution of malaria over the Italian peninsula and enlarged photographs of the mosquito that conveys the germ. There are also charts showing for each month of the year the quarters of Rome that are most affected by malaria. Tables indicate how the use of antitoxic serum has increased in Italy and that the total mortality, which for the entire kingdom amounted to 29·5 per 1000 of the population in 1887, was only equal to 22·2 in 1897 and 23·1 in 1899. Switzerland sends photographs of the popular sanatorium for the treatment of tuberculous patients at Heilingenschwendi and diagrams showing the mortality from phthisis at various ages. The maximum number of deaths among females from this cause occurs from 14 to 19 years of age, while among males it is from 20 to 30 years of age. Then there are very good coloured maps indicating the prevalence of different diseases in various parts of Switzerland, including phthisis. From these it will be seen that from 1876 to 1886 there was an average of 53 deaths per annum per 100,000 inhabitants of the large towns caused by typhoid fever, and that the proportion for all Switzerland, including the towns, was 37 per 100,000. From 1896 to 1899 the proportion of deaths from typhoid fever was only 11 for the large towns and nine for all Switzerland per annum per 100,000 of the population. Undoubtedly these are figures that will not fail to encourage nervous tourists.

Typhoid Fever in French Towns.

On the fourth side of the Pasteur Saloon the French Ministry of the Interior exhibits equally interesting diagrams. They also show how typhoid fever has been reduced in the towns of France which have more than 30,000 inhabitants. One of the worst among these towns is that of Havre. Here the deaths from typhoid fever were equal to 180 per 100,000 per annum from 1886 to 1890. The proportion fell to 140 per 100,000 from 1891 to 1895 and to 40 from 1896 to 1898. The other towns that stand high on the list are Lorient with 200, 70, and 90 deaths per 100,000 population per annum for the three same periods—namely, from 1886 to 1890, from 1891 to 1895, and from 1896 to 1898. Calculating in the same manner for the same periods there were 70, 50, and 100 deaths annually from typhoid fever at Troyes; 140, 30, and 40 at Angoulême; 50, 30, and 30 at Nice; 60, 100, and 90 at Toulon; and 80, 50, and 60 at Marseilles. The towns of Cette, Béziers, Perpignan, and Toulouse are about as bad; but, nevertheless, these diagrams as a whole show a general reduction in the prevalence of fatal cases of typhoid fever. There are similar tables given dealing with pneumonia, acute bronchitis, diphtheria, and other diseases. The two first mentioned remain about stationary, but there is an immense reduction in the death-rate from diphtheria, and the result for many other diseases is eminently satisfactory. Such is the general character of the exhibits in the Pasteur Saloon. They constitute a well-deserved tribute to the great French *savant*, and it is only to be regretted that other nations were not able to contribute their quota of information.

Paris, Nov. 4th.

LIVERPOOL.

(From our own Correspondent.)

Liverpool School of Tropical Medicine: Return of Dr. H. E. Annett from West Africa.

Dr. H. E. Annett, of the Liverpool School of Tropical Medicine, returned to Liverpool last week after a tour of investigations in West Africa extending over eight months. Dr. Annett studied the conditions of tropical diseases over an area embracing 1000 miles of the coast, extending his researches to Lokoja on the river Niger. He has accumulated a mass of observations on the relations between malaria and the situation, the geographical peculiarities, and the temperature. In the main these data bear out the theory already established by the inquiries of Major R. Ross, late I.M.S., and Dr. R. Fielding-Ould that malaria is disseminated by the anopheles mosquito.

University College, Liverpool: Old Students' Association.

The first annual dinner of the Old Students' Association was held on Oct. 27th, Dr. John Hill Abram, the president, being in the chair. The toast of "The Association" was proposed by Principal Dale, who cordially welcomed the association as a means of maintaining the active interests of old students in the welfare and development of University College. Dr. Abram, in reply to the toast, said that the progress already made in the organisation of the affairs of the association and the number of members enrolled were most encouraging. He emphasised the necessity for a students' union and club-house to which old students might resort when revisiting the college He also expressed the hope that at no distant date Liverpool would have a university of her own, thus identifying her students with the city

Municipal Eccentricities

The mode of procedure of the Selection Committee of the City Council has given rise to much comment both in the lay press and in medical circles Among the new members elected to the City Council on Nov 1st were Mr William Permewan, a Doctor of Medicine of the London University, a Fellow of the Royal College of Surgeons of England and a Diplomate in Public Health of the University of Cambridge, and Mr Muirhead a respectable fish and poultry dealer As Dr Permewan had defeated a member of the Health Committee his name was proposed to fill the latter gentleman's place on the committee Dr Permewan's friends were coolly informed by Alderman Petrie who took a leading part in the management of the affairs of the Selection Committee, that Dr Permewan must begin at the bottom of the ladder and abide his time for a seat on such an important committee as that of public health The hollowness of this statement is revealed by the fact that Mr Muirhead also a new member of the council, was placed on the Health Committee to the exclusion of Dr Permewan whose admitted knowledge of matters connected with public health would have been a needed accession of strength to the deliberations of that committee The whole proceedings may be summed up as childish in the extreme, and evincing little regard by the Selection Committee for the public weal

Medical Visitor of Licensed Houses in Lunacy

Dr James Barr, honorary physician to the Royal Infirmary, has been re appointed by the city justices medical visitor of licensed houses for the reception of lunatics within the city of Liverpool in pursuance of the Lunacy Act, 1890

The Royal Albert Asylum, Lancaster

The thirty sixth annual report of the central committee stated that there were 593 patients in the institution 265 belonging to Lancashire, 166 to Yorkshire 54 to Cheshire, 49 to Durham, 28 to Cumberland, 13 to Westmoreland, 13 to Northumberland, and five to other counties The general income had been well sustained the principal items being maintenance account £21 683 sustentation fund (endowment) account £5256 and extension fund £10,935, including the Ashton Wing The munificent donation of £10 000 from Lord Ashton had been devoted to the building fund of the new wing During the year £2962 had been collected by the several ladies' associations The Ashton Wing will accommodate 100 additional patients There had been 74 admissions during the year, 58 discharges, and 11 deaths The average number resident had been 594 The patients admitted were not below the average in intelligence and physical condition of the patients previously received The asylum is not a mere asylum in the sense of being a refuge and home for hopeless cases but a training institution aiming to develop the dormant physical and mental powers of the inmates, to improve their habits, to cultivate their moral and religious feelings, and to train them in some useful industrial occupation, so that when leaving the institution they might be less burdensome to their friends, and if possible, contribute something towards their own maintenance An alteration in the title of the institution was approved, adding the explanatory sub-title "A Training Institution for the Feeble minded as an affix to "the Royal Albert Asylum"

Proposed Sanatorium in Flintshire for Phthisis

It is proposed to erect a sanatorium in Flintshire for the treatment of patients suffering from phthisis The scheme owes its inception to Mr W J Crossley of Manchester, who, it is understood, will not only erect the buildings at his own cost, but will also endow them The locality selected lies between Halkin and Rhydymwyn on the estate of the Duke of Westminster near Moel Gaer, a commanding mountain The scheme provides for the erection of a large central residential building for the patients and a number of small bungalows on the south west slope of Moel Gaer, to which the patients will proceed in the daytime in order to gain the full benefit of the pure mountain air It is also proposed to plant the place throughout with pine trees another essential to the treatment of tuberculosis on the open air system

Death from eating Putrid Meat

Mr J O Bate, coroner for West Cheshire, recently held an inquest into the circumstances affecting the death of a police constable who died during the previous week in consequence, it is alleged, of having eaten some diseased meat whilst engaged on special duty with other constables at Altrincham during the election The deceased partook of some beef which some of the constables alleged was tainted The deceased became ill that night and complained of pains in the region of the stomach Mr A H Godwin of Liscard was called in to see him on the following morning, Oct 12th, and found him suffering from symptoms of irritant poisoning Peritonitis subsequently supervened from which he died on Oct 18th Evidence was given by the caterer of the meat that the joint, being a large one, was put into the oven on the afternoon that he received it (being apparently perfectly sound) and partly cooked It was then taken out and left to cool and at midnight it was put into an ice chest where it remained all night Next morning it was cooked finally and at noon it was sent away to be served to the constables A second constable, who had also partaken of the beef, became suddenly ill but recovered No ill effects from eating the meat had resulted to the remainder of the constables The jury found a verdict that "Death was due to peritonitis caused by eating putrid meat" They were of opinion that the method of cooking and cooling the meat was at fault

Nov 6th

SCOTLAND

(FROM OUR OWN CORRESPONDENTS)

Edinburgh Health Society

THE opening lecture of the present course of lectures of the Edinburgh Health Society was delivered on Saturday night in the Oddfellows' Hall, Forrest road, by Dr Leslie Mackenzie, medical officer of health for Leith The subject of the lecture was 'Public Health and Individual Duty' Dr Mackenzie considered what the meaning of the public health movement was, pointing out that it was essentially an ethical service based on the principle that to forward human happiness was human duty He considered that the fundamental doctrine in the theory of public health was that man was capable of variation of growth, of development, and of integration Man gained in strength as he gained in opportunity, and to free him from entanglements was to lessen for him the burden of his inheritance of evil and to strengthen for him the gift of his inheritance of good And that was the ultimate ground of public health practice, which claimed primarily at clearing the way for the free development of the human organism

A Proposal to Appoint a Port Medical Officer for Glasgow

At a meeting held in the National Hall, Gorbals, on Monday last, in the interests of a candidate for the representation of one of the municipal wards of the city, Dr Thomas Colvin who presided made special reference to the recent visitation of plague and advocated the appointment of a port medical officer in Glasgow with duties similar to those of Dr W Collingridge in the Port of London

Aberdeen University

The fifth annual meeting of the Aberdeen University Students' Union was held in the debating hall, Marischal College, on Oct 27th A satisfactory report on the finances was submitted Major Manuell (medical) has resigned the office of president, as his connexion with the University as a student is to cease Mr G O Gould was appointed as his successor and other office bearers were also elected —The University Choral and Orchestral Society have elected Professor Japp LL D (chemistry) as president for the ensuing year Eight bursaries from £22 10s to £18 per annum have been allocated to medical students

Nov 7th

IRELAND.

(FROM OUR OWN CORRESPONDENTS)

Abattoir Reform in Dublin

THE Corporation of Dublin a short time since sent two of its members Mr Kennedy and Mr Clancy, to visit Hamburg, Munich, and other towns in order to inquire into the working of Podewill's system for the destruction of slaughter-house offal. Their report is of interest, more especially when one recalls the justly adverse criticism of the slaughter-houses of Dublin by the Sanitary Commissioner of THE LANCET who visited the city some months ago. The offal-utilising method followed in Munich is described as a source of considerable profit to that municipality, the fat being sold for 22*s.* per cwt. and the manure at £5 per ton. Dresden, which boasts of having the most perfectly equipped abattoir as yet constructed, was visited, and the details of the Podewill system as used there are fully described. To put the matter shortly, the offal from diseased and slaughtered animals is—after the fat has been removed automatically—reduced to a powder which is found to be valuable as a food for pigs and fowls. To equip the city abattoirs in Dublin with the Podewill apparatus will cost about £5000. The writers of the report allude to the precautions taken by the municipal authorities in continental towns against the sale of infected meat. There are no private slaughter-houses and no meat is permitted to be exposed for sale unless it bears the brand of the public abattoir at which it was killed and dressed.

Dublin Sanitary Association.

The council of the Dublin Sanitary Association met on Nov. 1st, and received a letter from Sir Charles Cameron stating that the Public Health Committee had recommended the Municipal Council to make tuberculosis of the lungs a notifiable disease for one year as a tentative measure.

Return of the Staff of the Irish Hospital from South Africa.

The Royal College of Surgeons in Ireland has decided to entertain Sir William Thomson and his colleagues of the staff of the Irish Hospital at a dinner to be given in the College on Nov. 24th.

City Hospital for Diseases of the Skin, Dublin.

The first annual meeting of the friends and supporters of this hospital was held at the institution on Nov. 1st. The meeting was large and enthusiastic. Letters of regret for non-attendance were received, inclosing cheques, from many representative citizens Sir Francis Cruise, consulting physician to the hospital, was unable, owing to an urgent professional call, to be present. Mr. Thomas Myles, President of the Royal College of Surgeons in Ireland and consulting surgeon to the hospital, Sir Charles Cameron, and Mr. A H. Jacob were also, owing to a council meeting at the Royal College of Surgeons in Ireland at the same hour, unable to attend, but they bestowed upon the meeting their imprimatur; Dr. C. M. O'Brien, physician to the hospital, epitomised the work of the institution during the year. 2000 patients had been registered, of whom many were cured and all were relieved. He said that the expenditure exceeded the income from all sources during the year and in this the governors had the sympathy not only of the meeting but of the citizens at large Dr G B. White, surgeon to the hospital, concurred with his colleague Dr. O Brien. Alderman Ireland, J.P., representing the corporation, warmly approved of the objects of the hospital and the good work done there. He himself would be in favour of giving a grant from the corporate funds and he felt sure that when the good work of the institution was made known to his fellow-members they would support him.

The Belfast Union Fever Hospital

As anticipated in THE LANCET of Oct. 27th, p. 1240, Dr. A. G Robb has been appointed physician to the Belfast Union Fever Hospital in place of Dr. E. C. Bigger, who has been appointed Local Government Board inspector.

Queen's College, Belfast.

The following medical scholarships, &c., were awarded at the examinations held at the commencement of the session in the above college. Fifth year: Medicine and pathology, Albert Lytle Black, B.A.; surgery and midwifery, David M'Mordie, B A. (John Armstrong, a prize) Fourth year: Henry Mulrea Johnston and Sydney Herbert George Blakely. Third year: Thomas Lyle and Daniel Gillespie. Second year: William James Wilson and Robert James Spence. First year: Literary, James Stuart Dickey; science, Robert Jamison.

Ulster Medical Society.

The first meeting of the session 1900–1901 was held on Nov. 1st in the Belfast Museum. Professor J. W. Byers, ex-President, occupied the chair, and after the minutes were read he introduced the new President, Professor W. H. Thompson of Queen's College, Belfast, who delivered his inaugural address. After thanking the members for electing him Dr. Thompson gave a most interesting account of recent advances in our knowledge of normal digestion, based largely on the work done in Pawlów's Laboratory in St. Petersburg. In conclusion, Dr. Thompson regretted the inadequate teaching of students in physiological chemistry and spoke of the meagre attempts made by the English nation to provide laboratories for the study of such subjects as were being constantly investigated in kindred institutions in Europe and America. Professor J. A. Lindsay, in proposing a vote of thanks to the President, referred to the excellent laboratories which he had visited in the Johns Hopkins University in Baltimore. Dr. Dempsey, J.P., seconded the vote of thanks, which was acknowledged by Dr. Thompson A report from the council in reference to the publication of the Transactions having been considered it was arranged that the annual dinner should be held on Saturday evening, Feb. 23rd, 1901.

Health of Belfast.

In a report presented to a meeting of the city corporation on Nov. 1st it is stated that the death-rate for the week ended Oct. 6th had been from all causes 18·9 per 1000, and from the principal zymotic diseases 3 5. In the corresponding period of last year the general death-rate was 26·1 per 1000 and that from zymotic diseases 4 5. The deaths from zymotic diseases, as also those from chest affections, are much less numerous than they were in the corresponding period of last year. Both in the number of cases of typhoid fever notified, as well as in the mortality, the disease seems to have subsided into the ordinary endemic condition which appears now to be a constant factor in Belfast.

The Irish Medical Association.

On Nov. 1st a meeting of the members of the Irish Medical Association residing in co. Antrim and co. Down was held in the Belfast Museum. Dr. W. A. McKeown occupied the chair, and it was unanimously decided to invite the association to hold its annual meeting in Belfast in June, 1901. The headquarters of the society is in London, but a new departure was made a few years since when the annual meeting was held in Cork, and in the coming year this experiment is to be repeated and the society is to meet in Belfast The association is largely concerned with looking after the interests of the Poor-law medical officers in Ireland.

The Spread of Infectious Disease

At a meeting of the Portadown Town Council on Nov. 5th Dr. J. L. Rowlett, the medical officer of health, reported that during the last month there were six cases of scarlet fever notified, one of diphtheria, and one of puerperal fever. He had considerable trouble in isolating one case of scarlet fever. The patient, who was found to be "peeling," was running amongst the children who were attending school, and it was only when presented with a magistrate's order for her removal to hospital that the parents consented to have her properly isolated.

The Annual Dinner of the City and County of Cork Medical and Surgical Association.

The annual dinner of the above association was held in the Victoria Hotel, Cork, on Nov. 3rd. The President (Professor Henry Corby) occupied the chair, and amongst the guests were the Lord Mayor (Sir Daniel Hegarty), Professor Hartog and Professor Stokes of the Queen's College, representatives of both branches of the legal profession, besides several leading citizens identified with the trade and commerce of the city. The first toast was "The Queen," which was duly honoured. Then "The City Corporation" was proposed by the President, who referred to the improved sanitation of the city. The Lord Mayor and Sir John Scott responded and dwelt on the valuable aid which the corporation had at all times received from members of the medical profession when any projects calculated to improve the health of the citizens were under discussion. Sir John Scott, in proposing the toast of "The Cork Medical School," alluded to the brilliant array of medical graduates who had received their training in Queen's College, Cork, and said that not only the medical men of Cork, but the citizens generally, had reason to feel proud of such achievements. Professor Hartog and Professor

W. E. A. Cummins responded, the latter stating that recently when paying a visit to Netley he was astonished on consulting the lists to find that such a very large proportion of army surgeons had been educated at the Cork College. "The Legal Profession," proposed by the President, was responded to by Professor Stokes, Mr. George Crosbie, and Mr. Exham, solicitor. The President, in proposing "The Navy and Army Medical Officers," referred to the invaluable services rendered by these gentlemen in the South African war and said that it was a source of pride to the medical profession to know that the percentage of members of the Royal Army Medical Corps who had won the Victoria Cross was far higher than that of any other branch of the Services. The Lord Mayor in proposing the toast of "The City and County of Cork Medical and Surgical Association" alluded to the advantages conferred by the association on the local members of the profession, and through them on the citizens generally. Dr. Giusani responded in an able speech. Mr. E. W. Allsome proposed the health of Dr. J. J. Tracy, the honorary treasurer to the association, and laid stress on the invaluable services rendered by Dr. Tracy to the profession in connexion with the "battle of the clubs" and said how gratified all were to find that Dr. Tracy was again restored to health. Dr. Tracy responded and referred in grateful terms to the testimonial which had been presented to him when he had been in bad health and said that he valued it highly as an expression of the kindly feelings of his medical brethren. The toast of the health of Dr. R. P. Crosbie, the honorary secretary, was warmly received, and Dr. Crosbie, in reply, said that it afforded him very great pleasure to have had any part in making the evening's proceedings so successful. Mr. P. J. Forde proposed a vote of thanks to the President. Dr. Corby, in replying, referred to the great honour that the association had conferred on him by electing him president for the second time. A pleasing innovation was the presence of two lady practitioners. There were several songs in the intervals between the speeches, and the evening was in every sense a most enjoyable one.

Nov. 5th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Epidemic Disease in France during 1899.

AT the meeting of the Academy of Medicine held on Oct. 16th M. Laveran read the annual report upon the epidemics which have prevailed in France during 1899. According to him the documents upon which the report is founded are very incomplete. Throughout the departments the medical men employed during epidemics lose heart and are unable to collect sufficient exact information. The colonial reports come chiefly from M. Kermorgan and M. Matignon and deal with the plague in Madagascar and China. The report concluded with the following recommendations. 1. A special commission should be appointed to re organise the department which has to deal with epidemics. 2. Measures should be taken to insure the accurate declaration of epidemic disease. 3 All mayors should be asked to see that the cause of death is stated on the certificate of death. 4. Schoolmasters and schoolmistresses should at once notify any case of infectious disease among their pupils 5. They should also insist that no child who has suffered from any infection should be allowed to return to school until after a sufficiently long period of convalescence 6. Infantile diarrhœa should be tabulated separately from other kinds of diarrhœa in the statistics. 7. Statistics of disease should be regularly kept in every commune and upon one uniform plan 8 Disinfection should be much more widely used than at present and measures for the same should be able to be taken by those outside the ranks of professional disinfectors. Various other recommendations treated of general hygiene, of the isolation of soldiers suffering from infectious disease, of pure water-supplies, and as to adding to a sum of 300 francs which has been placed at the disposal of the Academy of Medicine to defray the expenses of publications dealing with infectious diseases.

The Aggravation of Cases of Typhoid Fever owing to the Vicinity of a Crèche.

Dr. Renon has recently drawn attention to a remarkable instance of intensification of the virulence of typhoid fever as treated in a hospital. His paper was read before the Hospitals Medical Society and the theory therein put forward is certainly startling, but nevertheless his figures deserve very careful consideration. They dealt with a series of cases of typhoid fever in which the patients were warded next door to a crèche, that is to say, a ward where women were taken in accompanied by their children. Between July 15th and Oct. 1st Dr. Renon had under his care at the Necker Hospital nine cases of typhoid fever, which were distributed between the crèche and the women's ward in the Peter block. Of these nine cases he lost four, or 44 per cent. These women, who were admitted with typhoid fever of a mild form, suddenly developed intense aggravation of the symptoms after about six days. Prostration was intense and they had constant vomiting and refused their food. Of the five patients who recovered only one maintained the mild type of disease, the other four exhibiting the gravest symptoms. These figures could not be put down to the fact that the women were nursing for only three of the nine were nursing and were warded in the crèche while of these three only one died. The six other cases were not those of nursing women and they were not warded in the crèche but in the women's ward. Of these six three died. Treatment, nursing, and a severe type of epidemic could all be excluded, for in the other wards of the hospital where the treatment and nursing were the same, the mortality was very different. Besides, the previous mortality from typhoid fever in the Peter block had been considerable, namely, seven out of 14, or 50 per cent. During the present year up to Oct. 1st, the mortality in this block from typhoid fever had been 11 out of 19 or 57 per cent, while at the same time in the other blocks the mortality among the women was five times less. The Peter block is therefore responsible for this enormous mortality and it is logical to infer that the proximity of sucklings plays a prominent part. Various forms of enteritis are common in the crèche and despite every care it is only natural that the different organisms of infantile diarrhœa exist in enormous numbers both in the crèche and in the adjoining ward. Probably, therefore, the patients suffering from typhoid fever are infected secondarily by microbes from infantile diarrhœa.

Operative Asepsis.

At the meeting of the Society of Surgery held on Oct. 24th M Walther gave a short account of the researches which he had lately undertaken upon this subject from a bacteriological point of view. The work had been done in the laboratory of M. Widal, in collaboration with him and his assistant, M. Ravaut The technique was as follows. Bouillons were sown with scrapings from the hands, which had been previously cleansed as follows. They were first soaped and brushed for 10 or 15 minutes in a small quantity of water which previously boiling had been allowed to cool until it could be borne. This water was changed four or five times. The hands were then soaked in alcohol, then in sublimate solution, then again in alcohol, and finally, to remove any trace of sublimate, in a fresh supply of hot water. They were then dried with hot sterilised compresses. Of 19 "sowings" (*ensemencements*) done before the operation and immediately after the washing one only gave any positive result Of six done during the operation only one gave rise to a culture. Three trials made after the operation gave a negative result. Trials were also made with scrapings from the skin of the patient which gave negative results in five instances and a positive result in one M. Walther concludes from these results that absolute sterilisation of the hands is possible in the great majority of cases. Indiarubber gloves are most inconvenient, especially as regards movements of prehension, so that, to take an instance, in the operation for radical cure of hernia, dissection of the sac is almost impossible for the surgeon while wearing these gloves.

Nov. 6th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Medical Attachés to German Embassies.

SOME Berlin periodicals, in discussing the possibility of an outbreak of plague in Europe, propose that medical attachés should be appointed to the German embassies abroad and should be assigned the duty of studying the hygienic conditions of the countries where they happen to be stationed and of promptly informing the German Government of the occurrence of cases of infectious disease. The arrangements should be settled by international agreements and in this way international regulations for the notification and prevention of epidemic diseases might be put on a more satisfactory footing than at present. Precedents already exist for embassies having attachés charged with other than diplomatic functions, because agricultural experts, architects, and engineers have for many years held appointments in connexion with the German embassies in order that they might inform the Government of anything remarkable happening in their respective branches in foreign countries. The position of the medical attachés would be analogous to that of the other technical attachés.

Post-Graduate Instruction.

The civilian members of the medical profession have often felt disappointed when the ample means at the disposal of the Army Medical Department for the post-graduate instruction of army medical officers were compared with the opportunities afforded for the same purpose to the civilian medical officers of health or even to general practitioners. Courses of instruction provided at the expense of the Treasury are available for members of the army medical staff during nearly the whole time of their service and in this way they are kept informed of the progress of medical knowledge. General practitioners, on the other hand, if desirous of engaging in post-graduate study must go to a university during their holidays and pay the rather high fees charged for post-graduate lectures. A wide-spread desire has therefore for a long time been expressed that the Government should establish post-graduate courses free of charge for civilian practitioners and the Government has at last complied. The Minister of Public Instruction has consequently arranged for the delivery of a series of lectures in the Charité Hospital by professors of Berlin University to members of the Berlin medical profession only. The first séries was delivered last spring, the subject being Tuberculosis, its Prevention, Bacteriology, Treatment, Complications, &c. The second series has been appointed for October and November and will deal with venereal diseases, including syphilis. The lectures are given in the evening five times a week in order to allow medical practitioners to attend after their day's work is done. That these lectures have really met the requirements of the medical profession was shown by the fact that all the tickets were applied for the day after their issue. In the inaugural address the director of the Charité Hospital pointed out that post-graduate lectures on practical topics like the present were a necessity for the general practitioner, because the increasing amount of medical literature and the great number of new therapeutic methods made it impossible for busy practitioners to keep abreast of the progress of medicine by reading only. Similar lectures will take place in other towns also, so that practitioners throughout the country will have opportunities of improving themselves without being compelled to interrupt their practice and to pay high fees. The above-mentioned official lectures must not be confounded with those of the Association for Post-graduate Study (Docenten Verein fur Ferien-Curse), where everybody is admitted who pays the fees and where opportunities for practical work, examination of patients, operations, &c., are afforded.

A Medical Strike Fund.

A committee of medical men in Leipsic, under the presidency of Dr. Hartmann, has addressed an appeal to all medical practitioners in Germany to unite in collecting a large strike fund. In the letter sent by these gentlemen it is said that the scanty remuneration of the profession in this country is due especially to the dominant position of the sick clubs These clubs, which in Germany are official institutions, membership of them being compulsory for working people, are in the habit of paying their medical officers very badly and of appointing them on humiliating terms The complaints against this state of things are manifold and are as old as the present workmen's insurance laws Many methods for the redress of these grievances have been proposed and strikes have even occurred in different places, as at Remscheid and at Iserlohn. The above committee wish to organise a strike of medical officers to clubs on a great scale, and with this object in view invite medical men to become members of the new medical union. Members are to pay one mark (=1*s*) a week, and the leaders of the movement hope to collect a sum of 2,000,000 marks (=£100,000) to begin with. The fund will be used to support members who may be on strike against sick clubs, and, moreover, to pay for advertisements in the medical and non-medical press warning medical men against settling in a place where a strike is in progress. Young men will be advised against the study of medicine by regular communications sent by the union to the press. Apart from the central committee in Leipsic local committees will be formed throughout the country. The system is, in fact, the same as that adopted with great success by the trade-unions, but it is very doubtful whether the organisation of the medical profession is equal to the task of arranging strikes and preventing the clubs from appointing other medical men to fill the vacancies. The appeal of the committee has been received rather coldly by the medical profession, especially in Berlin. The Berlin medical journals doubt whether the strike fund will amount to a sufficient sum and say that other measures have, as far as Berlin is concerned, given better results They recommend the free-choice system, to which allusion has already been made in the columns of THE LANCET, and they blame the committee for having omitted to mention this system. In a recent communication from the committee the idea of a strike seems in fact to have been placed in the background; the free-choice system is favoured, and the aim of the union is described in more general terms. It is very unlikely that the movement will have any important result and the matter will probably be dropped after a time, like so many other schemes proposed for the benefit of the medical profession.

Nov. 5th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Eliminative and Antiseptic Treatment of Typhoid Fever.

IN my letter in THE LANCET of Oct. 13th (p. 1106) appeared a short item relative to the plan of treatment adopted by Dr. W. B Thistle of Toronto in typhoid fever of which, in justice to Dr. Thistle, correction should be made in that he does not claim to get rid of bacilli from the intestinal walls. Dr. Thistle has now been employing this plan of treatment for seven years and during that time he has never had a fatal hæmorrhage, any hæmorrhages that occurred having been always very slight, and he has never had any perforations.

Diphtheria in Toronto.

At the present time there is more diphtheria in Toronto than in any of the towns and cities of the province of Ontario, the record for the present year being:—January, 66 cases; February, 60; March, 57; April, 78; May, 50; June, 74; July, 67; August, 74; September, 83; total, 609 cases. Since 1887, when 618 cases were reported, the following has been the number of cases reported to the Health Department:—1888, 498; 1889 320; 1890, 433; 1891, 1039; 1892, 1625; 1893, 693; 1894 338; 1895, 506; 1896, 562; 1897, 719; 1898, 426; and 1899, 500. The season has been an exceptionally fine and dry one in Toronto, and Dr. Sheard, the medical health officer, considers that this factor has something to do with the increase this year. In the northern central districts, where the disease is most prevalent, many complaints have been made of the condition of the sewers, sewer-air being plentiful, and this is also deemed to be a contributing cause. Although a recommendation was passed by the Committee on Works this past spring that ventilators should be placed in the sewers to carry the gas up through them, nothing has been done in that direction and as a consequence the health of the community suffers.

Queen's University, Kingston.

Dr. Fife Fowler, who has been for over 50 years connected with the Medical Department of Queen's University, has resigned the professorship of the theory and practice of medicine, but will retain the honorary position of Dean of Faculty. Dr. James Third (Trinity, 1892), late superintendent of the Kingston General Hospital, succeeds Dr. Fowler, while Dr. Haig of Campbellford, Ontario, assumes control of the General Hospital. A by-law was recently submitted to the citizens of Kingston for municipal aid to the extent of $50 000 to Queen's University, which passed by a very large majority. Queen's is said to be ambitious to be raised to the status of provincial university for the eastern portion of the province of Ontario, and at the next session of the Legislature it will ask the Parliament of Ontario for financial recognition, believing that its capacity can now readily be raised from 500 to 1000 students. Toronto University, which is the provincial university, will oppose granting any aid to its eastern competitor, fearing that it would detract from its own importance and influence in educational matters in the province.

The Morrice Pharmacological Laboratory at McGill University.

Dr. J. T. Halsey, a graduate of Columbia College, New York, has been requested by the Faculty of Medicine of McGill University to take charge of the Morrice Pharmacological Laboratory, which is designed for the purpose of carrying on original research work in that department, and he has accepted the appointment. This laboratory has been equipped by a Mr. Morrice of Montreal, who promises also for the next five years to contribute an annual donation to enable the university to conduct this important work. Dr. Halsey, after graduation, was for one year *interne* at St. Luke's Hospital, New York. He then proceeded to Germany, where he has been for the past five years pursuing studies in the chemical, physiological, and pharmacological laboratories of Freiburg, Strasburg, and Marburg. In October, 1898, he was appointed assistant to Professor Hans Meyer in the University of Marburg, a position which he resigned to accept the offer from McGill University.

Toronto Clinical Society.

At the first regular meeting of this society for the season of 1900–1901, on the evening of Oct. 3rd, Dr. W. H. B. Aikins, the newly-elected president, occupied the chair and delivered the annual address, referring in complimentary terms to the honour which had recently been conferred on one of their number, Mr. I. H. Cameron, by the Royal College of Surgeons of England, and also to the work of Dr. Ryerson as Canadian Red Cross Commissioner to South Africa. Dr. Ryerson delivered a very interesting and able address on the Medical Side of the South African War, dealing principally with typhoid fever and inoculation for it, dysentery, veldt fever, &c. He considered it to be an important fact that in an army of 200,000 men there had not been a single case of small-pox. He eulogised the work of the hospital orderlies whom he thought ought to be commended very highly for their very trying and laborious yet noble work. Dr. G. Silverthorn showed a child of a little more than a year old who in July last had a retro-pharyngeal abscess following upon an attack of measles upon whom he operated through the sterno-mastoid muscle with such signal success that the child was able to leave the hospital completely recovered within one week. Professor H. B. Anderson of Trinity Medical College showed a patient, a young man, aged 23 years, who for 10 years had been the subject of frequent asthmatic attacks and who had had three attacks of right-sided pleurisy. He was shown as having his liver displaced as low as the umbilicus. The interesting point in this case of hepatoptosis is that it was associated with definite asthmatic attacks. Dr. Silverthorn also exhibited specimens showing the course of a bullet-wound in a man who had been shot. The wound of entrance was on the left breast, one and five-eighths inches outside of the nipple line and on a line with the nipple itself. On following this wound backward the bullet was found to have punctured the fifth rib, fracturing it and tearing up a portion of its upper edge, two and three-quarter inches from its junction with its cartilage. It then passed through the pleura and through the anterior angle of the upper lobe of the lung, and then through the pericardium; then along the left border of the heart, which it grooved up and passed on backwards, tunnelling the fat in the auriculo-ventricular groove; then passing out again from the pericardium, backwards through the anterior portion of the lower lobe of the lung, and still backwards into the aorta opposite the ninth dorsal vertebra, with a large amount of hæmorrhage in the posterior mediastinum. The bullet, however, could not be found in any place in that region. An examination of the arteries was then made and the missile was found in the left femoral artery just below where the profunda femoris is given off. The bullet was a quarter of an inch in diameter. In impinging the posterior wall of the aorta it had perforated that wall, supported behind by the vertebral column, had fallen into the artery and had been carried to its ultimate destination. The specimen of the artery was shown with the bullet *in situ*.

Legislation to Regulate the Sale of Patent or Proprietary Medicines or Cures in the Province of Ontario.

At the last session of the Legislature of the Province of Ontario Mr. W. M. German, one of its members, introduced a measure which at the present time is exciting considerable adverse comment and opposition amongst the drug fraternity of the province. The preamble of the Bill states that it is expedient in the public interest to legislate against the fraudulent or improper advertisement of drugs, medicines, or cures, and against the sale of such of the same as contain harmful ingredients, to license the advertisement or sale of patent or proprietary medicines, to appoint an inspector of the same, and to provide for the payment of licences in respect of the same. Article II. of this proposed measure will provide for the appointment of a "registrar" of proprietary medicines who shall be attached to the office of the Provincial Secretary of Ontario, and who shall be a member of the Ontario College of Pharmacy, regularly qualified, and of at least seven years' standing. The duties of this officer are set forth in detail in Article III., and without being explicit the entire control of the drug trade in this direction would be under his authority. Article V. provides that every application for a licence shall be accompanied by a statement of the formula or prescription of the medicine which shall be duly verified by affidavit. Licences shall cost $1000 and must be renewed yearly. An important section is Article XI. which provides that no person shall advertise any medicine in respect of which a licence has been granted by any surgical picture which would suggest the means of committing any crime, or by any advertisement which is offensive in its language or holds out false hopes of alleviation or cure, or which is misleading in its statement of the curative properties of the drug. An appeal from any decision of the registrar shall be taken to a judge of the High Court of Justice of Ontario within six months from the date of such decision. The measure further provides for fines and penalties. As a most profitable part of the business of a druggist in the province of Ontario consists in the sale of patent medicines and also in the manufacture and sale of preparations of his own, it can readily be seen how the proposed law will bear upon each and every druggist in the province who would be required, under the provisions of this Act, if it became law, to recoup the province to the extent of $1000 for a licence and a similar sum for its renewal annually, and if he wished to sell 10 different formulæ he would be required to pay into the treasury $10,000. It has been interesting to watch the action of the various newspapers throughout the province who profit largely by advertisements of these patent cure-alls. They are standing hand-in-hand with the proprietors of "trade-mark" articles with the object of defeating the Bill, for the framing and pushing of which the Medical Council is charged with the responsibility. The "German Bill" as it is called, is without doubt a good one in certain particulars. It has been endorsed by a leading society paper, which gives the newspapers some pretty hard raps on the character of the advertisements which they are continually inserting, pointing out that some of those self-same newspapers which are foremost in opposition are also first as respects the publication of the offensive advertisements. The patent medicine trade needs regulating in this province, certainly as well as objectionable advertisements, and the suggestion of the *Dominion Medical Monthly* in a recent issue that the time was opportune for the appointment of a medical editor on the staff of the leading dailies to look after medical items which are popular in the press nowadays, as well as to exert an influence in shutting out these disgraceful advertisements, would, if acted on, result in a cleaner lay press in this particular direction.

Toronto, Oct. 22nd.

DEATH FROM ICE-CREAM.—The borough coroner of Plymouth held an inquest on Nov. 1st upon the body of a boy, aged 12 years, who had partaken of four or five ice-creams on Oct. 27th and died on Oct. 30th. A medical witness who had made a post-mortem examination stated that death was due to ptomaine poisoning the result of eating the ice-creams, and the jury returned a verdict to that effect.

Medical News.

The National Registration of Plumbers: Conference at Birmingham.—The Lord Mayor of Birmingham presided at a public meeting held in the Council Chamber, Birmingham, on Oct. 24th, among those present being Mr. Robert Crawford of Glasgow and Alderman Richard Hind, representing the Worshipful Company of Plumbers; Dr. Alfred Hill, medical officer of health of Birmingham; Alderman Cook, chairman of the Birmingham Health Committee; Alderman Parker, chairman of the Birmingham Water Committee; Mr. John Price, city surveyor, Birmingham; Vice-Principal Heath, of the Birmingham University; Bailie Dick, chairman of the Health Committee, Glasgow; Mr. G. H. Fosbroke, medical officer of health of Worcestershire; Dr. A. Bostock Hill, medical officer of health of Warwickshire; Dr. P. Boobbyer, medical officer of health of Nottingham; Mr. F. M. Williams, medical officer of health of Plymouth; Professor Matthew Hay, Aberdeen; Dr. W. A. Evans, medical officer of health of Bradford; and several master plumbers and operative plumbers representing various associations and the district councils working in conjunction with the National Registration of Plumbers. Previously to the public meeting a conference was held in the Council Chamber under the presidency of Mr. Robert Crawford, at which the following resolutions were passed. It was proposed by the Chairman and seconded by Dr. Alfred Hill:—

> That in the opinion of this Conference, representing the public health and water authorities and the master and operative plumbers of Great Britain and Ireland, it is desirable, and would be a great public advantage, if a measure should be passed through Parliament with the object of protecting the public from the results of bad and incompetent workmanship and securing the efficiency and responsibility of plumbers through a system of registration of the qualified masters and operatives; and that it is the duty of the Government, acting in the public interest, to carry through a measure with this object.

It was proposed by Mr. F. M. Williams and seconded by Bailie Dick:—

> That 12 representatives of the district councils be appointed to act in conjunction with the company in approaching the Local Government Board for the purpose of framing a scheme for a Plumbers' Registration Bill, and taking such steps as they may deem necessary for such legislation.

It was proposed by Professor Matthew Hay and seconded by Dr. Bostock Hill:—

> That this Conference approves of the establishment of two grades of registration, one for operative plumbers, in which the examinations would be essentially a test of workmanship and an oral examination substituted for the present written examination, and the other requiring a higher standard of technical knowledge for master plumbers, inspectors, and plumbers occupying similar positions; and that it be remitted to the company and the representatives of the Conference already appointed to prepare a scheme under this resolution, including the question of fees, and after submitting it to the district councils for their opinion, and finally adjusting it, to put the scheme into operation.

The Lord Mayor in welcoming the members of the conference said he was glad to think that it was many years since Birmingham began to show its interest in matters affecting the public health. When the water-pipes leaked people were anxious about their ceilings and carpets and lost no time in sending for the plumber, but when there was a bad smell they were not so eager to do so. The plumber was not always a popular person, and those who watched him at work were apt to think that his methods were somewhat deliberate. He was a man they could not do without, although he was perhaps the most abused artisan in all the sections of the building trade. The public, it was to be feared, did not appreciate sufficiently the necessity of looking after all those invisible matters which only make themselves known by their odour. Surely, then, it was all the more important to large communities like theirs that the trade on which all that depended should be of the best possible character. It was for that reason that he was there with his colleagues on the Health Committee. Why should it be difficult to get through an Act of Parliament the necessity for which he thought nobody would deny? They could not get it through because it was not a Government matter, and it must be apparent to everyone who had any experience of Parliamentary procedure that by continual working it must be made clear that it was a matter for Government interference. He believed that they had got hold of the right principle and that in time the principle would be recognised in the way they desired.—Mr. Robert Crawford, as chairman of the conference, read the resolutions passed at the conference. He said the plumbers of this country and their public representatives had been engaged during the past 16 years in educating the public, the local authorities, and the masters and men in the trade, and in creating a higher standard of appreciation of knowledge and of responsibility. At the present moment the British plumber stood at the head of his profession in the world. Those who travelled abroad must see that the old insanitary and slipshod methods of the continent were being forced aside. Throughout Europe, in all the most important hotels and institutions and good private houses, the British plumber had been recognised; he had taken possession of the continent from the plumbing point of view, just as his fellow-countrymen had taken possession of most of the unoccupied parts of the earth in other capacities.—Alderman Cook brought forward a motion endorsing the decisions of the conference, warmly supporting its efforts in the interests of the public health, and urging the Government to carry through the Bill for the National Registration of Plumbers.

Royal College of Surgeons in Ireland: Examination for Registered Practitioners.—Mr. William Robert Wilson, L.S.A. Lond., having passed the necessary examination, has been admitted a Licentiate in Surgery of the College.

The Dental Hospital of London, Leicester-square, has received a donation of £100 and a new yearly subscription of £10 10*s.* to the "general maintenance" fund and £100 as a special donation towards the amount urgently required for re-building the hospital, from Lord Grimthorpe, Q.C.

Shooting a Medical Man.—Sidney James Kirby, dairyman, was charged on remand at Leicester on Tuesday last with the attempted murder of Dr. Clarke by shooting him with a revolver at Leicester on Oct. 8th. Dr. Clarke, who had recovered sufficiently to give evidence, stated that in 1896 he certified the accused as insane. The accused, who behaved in an excited manner and did not seem to realise his position, was committed for trial.

Memorial to Dr. Augustin Prichard.—On Nov. 1st, at Redland Green Chapel, a window was dedicated to the memory of the late Dr. Augustin Prichard of Clifton. The window contains the figures of St. Luke and St. Barnabas and has a suitable inscription. There was a large attendance at the service among those present being several leading citizens who had held Dr. Prichard in high esteem.

University College of South Wales and Monmouthshire.—On Oct. 31st Principal Viriamu Jones, with a deputation from the University College of South Wales, attended the meeting of the Cardiff Town Council and made an earnest appeal for the granting of a free site in Cathays Park for the proposed new college buildings. The college, he stated, had only £50,000 out of the £150,000 which were required, and there was no possibility of obtaining sufficient funds to purchase the site for the sum required by the corporation. After some discussion it was eventually decided that the recommendation of the committee that the college should purchase the site should be referred back for reconsideration.

Kent County Ophthalmic Hospital, Maidstone: Resignation of Mr. M. A. Adams, F.R.C.S. Eng.—At a meeting of the board of management of this institution held in September last the resignation of Mr. Adams was received and with great regret accepted. A resolution was passed expressing on behalf of the governors and subscribers their deep sense of indebtedness to Mr. Adams and their appreciation of the assiduous and gratuitous services rendered to them and to the inhabitants of the county of Kent for the long period of more than 37 years, during which time he had been the surgeon to the hospital and upon whom had devolved to so large an extent the conduct of the institution, and to whom are largely due the benefits conferred upon the many thousands who had availed themselves of that free institution. At the following meeting of the board Mr. Ernest H. Cartwright, B.Ch., M.D. Oxon., was appointed surgeon in succession to Mr. Adams. Dr. Cartwright has up to this time acted as assistant honorary surgeon to the hospital.

GLASGOW OPHTHALMIC INSTITUTION · POST-GRADUATE COURSE OF DEMONSTRATIONS ON DISEASES AND INJURIES OF THE EYE—This course was commenced on Tuesday evening, Nov. 6th, over 50 graduates being present Dr. A M Ramsay took as his subject "Phlyctenular Conjunctivitis" and at the close of the lecture Dr. M Thomas, medical superintendent of the Glasgow Royal Infirmary, on behalf of the managers, welcomed the members of the profession and expressed his gratification at the increasing interest manifested in these annual demonstrations

MEDICAL MAGISTRATE—Mr. T. W. Buckley, M.D. Durh., of Thrapston, has been placed on the commission of the peace for the county of Northamptonshire, on the recommendation of the Lord Lieutenant, Earl Spencer, K.G

SOUTH AFRICAN HOSPITALS COMMISSION.

Evidence of Mrs Richard Chamberlain

THE Royal Commission appointed to inquire into and report upon the care and treatment of the sick and wounded in the South African campaign held its final meeting for the examination of witnesses on Monday, Nov. 5th, in one of the rooms of Burlington House The Commissioners present were Lord Justice Romer, Chairman, Dr W. S Church, and Sir David Richmond, and the witness examined was Mrs Richard Chamberlain

Mrs CHAMBERLAIN said, in reply to the CHAIRMAN, that she landed at Cape Town about the beginning of November and left on August 8th During nearly the whole of the intervening period she was in the vicinity of Cape Town, though she paid a visit to Mafeking and saw the hospital there run half upon the military and half upon the civil system The hospital to which she paid most attention was the No 1 Wynberg Hospital She also paid attention to No 2 Wynberg Hospital, she twice visited the Woodstock Hospital, and she was shown over No 3 Hospital But she only considered herself an authority with regard to No. 1 Wynberg Hospital She obtained permission from General Walker to visit this hospital General Walker told her that he had arranged for her to visit it, but when she went she was politely shown the way out. When she reported this treatment to General Walker he said there must have been a mistake, and matters having been arranged, she began to visit the hospital regularly. She got permission to visit three days a week, but as a matter of fact she was there every day No complaint was made at the time by the principal medical officer, but seven months later after she had reported him, there was complaint. General Walker made no representation to her about the matter, and when the General commanding the line of communications remarked that although the permission was for three days a week she was going to the hospital every day, he added that he supposed they were always glad to see her No difficulty arose between her and the principal medical officer until some time after Christmas, and the difficulties arose because she had reported him several times to the General, to the Base Commandant, to Colonel Stevenson, and in fact to anybody of authority she could get hold of The principal medical officer never complained that she gave things to the patients without his knowledge, but she heard indirectly from somebody else, a woman, that it was said she had given buns to enteric fever patients and that she had taken an ice-bag from the head of one patient. These statements were absolutely untrue She was absolutely sure that she had never given things to the patients without the knowledge of the principal medical officer. When at the request of the principal medical officer she gave a Christmas party to all the patients she forbade the ladies assisting her to hand food to the patients, she said that the orderlies who were in charge of the patients must be the ones to judge what the patients were to have As far as her own handing of food was concerned she not only looked at the diet sheet before giving anything, even tea, but in addition she used to ask the sister or the orderly One day somebody sent up to her to say that the Government stores of tobacco had run out and to ask for some of her tobacco They asked if they could borrow from her She replied that it was unnecessary to borrow for she would give the men some of her tobacco on the following day, she told the medical officer that she preferred to distribute her tobacco herself She admitted writing a letter containing this passage: "Surgeon General be blowed, I am going to give the men cigarettes to-morrow myself The hospital authorities said she was not to go to the hospital, but all the same she continued to go She said she would not go inside the hospital unless she was sent for specially by some patient who wanted to see her She paid three visits after being told not to enter the hospital They sent a sergeant to her, and she told him to go back to his superiors and say to them that he had communicated to her their orders As a matter of fact she disregarded their orders and went three times to the hospital—each time in response to a written message from a patient.

The CHAIRMAN In other words, for reasons of your own, you disobeyed the orders and consequently had to be excluded by an order of Lord Roberts?

Mrs CHAMBERLAIN: Yes, but surely the reasons are important.

The CHAIRMAN Now we will go to your personal experiences of the Wynberg Hospital

Mrs CHAMBERLAIN said that in the first instance it seemed to her that the whole place was in a most terrible muddle. There was no organisation, and though they had unlimited money and stores at their command the place did not look like a hospital. There was an absence of proper method in regard to the convoys coming to the hospital. The authorities of the hospital ought to have sent down to the station a medical officer of high rank to sort out and to classify the patients so that on their arrival at the hospital they could be put into the proper beds.

Dr CHURCH They were sorted when they got to the hospital

Mrs CHAMBERLAIN Very imperfectly

The CHAIRMAN You appear to think that you know better than the doctors?

Mrs CHAMBERLAIN Yes, I think I know much better than some of these doctors In reply to further questions by the CHAIRMAN, witness said that they were always short of splints in the hospital. She knew that because she saw people contriving makeshift splints and heard them saying these were all they could get They were short of every necessary utensil from cups and saucers and plates down to bed pans and things of that sort. This shortness prevailed all the time There were no proper air cushions or air beds or hot-water bottles or pillows, only the tiny regulation pillow They were, indeed, short of everything except drugs They had a very insufficient supply of nursing sisters When she first went to the hospital, she and a civil surgeon made a calculation and they found that there was one nursing sister to every 175 patients, counting night and day She could not tell the total number of patients or of nursing sisters, though she had the figures in her notes, but she assured the Commissioners that the proportion she had stated was correct There were plenty of nurses to be had, it was simply a question of red tape She considered that after the first rush there were enough orderlies if they had been properly organised and been taught a little about their work She could have arranged matters differently She herself provided soups and jellies and air-cushions and pillows

The CHAIRMAN They accepted your gifts?

Mrs CHAMBERLAIN Yes

The CHAIRMAN Did you complain of them for that?

Mrs CHAMBERLAIN No, but I complained of the things not being there She further said that they were even short of soap There was nothing in the way of chairs or couches on which to put patients and nothing in the way of warm things with which to wrap up patients after sundown when the temperature became very cold They were short of feeders and tubs and new linen, and utensils for hot water for *fomentations Indeed, it was difficult to keep some of the patients* reasonably clean She had further to complain of the dirt in the place All the time until the news came of this Royal Commission, the place was swarming with vermin, the floors were dirty, everything smelt a bit, the utensils were not disinfected, and the patients were not properly washed The buildings were occasionally washed down with dirty water She did not consider that the walls were dirty, though of course, the bugs came out of the crevices The system of night nursing for the orderlies was very bad The men were posted in batches and put in a tent and each man was supposed to be on duty for two hours There ought to have been proper night orderlies who were not called upon during the day In the officers' mess she observed great waste and the absence of proper supervision She saw napkins used for cleaning knives, crockery knocked about and smashed, and two-thirds of the wine and spirits dealt out for the mess were stolen The food was improperly cooked and dirtily served Although the officers had their servants with them they were supposed to be looked after by the orderlies, the servants' duties not being properly defined She did not make the allegation of theft against the officers' servants; she said that more probably the wine and spirits were stolen by the orderlies Another complaint she had to make was that while there was any amount of fresh milk to be had around the hospital the patients were very often without it and had to be content with tinned milk She had seen both officers and men who could not have fresh milk Another thing she objected to very strongly was that although there were typhoid and other diseases prevalent in the neighbourhood of Wynberg the milk was not sterilised, and her fear always was that diphtheria or scarlet fever might be communicated by the milk She called attention to the need of sterilisation several times, but later on gave up the business as hopeless. She had seen orderlies take sheets that had been used on the beds of typhoid patients, rinse them through with cold water, dry them, and then place them on beds for new patients. She had no doubt on the point for she had witnessed the whole process Men who had never been to the front contracted typhoid and this she attributed to want of proper precautions in the hospital She complained that there was no proper inspection by the military authorities The doctors were practically allowed to do what they liked If the general came down he gave several days' notice and she did not consider an inspection was worth anything if notice of it were given In her opinion the inspection should be made without notice and by somebody outside the Army Medical Department. She objected to drunken army doctors being sent off in charge of convoys There was a doctor at No 2 Hospital whom she saw at intervals generally intoxicated for some months, and when he got into a row and was turned out of the hospital he was sent home in charge of transports There were other cases which she put before Lord Lansdowne and his lordship found them to be true There were two other doctors who were frequently drunk who were sent home in charge of invalids on transports.

The CHAIRMAN *invited* Mrs. Chamberlain to write down the names of the three doctors she referred to as well as the names of the transport ships on which they acted

Mrs CHAMBERLAIN, while writing in response to the CHAIRMAN, said that one of the doctors was a very nice young man and she would rather not give his name

The CHAIRMAN, having received the paper from Mrs Chamberlain, said there was only one doctor named

Mrs CHAMBERLAIN admitted she had only written one name but she had given the names of the three ships she could not keep all the names in her head

Dr CHURCH It is a serious charge you are making, that it is the practice to put drunken medical men on transports.

Mrs CHAMBERLAIN: Yes, it is the practice. When they want to get rid of the drunken medical men they put them on transports Another thing to which she desired to call attention was the manner in which complaints were received When complaints were made she considered that they ought to have been more looked into than they were

The CHAIRMAN reminded Mrs. Chamberlain that the Commissioners were now at the end and not at the beginning of their inquiry that they probably knew more about these matters than she did, and invited her to confine her evidence to matters of her own knowledge and experience

Mrs CHAMBERLAIN You remind me of a counsel for the defence. If I had not known who you were I should have thought you were the counsel retained by the army doctors

The Chairman: Quite an erroneous impression, I assure you, Mrs. Chamberlain.

Mrs. Chamberlain: Well, I think a witness should be assumed to be truthful until she is proved otherwise, and I think you should hear my evidence

The Chairman assured Mrs. Chamberlain that he had every desire to be courteous to her and that his only desire was to avoid mere expressions of opinion and to keep the evidence to matters of experience and fact.

Mrs. Chamberlain, in further examination, said that she had to complain of the manner in which lunatics were treated in the hospital. They had several lunatics and she maintained that they ought to have been put somewhere else and not allowed to go about the hospital and disturb and frighten the patients One was a young officer of the Royal Artillery who roved all over the place and used to dance into the wards where the most serious cases were, causing great fright and alarm and confusion. This went on for quite a considerable time until he became violent to an orderly and he was removed in an ambulance. She thought the man should have been put either in a small place by himself or in a proper lunatic asylum.

The Chairman: Do you not think the doctor was a better judge than you of what should be done with a lunatic patient?

Mrs. Chamberlain: I am sure he was not One case had a fatal termination. A young Army Service Corps officer came down suffering from a different form of insanity. He was very melancholy and when she spoke to him he said that he was miserable. Once before he had tried to poison himself. In her opinion they did not give him proper supervision in the hospital. They let him wander about, and out of pity she used to take him down to her hut and talk to him and give him something to think about. They took him down to the military sanatorium at Claremont They gave no warning to the authorities of the sanatorium and he shot himself next morning. All she could say about the Woodstock Hospital was that it was filthily dirty. She considered Wynberg bad, but Woodstock was worse, but that, of course, was before this Commission went out to South Africa. She went to Rondebosch once, and considering that it was a military hospital and run upon a bad system she thought it reflected great credit upon the officer in charge She was asked to go up to Mafeking by the chief magistrates of the place in order to see the hospital, one portion of which was run on the military and the other on the civil system. The sight was interesting because of the contrast it offered. When she went into the military portion she saw a man who appeared to be dying from enteric fever. She called the sergeant-major, who said, "We think we may just pull him through with great care." By the bedside there was some tinned milk very badly mixed indeed. The patient said he could not drink it, and the sergeant-major said he could not get fresh milk. She moved across to the civil portion of the hospital, where she saw convalescents with great bowls of fresh milk.

By Dr. Church: She had had considerable experience of hospital work in Birmingham and in the Guards Hospital in Rochester-row, but she had never trained in a hospital.

By Sir David Richmond: She did not pretend to be qualified to say whether a patient should or should not have tobacco. She always inquired of the orderly which of the men were allowed to smoke by the medical officer. She took care that her distribution did not take the place of theirs and did not clash with theirs

This closed the examination of Mrs. Chamberlain, and the Chairman announced that no more witnesses would be called, and that the Commissioners would now proceed to the consideration and preparation of their report.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to The Lancet *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

Ainslie, William, M.B., Ch.B. Aberd., has been appointed Certifying Surgeon under the Factory Acts for the Kington Urban District and Kington Rural District, except the Civil Parishes of Eardisley, Willersley, Winforton, and Brilley.

Aymer C., M B, C. M. Aberd, has been appointed Certifying Surgeon under the Factory Acts for the Burgh of Inverbervie and the St. Cyrus District of Kincardineshire.

Bigger, E. C, M D. Irel, M Ch., L. M. R.C P., R C.P.S. Irel., has been appointed Local Government Inspector, Belfast.

Campbell, John Archibald, L.R.C.P. & S. Edin, L F.P S. Glasg., has been appointed Demonstrator of Anatomy at Anderson's College Medical School, Glasgow.

Durham, Frederic, M B., F.R.C.S, has been appointed Consulting Surgeon to the North-West London Hospital, Kentish Town-road, N.W.

Grant, Lachlan, M.D Edin., has been appointed Parish Medical Officer and Public Vaccinator, Ballachulish and Glencoe; also Certifying Factory Surgeon for the Parish of Lismore and Appin, Argyleshire.

Ham, B. Burnett, M D., M.R.C.S., L.R.C.P., D.P.H. Cantab., has been appointed Commissioner of Public Health for Queensland, Australia.

Lightbody, J. H., M D. Vict., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory Acts for the Urban District of Bexhill-on-Sea.

MacGuire F. J., L.R C.P., L R C.S. Irel., has been appointed Medical Officer for the Longford Workhouse, vice R. S. Cochrane, deceased.

Macquarie, J., M.B., C M. Aberd., has been appointed District Medical Officer, Wigton Union, vice T P. Thompson, resigned.

Maudsley, N., M.B., C.M. Edin., has been appointed District Medical Officer Rothbury Union, vice W F. Miller, resigned.

Moorhead, John, M.A., M.D., has been appointed Consulting Physician to the Royal Hospital, Weymouth.

Mudge, T., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory Acts for the Hayle District of Cornwall.

O'Meara, W. H., L R.C.P., L R.C.S. Edin., has been appointed Medical Officer for the Workhouse, Holbeach Union, vice R. R. Harper, resigned.

Pollock, R. G., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer for the Croydon Union, vice H. Ross-Todd, resigned.

Robb, A. G., M B. Irel., has been appointed Superintendent Medical Officer to the Fever Hospital, Belfast Union, vice E Cory Bigger.

Roberts, Adeline M., M.B. Lond., has been appointed House Surgeon to the Manchester Clinical Hospital for Women and Children, Park-place, Cheetham Hill-road, vice N. Lomas.

Sandstein, A. C, M.B., Ch.B. Edin, has been appointed Resident Medical Officer to the Gesto Hospital, Edinbane, Isle of Skye.

Thomas, Frank G., M.B., B.Ch. Cantab., has been appointed Ophthalmic Surgeon to the Swansea General Hospital.

Thomas, Jabez F.R.C.S. Eng., L R.C.P. Edin., L.S.A., has been appointed Consulting Surgeon to the Swansea General Hospital

Thomson, Sir William, M.D., M.Ch. Irel., F.R.C.S. Irel., has been appointed one of the Surgeons-in-Ordinary to the Queen in Ireland, vice Sir William Stokes, deceased.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Birkenhead and Wirral Children's Hospital, Woodchurch-road, Birkenhead.—House Surgeon for twelve months. Salary £100 per annum, with board, residence, and laundry.

Birmingham and Midland Hospital for Skin and Urinary Diseases, John Bright-street, Birmingham.—Clinical Assistant

British Hospital, Oporto, Portugal.—Medical Officer. Salary £150 per annum, with liberty to engage in private practice. Apply to the Treasurer, Mr. R. Coverley, 55, Rua da Reboleira, Oporto.

Cardiff Infirmary.—Assistant House Surgeon for six months. Salary at the rate of £75 per annum, with board, washing, and apartments.

Central London Sick Asylums District.—First and Second Assistant Medical Officer and Dispenser at either of the Asylums at Cleveland-street or Hendon. Salary of the First Assistant Medical Officer £100 per annum, and of the Second £75 per annum, each, with board and residence, for twelve months. Subject to statutory deductions, Apply to the Clerk, Clerk's Office, Cleveland street Asylum Cleveland-street, London, W.

Coomassie Expedition.—Medical Officers for six months in the colony, with a salary at the rate of £30 a month, and a gratuity on returning to England of ten days' pay in respect of each complete calendar month served in the colony. Free passage to and from the colony and free rations will be provided. Applications to be addressed to the Assistant Private Secretary, Colonial Office, London.

Cornwall County Asylum, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £120, rising to £150 by £10 annually, with board, furnished apartments, &c.

Grimsby and District Hospital Great Grimsby.—Resident House Surgeon. Salary £80 per annum board, lodging, and washing.

Hailey Open-air Sanatorium, Wallingford.—Resident Assistant Physician. Salary £100.

Hartlepools Hospital.—House Surgeon. Salary £80 per annum, with board, and lodging in the institution.

Holloway and North Islington Dispensary, Palmer-place, N.—Honorary Medical Officer.

Holloway Sanatorium Hospital for the Insane, Virginia Water, Surrey.—Junior Assistant Medical Officer for the male side. Salary £150 per annum, rising to £200, with board, lodging, washing, and attendance.

Hospital for Sick Children, Great Ormond-street, London.—Resident Medical Superintendent for one year. Salary 100 guineas, with board and residence in the Hospital. Also Ophthalmic Surgeon.

Kent and Canterbury Hospital.—Assistant House Surgeon, unmarried. Salary £60 a year, with board and lodging.

Kent County Asylum, Chartham, near Canterbury.—Second Assistant Medical Officer, unmarried. Salary begins at £175 per annum, with board, quarters, washing and attendance. Also Third Assistant Medical Officer required in January next. Salary begins at £125, with emoluments as above.

Liverpool Dispensaries Moorfields, Liverpool.—Assistant Surgeon, unmarried. Salary £100 per annum, with board and apartments.

Manchester Hospital for Consumption and Diseases of the Throat and Chest.—Resident Medical Officer for the In-patient Department, Bowdon, Cheshire. Salary £100 per annum, with board, apartments, and washing.

Manchester Royal Infirmary.—Resident Medical Officer for the Convalescent Hospital at Cheadle, for twelve months, unmarried. Salary £150, with board and residence.

Metropolitan Asylums Board.—Four Assistant Medical Officers at the Fever and Small-pox Hospitals (no vacancy for a Female Medical Officer), unmarried. Salary £160 per annum the first year, £180 the second year, and £200 the third and subsequent years, with board, lodging, attendance, and washing (subject to statutory deduction).—Apply at the Office of the Board, Thames Embankment E C.

National Orthopædic Hospital, 234, Great Portland-street, Regent's Park, London.—Surgical Registrar.

New Hospital for Women, 144, Euston-road, London.—Two fully qualified medical women as House Physician and House Surgeon. Also Clinical Assistant for Out-patient Department for one year.

North-Eastern Hospital for Children, Hackney-road, London.—House Surgeon for six months. Salary at the rate of £80 per annum, with board, residence, and laundry allowances. Apply to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

NORTH WEST LONDON HOSPITAL, Kentish Town road —Assistant Surgeon Also Resident Medical Officer and Assistant Resident Medical Officer for six months Salary at the rate of £50 per annum, with board, residence, and wahing

NOTTINGHAM CITY ASYLUM —Senior Assistant Medical Officer, unmarried Salary £200 a year, with board, apartments, and washing

PARISH OF ST. PANCRAS, London —Senior Assistant Medical Officer for the Workhouse, for two years Salary £135 per annum, with residential allowances. Apply to the Clerk to the Guardians, Vestry Hall, Pancras road, S W

PECKHAM HOUSE ASYLUM, S E —Junior Assistant Medical Officer, unmarried Salary £150 per annum, with board, residence, &c

ROYAL ACADEMY OF ARTS, London — Professorship of Anatomy. Tenable for five years The annual fee for six lectures and six demonstrations to the students, is for the lectures £100, and for the demonstrations £28 Apply to the Secretary, Royal Academy of Arts, W

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months Salary at the rate of £40 per annum, with board, lodging, and washing

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road, Brighton —Acting Physician

ROYAL DEVON AND EXETER HOSPITAL, Exeter —Assistant House Surgeon for six months Salary at the rate of £80 per annum, with board lodging, and washing

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W C —Clinical Assistants for six months

SALISBURY INFIRMARY —House Physician, unmarried. Salary £75 per annum, with board, lodging, and washing

SUSSEX COUNTY HOSPITAL, Brighton —Resident Pathologist. Salary £70 per annum, with board and residence

THE CHIEF INSPECTOR OF FACTORIES gives notice of vacancies as Certifying Surgeons under the Factory Acts at Tisbury, in the county of Wilts, at Haverfordwest, in the county of Pembroke, and at Wishaw, in the county of Lanark.

VICTORIA HOSPITAL FOR CHILDREN, Queen's road, Chelsea, S.W.—House Physician for six months Honorarium £25, with board and lodging in the Hospital

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £110 a year, with board, lodging, and attendance

Births, Marriages, and Deaths.

BIRTHS.

ALLAN —On Nov. 4th, the wife of Alex. W. Allan, M D, Wainfleet, Lincolnshire, of a son

CULMER —On Oct 31st, at Chinehurst, Alum Chine-road, Bournemouth, the wife of J. W. Culmer, M.R C S, L R C P, of a son

KEATS —On Oct. 26th, the wife of William J C Keats, Medical Superintendent of Camberwell Infirmary, of a daughter

KINGDON ELLIS —On Oct 30th, at Lowdham Notts, the wife of Robert Kingdon-Ellis, M.A, M B Oxon, of a daughter.

WALTERS —On Nov. 3rd, the wife of Dr. F Rufenacht Walters, of 21, Wimpole-street and Crooksbury Ridges, Farnham, of a daughter

MARRIAGES.

CHURCHILL—HUBERT.—On the 31st Oct., at St. Mary's, Billingshurst, Sussex, by the Rev A H Barrow, vicar, assisted by the Rev S Norman and the Rev G H Torrance, John Aylward, M R.C S, L.R.C P, only son of John Foot Churchill, M R.C S, L.R.C P, of Chesham, Bucks, to Sybil Maude, only daughter of William Henry Hubert, M R C S, L.S A, of the Brick House, Billingshurst

CRIMMIN—LENNAN —Oct 29th, at the Church of St. Joseph, Terenure, by the Very Rev Terence Anderson P P Major John Crimmin, V C, Indian Medical Service, to Julia (Juju), only daughter of William F. Lennan and Mrs Lennan, St. Ronan's, Orwell road, Rathgar, co Dublin, and granddaughter of the late Major J. J. Poett, Indian Army. No cards

MARRIOTT—GOCHER On the 8th inst. at the parish church, Edgbaston, by the Rev Horatio Spurrier, M A., vicar of Shildon (uncle of the bridegroom), assisted by the Rev Canon Cresswell Strange, M A, vicar of the parish, Hyde Marriott, B Sc. M B Lond, eldest son of the late Joshua Marriott of Stockport, to Emily Katharine, third daughter of Thomas Gocher, of Edgbaston At home Dec 5th, 6th, and 7th No cards

SWALLOW—ATKINSON —On Nov 1st, at All Saints' Church, South Lambeth, S W, Allan James Swallow, M B, B S, of Mount Ringcombe-gardens Clapham rise, S W., to Elizabeth, elder daughter of the late John Bewley Atkinson, of Chertsey hill, Harraby, Carlisle.

DEATHS

ANDREWS —On Nov. 4th, at Curzon House, Ridgway, Wimbledon, Frederic Foster Andrews, M D, aged 73 (formerly of) 29, Eccleston-street, S.W

BARRY On Nov 5th, at Westbourne Park-road, Bayswater, Richard John Barry, Fleet Surgeon, R N, aged 54

HALE —On Nov 4th, at Barrow Hill, Chesterfield, Thomas Frederick Hale, M R.C S, aged 74 years No cards.

HUGHES —On Nov. 3rd, at Chester-terrace Regent's Park, London, Alfred William Hughes, F R.C S, Professor of Anatomy at King's College London, aged 38.

MORLEY —On Nov 2nd, at Hartington street, Derby, Henry Morley, L D S Eng aged 73 years

SHORTO —On Nov 2nd, at 5, Trinity road Wimbledon, James Reeve Shorto, M R C S, L S A, aged 64 formerly of Southampton.

N.B —A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths

Notes, Short Comments, and Answers to Correspondents.

A MEMORIAL TO THE GENERAL MEDICAL COUNCIL FROM THE MIDDLESBROUGH AND DISTRICT MEDICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—Knowing what an interest you take in all forms of medical organisation I should be glad if you will grant me a little space to let you know some of the work that has been done and is being done in this district. Since the formation of our medical society there has been a steady increase in its membership, which now includes every medical practitioner in the town and district with one exception Much good work has been done in reforming old bad habits amongst us and in raising the standard of medical practice generally Amongst these reforms (one of the most needed in an industrial town like this) was an unanimous resolution prohibiting members (1) employing collectors to canvass for members for private family clubs, or (2) associating themselves with "canvassing" in any form This naturally involved the medical men holding appointments under the various medical aid societies in the town and in view of, the strong disapproval of the General Medical Council at medical practitioners associating themselves with societies who systematically canvass for members (see resolution, June, 1899), it was unanimously resolved that no member of our society should hold any post under any medical aid society and that all present appointments should be given up This resolution has been acted upon, with the result that the medical aid societies advertised for and procured the services of a qualified medical man. On the arrival of Dr X in the town he was waited on by a deputation from our medical society and in a most friendly way was asked to reconsider his action in supporting the medical aid societies here when all the local medical men had expressed their disapproval of those societies. As Dr X still persisted in his action it was resolved to memorialise the General Medical Council, calling their attention to what, in the opinion of the Middlesbrough and District Medical Society, was a case falling within the terms of their resolution of June 1899 This memorial has now been drawn up and signed by all medical men practising in the town and district and forwarded to the General Medical Council At the Manchester conference strong disapproval was expressed as to the way in which medical aid societies exploited the services of general practitioners in order to secure members The ruling of the General Medical Council on this matter was discussed, and it was asked if their disapproval was anything more than a "pious opinion" We were told that no specific case had been brought to the notice of the Council since the resolution bearing on medical aid societies was passed It is with the object of placing a "specific case" before the General Medical Council that our society has taken this action, trusting that it may be the means of obtaining some decision from the Council which will prohibit general practitioners from associating themselves with this very objectionable form of contract work.—I am, Sirs, yours faithfully,

R E HOWELL, M B Edin., M R.C.S Eng,
Honorary Secretary Middlesbrough and District
Medical Society

Nov 6th, 1900.

⁂ The Middlesbrough and District Medical Society has given to the General Medical Council a test case The result will be watched by the medical profession with interest.—ED L.

THE CASE OF MR. JOSEPH HENDERSON MARTIN

To the Editors of THE LANCET.

SIRS,—A fortnight ago Mr Joseph Henderson Martin, M.R.C S. Eng, L.S A., whilst acting as assistant in charge of a branch colliery practice at Lumley, co Durham, became insane and through lack of means had to be removed to the County Asylum at Sedgefield His wife and five young children (ages, 12, 10, nine six, and four years) are practically destitute, and I venture to appeal on their behalf through your influential columns

Mr Martin was a student at the Middlesex Hospital, has filled several assistantships—one at Richmond in Yorkshire, one in Leicester—and for a time he practised on his own account in Huntingdon. He is only 43 years of age, and through no absolute fault of his own has never been in a position to lay by any money I understand that during the last two years of his life he has been freer from money troubles than he had ever been before, and his income then would be about £200 and a house Any subscriptions in aid of this unfortunate family would be thankfully received by Dr W M Renton, St. Mary's House, Chester-le-street, or by yours faithfully,

H LYON SMITH.

The Hawthorns, Chester le Street, Nov 7th, 1900

THE "MEDICO" TEA INFUSER.

THIS teapot is very ingeniously as well as simply designed in order to place the infusion of tea leaves under easy control. The space beneath the lid which contains a perforated cup or strainer is occupied by what may be described as a wide dip tube. The tea leaves are placed in the strainer and hot water is poured in until the level of the water is just above the strainer and the leaves are immersed. There is an annular space around the strainer just beneath the shoulder of the teapot. On pouring in hot water the water traps air in this space after the manner of a seal. Thus the level of the water in the strainer is higher than that in the teapot owing to the imprisoned air. So long as this is so the process of infusion proceeds, but it may be immediately stopped by unscrewing a little air-valve on the shoulder of the teapot. The trapped air then escapes and the water in the strainer sinks and that in the teapot rises until a common level is obtained. At this point, of course, the leaves are left "high and dry" and out of contact with the water. In this way the infusion of the tea may be easily controlled. The device is to be commended since it admits of tea being made correctly with a minimum of trouble; there is no extreme extraction of the pernicious astringent substances of tea-leaves, a delicate wholesome liquor being obtained which may stand for some time without taking up an objectionable excess of tannin. The difference between tea thus made and the tea made in the ordinary teapot and allowed to stand is the difference between tea that is fit to drink, as in the former case, and unfit to drink, as in the latter case. Mr. John Marshall of 5, Sellons-avenue, Harlesden, London, N.W., is the patentee.

HOSPITAL ABUSE, A SIDE THAT IS SOMETIMES OVERLOOKED."

To the Editors of THE LANCET.

SIRS,—The letter of your correspondent "Hospital Surgeon" in THE LANCET of Nov. 3rd (p. 1320), expressing openly, as it does, what are, I believe, the general, though somewhat thinly veiled, opinions of his class, seems to call for some reply from the general practitioners who have been educated and approved by examination by him or such as him. The general practitioner's rôle is stated to consist in "draining" a patient's "fee-paying capacity by a long course of useless medical treatment" He is further taxed with only sending for consultation "the refuse of his practice" or the "patients of whom he is weary or who are weary of him." We are further led to suppose that he has no therapeutic expedient beyond "the usual bottle of medicine." I am not concerned to answer these charges. I only wish to call attention to them as showing the opinion held by a hospital surgeon of those whom he lets loose on society and is thus responsible for. "'It was a thousand pities,' said Corporal Trim, 'though I believe, an' please your honour, that I am going to say but a foolish kind of thing for a soldier.' 'A soldier,' cried my uncle Toby, interrupting the corporal, 'is no more exempt from saying a foolish thing, Trim, than a man of letters.' 'But not so often, an' please your honour,' replied the corporal. My uncle Toby gave a nod." A general practitioner is no more exempt from making a mistake than a hospital surgeon, but not such a tragic one. Is not each class too apt to regard the other as a somewhat blundering rival rather than as a *confrère* practising an equally honourable branch of the profession and equally liable at times to err, in practice, in ethics, in brotherly feeling?

I am, Sirs, yours faithfully,
Nov. 5th, 1900. A GENERAL PRACTITIONER.

A QUESTION OF TASTE AND POLICY.

A (a registered medical practitioner) gives B and Co. a testimonial concerning their beef extract, &c. B and Co. ask permission to publish it and A gives them permission. Has A committed any offence against any law, rule, or regulation either of the General Medical Council or other governing body, either in giving the testimonial or in permitting it to be published?

The above question has been propounded to us by a subscriber and deals with a subject which has often been noticed by us in our columns. We take it for granted that our correspondent is describing the whole transaction and that no money has passed between A and B and Co. in return for the testimonial and that A was not interested in the sale of B and Co.'s commodity. A has not committed any offence against any law or any regulation of the General Medical Council, but what he has done is most inadvisable. On grounds of public policy it is a pity that testimonials should be given which to the censorious will always suggest that they have been given in return for value received, while on grounds of taste it is inadvisable that a medical man should have his name published abroad as an expert in food or allied subjects.

WHEAT GLUTEN FLOUR.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if you or any of the readers of THE LANCET can supply me with the names and addresses of manufacturers in this country of wheat gluten flour.

I am, Sirs, yours faithfully,
Nov. 5th, 1900. R. A. B.

"MOTOR CARS FOR MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—If your correspondent "Motor-car" will emerge from the [illegible] of his *nom-de-plume* and meet me in the correspondence [illegible] of the *Autocar*, where we can more fitly discuss technicalities [illegible] relieve you of an interesting, though "foreign," argument, [illegible] very pleased to give him any details concerning my experience [illegible] he may wish to have. At the present moment he does not [illegible] er he is judging and condemning autocars as a *practical* [illegible] merely from the point of view of the man in the street.

MACGUIRE
Officer for
MACQUARIE, J.
Officer, Wi
MAUDSLEY, N.,
Officer Roth
MOORHEAD, JOHN
cian to the Roy

Curiously enough I gave up my horse and trap for the very same reasons that your correspondent hesitates to adopt the more modern mode of locomotion—viz., uncertainty, expense, and general unsatisfactoriness. It used to cost me about 6*d.* per mile in the days of the hay motor, whereas I ran up to London not long ago with another passenger and luggage on board my car for 7½*d.* (40 miles). If your correspondent should happen to be a resident in this town or neighbourhood it might interest him to attend the meeting of our club on Friday, Nov. 9th, when we propose to open a discussion upon the "Most Suitable Form of Motor Vehicle for General Purposes."

I am, Sirs, yours faithfully,
CLAUDE A. P. TRUMAN, L.R.C.P. Edin.,
Honorary Secretary Reading Automobile Club.
Reading, Nov. 6th, 1900.

THE EXTRACTION OF TEETH FOR CLUB PATIENTS.

To the Editors of THE LANCET.

SIRS,—I shall be very pleased if you or any of your readers will kindly inform me whether it is customary for club surgeons to extract teeth gratuitously for members. This may seem a small matter, but in a country practice extractions are numerous, and as dentistry is quite a separate branch I cannot see that it need be included under the head of "Medicines and Medical Attendance." It appears to me that if we do this club members may just as reasonably expect us to stop teeth and even to perform other and more difficult operations which belong entirely to the dental specialist. I have always charged and been paid for extractions, but I find that some clubs in the neighbourhood have squeezed these in under the elastic heading of "Medical Contract."

I am, Sirs, yours faithfully,
Nov. 6th, 1900. JUNIOR.

"WANTED—A HOME."

To the Editors of THE LANCET.

SIRS,—In answer to Dr. Herbert Hart's query in THE LANCET of Nov. 3rd the National Association for Promoting the Welfare of the Feeble-Minded (Office, 53, Victoria-street, S.W.) has training homes for children of weak mind not certifiably imbecile. Terms from 7*s.* to 10*s.* per week.

I am, Sirs, yours faithfully,
Richmond-hill, Surrey, Nov. 6th, 1900. G. E. SHUTTLEWORTH.

◆

Perplexed would be thankful for suggestions for treatment of the following cases. 1. Pruritus ani et scroti in a patient aged 25 years; generally worse at night. Many remedies have been tried, but relief has so far only been of a transitory nature. 2. Tinea sycosis, which has resisted treatment of various kinds for over six months.

M.B.—We cannot find upon the Register or in the Medical Directory the name of the medical man who gives the testimonial to the quack remedy. The testimonial is not fully dated. Of course it would be wrong for a medical practitioner to give such a testimonial.

E. M. W.—No connexion is known to exist between cancer and alcoholic abuses. Local irritation is stated to cause cancer of the lip in smokers but the predisposition must be very slight.

ERRATUM.—In THE LANCET of Nov. 3rd, p. 1306, col. 1, line 10 from foot, the word "gypsum" ought to have been *alum*.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 8th, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rainfall	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 a.m.
Nov. 2	30·10	N.	0·06	61	56	53	55	56	Overcast
" 3	30·21	N.	...	61	57	53	53	54	Overcast
" 4	30·13	S.	...	65	57	50	51	52	Cloudy
" 5	29·85	S.W.	0·04	61	56	50	51	52	Overcast
" 6	29·61	S.	0·07	69	57	52	52	53	Raining
" 7	29·32	S.W.	0·14	59	52	51	51	52	Overcast
" 8	29·93	S.W.	0·12	85	53	42	42	44	Fine

During the week marked copies of the following newspapers have been received: *Catholic Times (London), Gainsborough Leader, Scarborough Mercury, Birmingham Daily Post, Farm, Field, and Fireside (London), Burton Mail, Dundee Advertiser, Glasgow Evening News, Leicester Daily Post, Bradford Observer, Westmorland Gazette, East Anglian Daily Times, Liverpool Daily Post, Darwen News, North British Daily Mail, Sheffield Daily Telegraph, York Daily Herald, Hereford Times, Scotsman, Citizen, Yorkshire Post, Times of India, Pioneer Mail, Builder, Architect, Bristol Mercury, Huddersfield Examiner, Science Siftings, Spare Moments, The Sun, Sanitary Record, Local Government Chronicle, Reading Mercury, City Press, Hertfordshire Mercury, Abingdon Herald, Dunfermline Press, Torquay Times, Sheffield Daily Telegraph, Daily Express, Hampshire Independent, Mining Journal, Surrey Advertiser, North China Daily*

News (Shanghai), Local Government Journal, Skyrack Courier (Leeds), South-West Suffolk Echo, Colchester Journal, Eastbourne Gazette, Lincoln Echo, Banbury Guardian, Wolverhampton Chronicle, Midland Counties Herald, South London Press, Horncastle News, Public Health, Cape Register, Licensed Victuallers' Gazette, Sleaford Journal, Leeds Mercury, Carnarvon Herald, Worthing Intelligencer, &c., &c.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.)

TUESDAY (13th).—London (2 P.M.), St Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (14th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

THURSDAY (15th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (17th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (12th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Cases:—Dr. Cautley: Bi-lateral Birth Palsy.—Mr. Kellock: Mollities Ossium in a Child.—Dr. Caley: Vascular Swelling connected with the Thyroid.—Mr. Weeks: Congenital Locomotor Ataxy.—Dr. Dockrell: (1) Hyalin Degeneration of the Skin; (2) Adenoma Sebaceum.—Dr. Savill: Erythro-melalgia (Acroparæsthesia).—Mr. Wallis: Baker's Cyst of Leg (?) Mr Little: Specimens from a Case of Late Rickets shown at a previous meeting

TUESDAY (13th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.)—Dr. A. H. N. Lewers: The After Results in 40 Consecutive Cases of Vaginal Hysterectomy performed for Cancer of the Uterus.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury square, W.C.)—8 P.M. Mr. F. Browne: The Experiences of a British Pharmacist in China (illustrated by lantern slides).

WEDNESDAY (14th).—HUNTERIAN SOCIETY (London Institution, Finsbury circus).—8.30 P.M. Paper.—Dr. T. G. Stevens: Some Points in the Diagnosis and Treatment of Puerperal Sepsis

THURSDAY (15th).—*CHILDHOOD SOCIETY* (Library of the Sanitary Institute, 72, Margaret-street, W.)—8 P.M. Prof. W. H. Woodward: The Training of Teachers.

HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.)—8.30 P.M. Dr. R. Maguire: The Prognosis and Treatment of Tuberculous Disease of the Lungs. (Harveian Lecture.)

FRIDAY (16th).—SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (Evelina Hospital, Southwark bridge-road, S.E.).—5.30 P.M. Cases will shown by Dr. Carpenter, Dr Chaffey, Dr. Sunderland, Mr. Tubby, Mr. Lucas, and Mr. Edmunds. Papers:—Dr. T. Fisher: Cases of Thrombosis of the Cerebral Veins in Children.

EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Dr. Patrick Manson (President): Some Problems in Tropical Epidemiology. (Inaugural Address.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Morris: Consultation. (Skin.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Beddard: Diet in Health and Disease.

TUESDAY (13th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—4 P.M. Dr W. Ewart: Consultation. (Medical.)

THE HOSPITAL FOR DISEASES OF THE SKIN (Stamford-street, Blackfriars)—5 P.M. Mr. G. Pernet: Differential Diagnosis of Syphilitic and Non Syphilitic Affections of the Skin.

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND—(Museum of Practical Geology, Jermyn-street, S.W.)—8.30 P.M. Right Hon Lord Avebury: Huxley Memorial Lecture

WEDNESDAY (14th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.)—5 P.M. Mr. W. H. A. Jacobson: Clinical Lecture. Some Remarks on the Question of Early Operation in Acute Appendicites

LONDON THROAT HOSPITAL (204, Gt. Portland street, W.)—5 P.M. Dr Woakes: Nasal Polipus with special reference to its recurrence. (Post-graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton)—4 P.M. Dr. Horton Smith: Bronchiectasis.

THURSDAY (15th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—4 P.M. Mr. Hutchinson: Consultation. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street, W.C.).—4 P.M. Dr. Lees: Demonstration of Selected Cases.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL (Gray's Inn-road, W.C.)—5 P.M. Dr D. Grant: Diagnosis of Diseases causing Stridor or Obstruction to Respiration.

CHARING CROSS HOSPITAL.—4 P.M. Dr. Ellen: Gynæcological Demonstration. (Post graduate Course.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.)—5 P.M. Dr. S. Taylor: Surface Anatomy.

FRIDAY (16th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—2-3.30 P.M. Dr. J. Taylor: Class. Clinical Examination of the Nervous System. 4 P.M. Dr. J. D. Grant: Consultation. (Ear.)

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them! Subscriptions paid to London or to local newsagents (with none of whom have *the Proprietors* any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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we shall note that at the moment of injury numerous small vessels are ruptured and there is an instantaneous pouring out of a certain amount of blood and of lymph, so that effusion goes on for three or four hours after an injury. It is during these hours that the application of cold is so effective, and it seems to me that it acts in the following direction. It is a local constringent of the vessels, lessening their size and limiting the effusion. Now, if the amount of effusion poured into and around the joint be controlled the time of healing is lessened, and the probable amount of stiffness afterwards is also decreased, so that the patient recovers sooner. It is therefore quite rational to apply cold during the first three or four hours after the accident, and, indeed, it is the best method at our command. If there be a desire to check further the amount of effusion this can be readily done by the application of pressure and placing the joint in such a position that its potential cavity is lessened. For example, the knee should be placed in extension and not flexion, the ankle at a right angle and not in full extension nor in full flexion. Pressure is usually applied by bandage, but herein there is an intelligent and a non-intelligent method. If an ordinary bandage merely be bound round the joint the chief part of the pressure is made on the prominence of bones at the joint, but pressure must be made so that it is brought to bear evenly on all parts of the capsule which can be got at. For example, in the case of the ankle-joint a bandage around the ankle merely presses on the external and internal malleoli and on the tendo Achillis behind. But, now, if three or four layers of cotton-wool be placed on the joint with a little additional amount in front of and behind the internal and external malleoli and the bandage be then applied, the cotton-wool sinks into the various hollows and effectually compresses the distended capsule. So that if the sprain be seen within the first two or three hours of its occurrence the following treatment should be carried out. Apply cold vigorously for from about ten minutes to a quarter of an hour, either by pouring cold water over the joint or by the application of ice or spirit lotion and then wrap the joint round with lint or other suitable material soaked in cold water or spirit lotion, put on the cotton-wool in the manner just indicated and place the joint in such a position that there is least potential cavity for effusion to be poured into and firmly bandage the part.

During the period of quiescence the same line of treatment should be adopted, for there is some quiet effusion still going on. But when the second attack of pain ensues and it is becoming more severe, the application of cold is not of much value, since by this time the tissues are distended with blood and with lymph and effusion has now ceased to be poured out. The right thing to do is to apply heat, as hot applications not only diminish the pain but exercise a permanent effect upon the duration and the amount of swelling in this way; when the vessels which have been injured have recovered their tone the application of hot water or of heat in other forms promotes absorption, so that the effused blood and lymph are as rapidly as possible taken up into the blood-vessels and lymph-channels. During this time the joint should be kept at rest and pressure should be maintained on it by cotton-wool and a bandage, since well-directed pressure also assists absorption.

The most vexed question in connexion with a sprain is the duration of this period of rest. How long should it be persisted in? It may be said that as a rule most joints are rested too long and that at an average of three or four days after the swelling has subsided movement of the joint should be commenced. The direction of the movement is a most important point. It has already been stated that we can ascertain by the position of the tender spots and by the distribution of extravasated blood which part of the joint has been most injured. Take, for example, injury to the external lateral ligament of the ankle, no one would be so unwise as to invert the ankle as a part of the early movements, but would flex and extend and carefully evert it so that whilst moving the joint he would be in no way interfering with the healing of strained and of ruptured ligaments. It should not be forgotten that constitutional conditions influence the question of sprains very considerably. If the patient have a tuberculous history or a gouty or a rheumatic-gouty history he should rest much longer than should a patient with an ordinary history.

When the amount of swelling is very considerable hot applications and rest are not sufficient. The best thing is properly applied friction. The object of friction is to empty the lymphatics of a certain amount of coagulated lymph, and in rubbing the parts it is always adviseable to begin to rub that part of the swelling which is most distant from the joint, thus emptying the distant lymphatics first and then those which are nearer the joint and so promote circulation of lymph from the most congested to the least congested parts. Together with rubbing, frequent application of hot water and gentle movement should be carried out. If after ten days' treatment on these lines the thickening about the joint have not disappeared and there still remain tender spots on moving the articulation and on pressure, counter-irritation by blisters is called for. As a rule, one may say that in a fortnight or three weeks with the above treatment a severe sprain will cease to give rise to trouble and inconvenience and the patient can go about with comfort. Sometimes, however, it happens that on the patient attempting to use the joint acute pain sets in. This is due to sub-acute or chronic congestion of the joint, and the only treatment for it is absolute and complete rest. It is easily effected by means of a plaster-of-Paris application, and from four to six weeks is not too long a period to keep such a joint entirely at rest. It, however, frequently occurs that after the removal of the splint the movements are necessarily somewhat stiff and awkward and are not infrequently painful. As a rule, such pain does not arise from adhesions within the joint but it is really due to the condition of the muscles. They are at this stage somewhat wasted and their tendons are more or less glued in their sheaths. There are two means of overcoming these difficulties: one is by rapid movement of the parts under an anæsthetic and the other is by more gradual methods. The former, or the more forcible method, sometimes meets with astonishing success, but at other times it is followed by disaster, especially in cases with a tuberculous inheritance. The more gradual means comprise friction, the use of the hot-air bath, and the constant current. It is essential that patience in treatment should be inculcated, and if cases are treated on the above lines there will not, as a rule, be much difficulty in bringing even severe and complicated forms of sprain to a successful issue.

Allusion has been made in an early part of the paper to the practice of treating sprained joints by the method of mobility from the first. It is one which can only be employed in very slight cases and even then with some misgiving, for in certain patients the symptoms instead of rapidly clearing away become more pronounced and permanent thickening and disability of the joint remain.

II.—THE TREATMENT OF SOME FRACTURES.

The treatment of fractures about the elbow-joint.—Of all fractures those in the neighbourhood of this joint are more difficult to diagnose and are more often followed by disastrous consequences both to the practitioner and to his patient than any other fractures, and such was more often the case formerly than now that the Roentgen rays permit of early recognition of the mischief. But it must often happen that the rays are not available. Excluding fracture of the olecranon the general practice has been to put the arm up at a right angle with the forearm in the mid-position between pronation and supination. In my opinion keeping the limb in this position for a fortnight or three weeks is the cause of most, if not all, the after-trouble. Now I am about to propound an axiom—namely, that in all injuries about the elbow-joint except fracture of the olecranon the forearm should be forcibly extended, then supinated, then acutely flexed—that is to say, the limb should be placed with the ball of the thumb of the affected limb resting against the neck on the opposite side. No splint is needed and, indeed, is harmful, for the position can easily be secured by means of a sling passing round the neck and round the wrist. For the knowledge of this axiom and for an insight into its practical value I am wholly indebted to my friend Mr. Robert Jones of Liverpool.

It is interesting to see how it works out. Taking, for instance, a case of dislocation of the elbow backwards with fracture of the coronoid process of the ulna. If the limb be put up in the usual right-angled position the dislocation does not remain perfectly reduced, while the separated coronoid process is drawn upwards by the action of the brachialis anticus and acquires a new fixation point higher up on the ulna so that it locks prematurely in the coronoid fossa of the humerus and thus limits movement. Or, again, to take those severe injuries to the lower end of the humerus in which there is an oblique fracture into the joint with frequent displacement forwards of one of the condyles, if the limb is put up in the usual way at the right angle the displacement is not reduced, a large mass of callus is thrown out on the front of the humerus, and at the end of three or four weeks the range of movement is found to be limited to a few degrees and no efforts whether under an anæsthetic or not can increase this. If, however, as soon as possible after the accident the forearm be fully extended, and with the thumb pressure be firmly made in front of the elbow-joint and the forearm then acutely flexed and supinated and kept in apposition for the time mentioned above the result will be most satisfactory. What has happened is this. The ulnar and radial portions of the elbow-joint being in a flexed position have maintained the fractured parts of the bone in their proper position and by the pressure of the coronoid process into its fossa this depression has remained comparatively free from callus. It may be objected that there will be considerable difficulty in securing complete extension when the bones have been united, but it is a practical and therefore certain point that at the elbow after all fractures, except those of the olecranon, the difficulty arises not in obtaining extension but flexion movement, and it is this very difficulty which is obviated by the method of which I am speaking. To take one more example, a transverse fracture of the lower end of the humerus, if the right-angled position be adopted, the lower end of the upper fragment projects forwards and the lower fragment is displaced backwards. By adopting the acutely flexed position this is at once overcome. The same method is applicable to dislocations of the elbow after reduction, for if that position can be assumed there is no doubt that complete reduction has taken place. The value of the method might be exemplified in each of the many fractures in the neighbourhood of the elbow-joint, but space will not serve. Actual trial of the treatment of all doubtful injuries and fractures in the neighbourhood of this joint, except fractures *of the olecranon, by fully extending, then supinating the fore*arm and acutely flexing it without the subsequent use of splints, pads, and bandages, and merely using a sling, will prove the truth of these statements in a most gratifying way. At the end of from three to four weeks in the case of a fracture the hand should be dropped a little, and then two or three days afterwards it should be noted whether the patient can raise the forearm to the fully flexed position. If he can, the sling may be further loosened and the process repeated. If he cannot, the forearm must be placed back where it was previously and kept at rest there for some days and the experiment then be repeated.

Separation of the lower epiphysis of the femur.—This is a rare accident but there are many interesting points in connexion with it. The separated epiphysis is usually displaced forwards and not backwards, unlike the displacement which occurs in a transverse fracture of the lower end of the femur; the displacement is backwards almost always in the latter case. Forward displacement of the lower epiphysis is accounted for by this circumstance—the epiphyseal line is directed from the front downwards and backwards so that the epiphysis more readily glides forward on to the shaft. In transverse fracture the line of fracture usually passes above the attachment of the gastrocnemius; hence the fragment is tilted backwards. Another point of interest about separation of the epiphysis of the lower end of the femur is that it is almost always due to a wheel-accident, the most common cause being that a boy riding behind a cab gets his leg caught in the wheel and the epiphysis is wrenched off. There are two difficulties in treatment—first, to reduce the epiphysis and, secondly, to maintain the reduction. *This can sometimes be accomplished* by division of the tendo Achillis and forcible extension, but the epiphysis is extremely liable to become displaced. To prevent this Mr. Jonathan Hutchinson, jun., and Mr. H. L. Barnard recommend that the limb should be put up with the heel touching the buttock. I have made trial with both methods and have sometimes failed with them and been compelled to open the joint and to fix the epiphysis in place with a steel nickel-plated screw, and indeed this seems to me to be the best course to adopt in doubtful cases.

NEW ISOLATION HOSPITAL.—The Gelligaer District Council have decided to erect a permanent isolation hospital to take the place of three small cottages at present used for the purpose of isolation and the resources of which have proved totally inadequate during the epidemic of typhoid fever which is at the present time affecting the small mining village of Pontlottyn.

REMARKS ON TEN CASES OF ENTERIC FEVER IN WHICH THE BLOOD WAS EXAMINED PERIODICALLY FOR AGGLUTINATIVE PROPERTIES.

BY WILLIAM G. SAVAGE, B.Sc., M.D., D.P.H. LOND.,
LECTURER ON BACTERIOLOGY, UNIVERSITY COLLEGE, CARDIFF; BACTERIOLOGIST TO THE CARDIFF AND COUNTY PUBLIC HEALTH LABORATORY.

THIS investigation was undertaken mainly with the following objects: 1. *To determine as far as possible whether the* serum reaction is any aid to prognosis, and if any connexion between the serum reaction and the presence of complications, especially relapse, can be traced. 2. To determine whether the blood of patients suffering from enteric fever reacts better to the bacillus *coli communis* than the blood of patients not so suffering, and, if so, to see if the cases which so react run a different clinical course to the others, and if in such cases any causal connexion can be traced between this reaction and complications or relapse. 3. As a subsidiary *point, to* determine whether considerable differences in clumping power exist between typhoid bacilli obtained from different sources

It is now universally accepted that the bacillus coli communis is not a separate, distinct, and invariable organism, but rather that the name covers a group of organisms, closely allied but differing among themselves in certain details, chemical, morphological, and pathological. It is therefore *of importance that a number of bacilli coli obtained from* different sources should be used. The bacilli coli examined were derived from the sources shown in the following table:—

TABLE I.

Race of bacillus coli.	Whence obtained.
I.	Isolated from the stools of a patient suffering from enteric fever.
II.	Isolated from the urine in a case of pure bacillus coli infection *of some* part of the urinary system.
III.	The stock laboratory bacillus coli culture.
IV.	Obtained from a case of pyosalpinx.
V.	" " an abdominal abscess.
VI.	Isolated from the mesenteric glands in a case of enteric fever.
VII.	" " stools of a patient suffering from enteric fever.
IX.	" " stools of a patient suffering from enteric fever, Case 3 of the series.
X.	" " stools of a patient suffering from enteric fever, Case 9 of the series.
XI.	" " stools of a patient suffering from enteric fever, Case 3 of the series.
XII.	" " stools of a patient suffering from enteric fever, Case 9 of the series.
XIII.	" " *spleen* of a patient who died from enteric fever.
XIV.	" " milk (obtained from a farm) suspected of causing a small outbreak of enteric fever.

All of these except Coli III. were fairly recently isolated. Coli III. had been sub-cultured for over a year in the laboratory. It will be noticed that Coli I., VI., VII., IX., X., XI., XII., and XIII. were obtained from cases of enteric fever. They differed among themselves in rate of coagulation of milk, production of indol, &c. Only the pathogenic effects of Coli III. and Coli XIV. were tested. Coli III. is quite non-pathogenic even in considerable doses. Two cubic centimetres of Coli XIV. injected intra-peritoneally into a young rabbit caused death in about, or less than, 24 hours and the bacilli were isolated from the liver, spleen, peritoneal fluid, and heart blood. A variety of Gaertner's bacillus was also used on one or two occasions.

A number of typhoid bacilli isolated from different cases were also used. They will be indicated as follows:—Ty. St. (the stock laboratory culture), Ty. S, Ty. R, Ty. M, and

Ty. B—these last four were isolated from spleens of patients who died from enteric fever. All five of these races were obtained from different cases of enteric fever. Ty. S and Ty. St. were non-virulent even in considerable doses (i e., five cubic centimetres of young broth cultures injected intra-peritoneally into guinea pigs had no effect). Ty. R was isolated nine months before these observations were made, so probably it is non-virulent. It was not tested for virulence. Ty. M and Ty. B were both isolated in the autumn of 1899 and both showed a considerable degree of virulence The blood was collected from each case as far as possible every week and was stored till required in the ordinary sealed glass pipettes. The method of examination employed was in all cases the microscopic one. The diluted serum and broth (bacillus typhosus or bacillus coli) were mixed and a hanging drop preparation was made. The time allowed for the reaction to complete itself is of considerable importance. To insure comparable results in this particular the same time-allowance was given in each examination which was made. Very dilute sera require a considerable time to effect their specific action. Two hours is a convenient and fairly suitable period, and for all the following examinations this was the time-allowance. A number of control experiments were made with sedimentation tubes, but they are not included in the figures given in the paper. The dilutions were all accurately made by fine glass pipettes and in every case the diluting fluid consisted of 0·75 per cent. sodium chloride.

In comparisons between the agglutinative power of different sera it is exceedingly important that the conditions shall be comparable. This is probably often overlooked. Thus the age and nature of the typhoid culture used, the age of the culture from which it is a sub-culture, the temperature of incubation, and especially its degree of reaction (acidity or alkalinity), all may, and in some cases certainly seem to, affect the sensitiveness of the reacting typhoid culture. It is well known that the agglutinative power of any serum undergoes little or no deterioration by being kept. This was shown by Widal and others and incidentally I have been able to confirm this. To render the sera of the same case strictly comparable the tubes of blood collected week by week were not examined at once, but were kept until all the blood required was collected from that case. They were subsequently examined together so that the same broth culture of the bacillus typhosus or bacillus coli in question was, as far as possible, used for all the sera of that case. In this way differences of sensitiveness of culture &c., were quite excluded.

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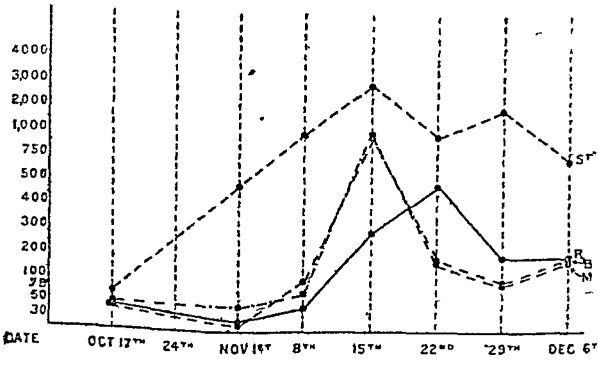
It is also of importance to find out whether any relationship exists, as Courmont believes, between the clinical course of the disease and the varying clumping power of the blood examined at different stages of the disease. The most graphic way to study this question is to make charts showing the highest dilution at which a positive reaction was obtained and then to compare these charts with the clinical features of the case. Weekly examinations of the blood were made and in most cases a number of different races of typhoid bacilli were used. The charts in Cases 1 to 9 were made in this way. For the chart in Case 10 the blood was only examined twice. The figures are made by joining the points which mark the maximum dilution giving a positive reaction in two hours. In the charts the vertical line of figures refers to the dilution of the serum employed and the horizontal to the date of examination. The several curves are made by joining the points giving a positive reaction with the highest dilution and are shown by different dotted lines for the different races of bacillus typhosus employed. The particular race used is indicated by lettering at the end of the curve, thus R=Curve obtained by using Ty. R, B=Curve of Ty. B, &c. The lines employed are indicated as follows: —— R, — — — — St or S, — - - - - - - B, —‖—‖—‖ M.

The following are brief clinical summaries of the cases:—

CASE 1.—The patient, a man, aged 30 years, was admitted into University College Hospital on Oct. 16th,

CHART 1.



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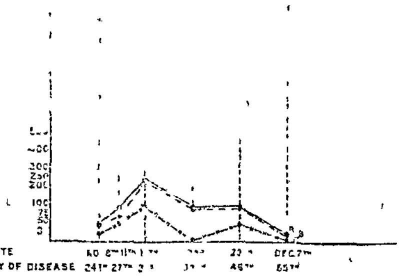
1899, and was discharged on Dec. 8th The first symptoms occurred *about six weeks before admission* with violent pains in the abdomen. For the following three weeks the patient suffered from severe pain, sickness, and diarrhœa, and was confined to bed. Though he felt weak he then *resumed work and was at work* until Oct. 11th when pains in the abdomen and the side began. On admission the patient had a temperature of 104° F. which, however, rapidly declined and reached normal on Oct 22nd. On Nov. 3rd the temperature rose again and the patient apparently had a relapse The temperature went back to normal on the 21st. The temperature indicated a definite relapse, but there were no symptoms to account for the relapse and no fresh typhoid symptoms were exhibited Typhoid spots were present on admission, but not during the relapse The case was apparently not a severe one, the patient being admitted into the hospital towards the end of the attack.

CASE 2—The patient was a man, aged 21 years He was admitted into University College Hospital on Nov. 6th, 1899, and was discharged on Dec 8th His illness began about Oct 16th, three weeks before his admission, with a bad headache which lasted for a week There was some slight bleeding from the nose and the patient felt very ill. Diarrhœa and vomiting began later A few typhoid spots were found soon after admission. A little blood was passed in the stools during the course of the disease The temperature was 102·8° F. on admission and it reached its highest point (103·4°) on Nov. 8th. The temperature was quite normal from the 19th until the patient left the hospital. There were one or two actions of the bowels for the first few days after admission and they were subsequently produced by enemata This was a mild case of typhoid fever with only 13 days of temperature in the hospital and no complications.

CHART 2



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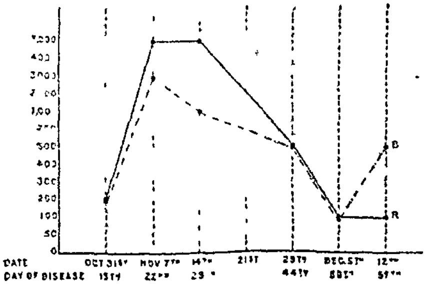
CASE 3—The patient was a girl, aged 14 years. She was admitted into University College Hospital on Oct. 28th, 1899.

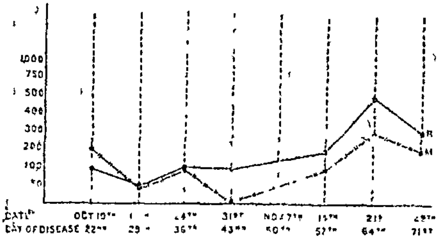
CHART 3.



The first symptoms, consisting of faintness, headache, and vomiting, appeared on Oct 17th and typhoid spots were first noticed on Nov. 1st. The temperature was 104·8° F. on admission and remained high until Nov. 2nd when it fell rapidly and reached normal on the 4th From the 5th to the 11th it was between 99° and 102° and it was practically normal from the 18th. The patient suffered from profuse diarrhœa which was most marked from Oct 30th to Nov 11th

CASE 4.—The patient was a man, aged 27 years. He was admitted into University College Hospital on Sept. 26th, 1899, and was discharged on Dec. 4th. His illness began on Sept 19th with pains all over his body, loss of appetite, and slight headache On the 23rd he had to take to his bed and on the next day he had severe epistaxis When admitted he showed well-marked spots On Oct 17th the patient had a *rigor* and on the 13th and 14th he had profuse attacks of hæmorrhage from the bowel and lost altogether about three pints of blood. There was constipation throughout for which enemata were given. The temperature remained high until the middle of October and reached normal on the 24th On the 30th it rose again with pain and swelling of the left leg and it returned to normal by the middle of November On Oct 3rd and subsequently for a week the patient was very delirious and scarcely slept at all, his general condition being very bad The case was marked by a very profuse typhoid rash. Clinically this was a severe case with marked hæmorrhages and phlebitis.

CHART 4.



CASE 5—The patient was a man, aged 25 years He was admitted into University College Hospital on Sept 27th, 1899, and was discharged on Nov 15th. His illness began on Sept. 14th *with great pain in the loins, and on the third day there were violent hæmorrhage and vomiting* The patient's temperature on admission was 104° F, but it fell rapidly, and became normal on Oct 6th. It began to rise again on the 11th and a well-marked relapse then took place. It fell back to normal on the 28th, and this was maintained until the patient left the hospital on Nov. 15th The relapse was marked by fresh spots and the spleen remained enlarged. The relapse showed a typical "staircase" rise and fall of temperature There was constipation throughout. Clinically this was a moderately severe case

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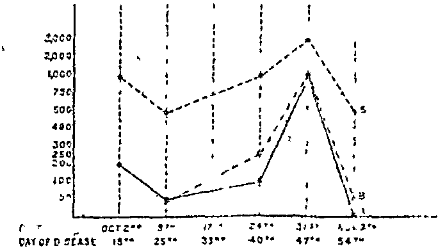

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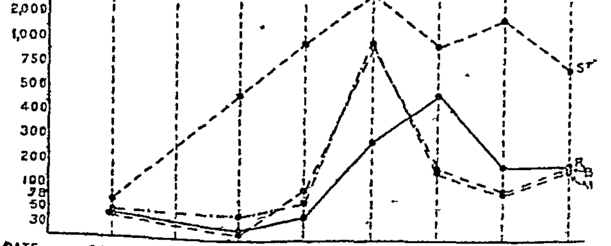

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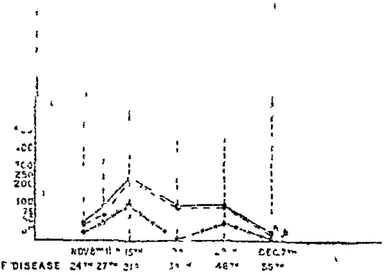

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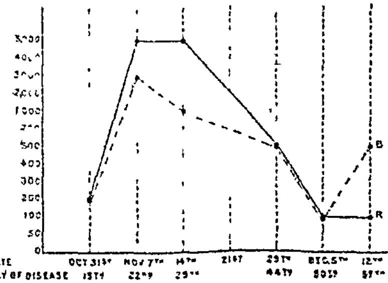

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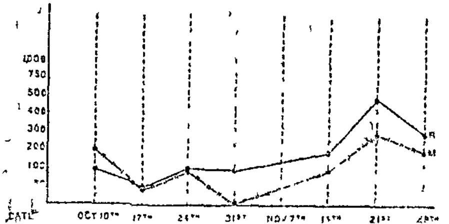

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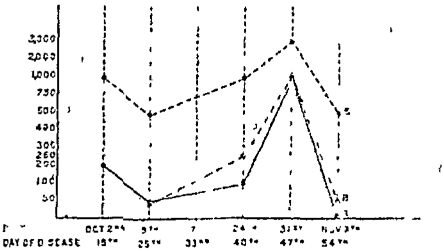

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A relapse then began, and the temperature reached its maximum on Nov 30th, when it was 103·8°, and did not decline to normal till Dec. 15th, and this was maintained until the patient left the hospital. Constipation was present on admission and lasted until Nov 29th, but subsequently natural actions occurred.

CHART 6.

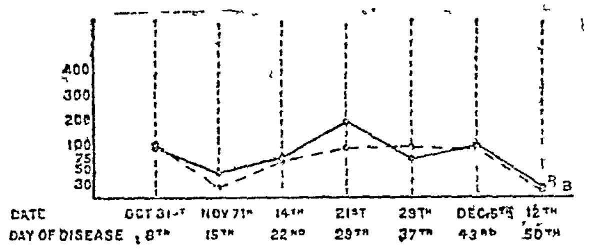

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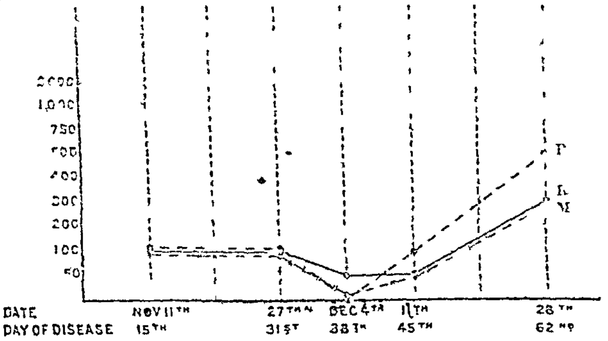
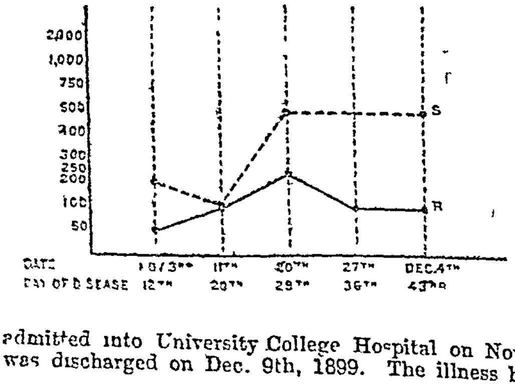
CHART 7.



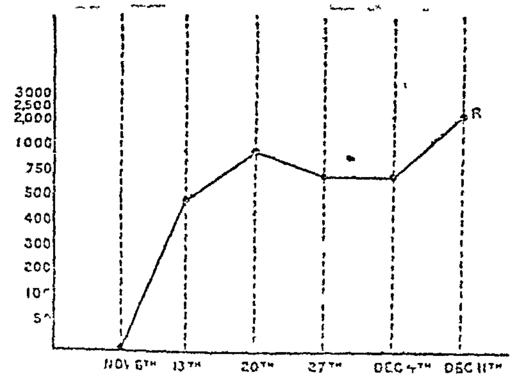
CASE 8.—The patient was a woman, aged 31 years. She was admitted into University College Hospital on Nov. 1st and was discharged on Dec. 9th, 1899. The illness began at the end of September with loss of appetite and of sleep. The woman became very weak and was unable to get about, but she did not take to her bed until she was admitted into the hospital. Typhoid spots were first noticed on Nov. 5th. For the first week after admission the temperature was up to 104° F. during some part of the 24 hours, but gradually fell during the next week, and remained practically normal from the 14th. No complications ensued and the patient made an uninterrupted recovery. Her bowels were at first constipated, but on and after Nov 10th they acted naturally.

CHART 8.



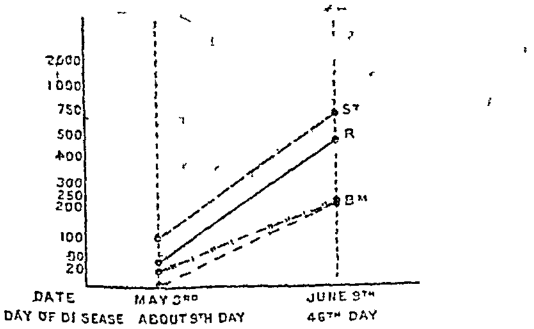
CASE 9.—The patient was a woman, aged 30 years. She was admitted into University College Hospital on Nov. 1st, 1899. The illness began three weeks before her admission into the hospital with severe headache. She had feverish attacks, with alternate fits of heat and cold and sweating at night. She was treated for rheumatism. On admission she had pains in her ankle-joints. On Nov. 6th typhoid spots were found and the patient passed a typical typhoid stool. A little blood was passed in the stools on the 7th and the 9th and again on the 23rd and the 25th. The patient had diarrhœa for the first week after admission and maintained a fairly free action of the bowels throughout the attack. Until Nov. 30th the temperature remained high; it then began to decline and on Dec 3rd it reached normal. This was a well marked case in which the general condition of the patient was good and in which, with the exception of slight hæmorrhage on two occasions, there were no complications

CHART 9.



CASE 10.—The patient was a man, aged 30 years. He was admitted into Cardiff Sanatorium on May 2nd, 1900, and was discharged cured on July 12th. He had taken to his bed about April 24th. On admission the rash was very marked. A relapse began about May 27th, the maximum temperature being reached on June 1st, but it declined to normal on the 17th. A fresh crop of spots developed during the relapse.

CHART 10.



We can now see if any relationship can be made out between any of the symptoms or complications and the serum reaction The serum reaction and temperature charts will first be considered. The cases unaccompanied by any complications are of special interest from this point of view. These are Case 2, Case 3, and Case 8. In all of these three cases there was a gradual or a rapid fall of temperature which did not rise again. In all three cases the reaction was not at its maximum at the same time as the temperature but was best marked when the temperature was falling or after it had reached normal Later the agglutinative power fell also. According to Courmont this association indicates a good prognosis Case 2 and Case 8 were mild cases and Case 3 was a well marked but not severe, case in a child The patients in all the three cases made a good recovery In the main, therefore, these three cases agree with Courmont's dictum In the other cases complications were present and any possible relationship was therefore obscured Thus in Case 1 the reaction was *only* well marked *after* the relapse and was best marked when the temperature was falling In Case 4 the highest positive reaction was obtained after the temperature had been normal, or nearly normal, for four weeks. In Case 5 the reaction curves appeared to come down with the temperature, rising again when the relapse began, but reaching their highest point considerably later than the maximum temperature of the relapse In Case 6 the reactions were feebly marked throughout and in Case 7 the numerous complications prevented any connexion being traced In Case 9 the clumping power gradually rose while the temperature remained high and it continued well marked after the temperature had returned to normal The highest positive reaction was obtained after the reaction had become normal.

In the second place, the relationship to complications is worth investigating, and of these relapse possesses the greatest interest Relapses were met with in Case 1, Case 5 Case 6, and Case 10 In Case 7 a rise of temperature took place which was very suggestive of a relapse, but no true reinfection, in the sense of fresh spots, occurred and its duration was very short The fall of the temperature was very suggestive No obvious explanation of this rise of temperature was noted and at the most it can be considered as a very doubtful case of relapse That relapses were met with in four (? five) out of 10 cases is easily to be explained, because Case 10 was only selected on account of its relapse while the other three relapses occurred in a series of cases much greater than nine but in which only nine were carefully worked out, the blood collected from the other cases being only partially utilised In all these cases of relapse the following peculiarity is noticeable—i e, in all, at one period or other, before the relapse the blood reacted very feebly or not at all[4] This can be seen from the serum charts and also in Table II

TABLE II

Case	Relapse		Remarks on the serum reaction
	Date of onset	Day of disease	
1	Nov 3rd	Twelve days after the temperature had reached normal.	Both examinations before the relapse (Oct 17th and Nov 1st) showed only weak reactions Subsequently the reactions became well marked
5	Oct 11th	Twenty seventh	Two days before the relapse the blood would only react 1 in 50 with Ty M Ty B and Ty R. Subsequently the reaction became well marked
6	Nov 21st.	Twenty ninth	Two weeks before the relapse the reactions were very feebly marked and they were not well marked a week before the relapse There was no subsequent well marked reaction
10	May 27th.	About the thirty third	The blood was only examined twice The first examination three and a half weeks before the relapse showed feeble reactions The second examination during the relapse (13 days after its commencement) showed well marked reactions

Is the converse true? Do all cases with a feeble reactive power relapse? In the series of cases recorded here this is certainly not the case This can be readily seen from the charts To give only one example—In Case 2 the blood was first examined on Nov 8th, and here, with Ty B, Ty R, and Ty St no positive reaction was obtained with a greater dilution than 1 in 50 In the relapse cases, except in Case 1, we have a *fall* in the agglutinative power of the blood previously to the relapse The patient in Case 1 came into the hospital towards the end of the attack, and a slight fall is noticed It is not unreasonable to suppose that if the serum could have been examined earlier a more marked agglutinative action would have been demonstrated If so it would bring it into line with the other cases This fall and subsequent rise again in the other case is only present in Case 4 and Case 7 In Case 7 there is considerable evidence of a relapse of an abortive nature starting on Dec 1st If the condition is a true relapse then this fall must be considered along with that of Case 5 and Case 6 In Case 4 the patient had several severe attacks of hæmorrhage, which took place on Oct 13th and 14th The fall of agglutinative power was noticed when the blood was examined three days later. It seems not unreasonable to attribute this fall to the severe hæmorrhage which would, one would expect, diminish the quantity of agglutinins in the blood The fact that here we have severe hæmorrhage on Oct 13th and 14th with a fall of agglutinative power, and that the agglutinative power of the blood subsequently rises, is of great interest when considered with Gengou's conclusion that if an animal be bled the agglutinative power falls and does not rise again Contrary to this observer in this case, apparently, the fall due to bleeding was associated with a subsequent rise, and this is rather what we would expect and further illustrates the close parallel between antitoxins and agglutinins

Considering, therefore, all the cases we may say that the cases which relapse show at some period previously to the relapse very feeble agglutinative properties and that very generally these weak reactions are preceded by better marked reactions, yet, on the other hand, it is in no way true to infer that all cases which show a feeble serum reaction will relapse From so few cases it is futile to lay down definite rules, but stating the matter in another way we are, perhaps, justified in saying that if the blood examined every week shows a well marked *reaction* no relapse is to be anticipated, but if a feeble reaction is obtained relapse may follow, and this is especially likely to occur if on previous examination the reaction had been better marked

A number of observers have recorded cases where, following failure to obtain a positive serum reaction, relapse has followed Widal records a case with no serum reaction in the original attack Park also records a similar case Elsberg[5] includes four cases of relapse in his series In the first case the reaction appeared on the sixteenth day, in the second on the twenty fourth day, in the third on the twenty seventh day, and in the fourth on the thirty second day In one case the reaction only appeared during the second relapse *In these cases the reaction in those which relapsed* was delayed Very possibly some slight but incomplete reaction was present earlier Cabot[6] mentions three cases in which he obtained the reaction only in the relapse and quotes cases by other observers Lately Dr H P. Hawkins and Dr E O Thurston[7] have recorded a case with a negative serum reaction on the fifteenth day, the twenty second day, and the thirty seventh day, but a positive reaction on the one hundred and third day, the positive reaction only being obtained after the onset of a relapse These cases all confirm the evidence that previously to a relapse there is a diminished agglutinability of the blood

Of the theories of relapse perhaps the most generally accepted one at the present day is that it is a re infection by the typhoid bacillus, by bacilli already in the body, the re infection being possible owing to poorly acquired immunising properties and precipitated by the absorption of toxins from the alimentary canal increasing the virulence of the typhoid bacillus This view is very clearly stated by Dr Horton Smith[8] According to this view several factors two at least, seem to be necessary for a relapse to take place The blood must be so modified that it permits a re infection and the virulence of the typhoid bacilli requires raising As Professor A E Wright and Captain G Lamb I M S,[9] say, "The agglutinins are bacteriotropic and anti bacterial substances," and if this be so a low clumping power would seem to be one of the factors which should enable a relapse to take place It is well known from Courmont's researches that if the typhoid bacillus be grown in a medium containing typhoid serum the agglutinins disappear in proportion to the growth of the bacilli or stating it in another way, as Professor Wright and Captain Lamb put it, 'the typhoid bacillus cultivates itself in a medium which is relatively poor in agglutinins' *A low agglutinative power of the blood would certainly seem to favour re infection*

It is obvious that the low agglutinative power of the blood is not all that is necessary for a relapse to occur because feeble serum reactions are present in many cases which do not relapse. There must be other factors at work. Fresh virulence of the typhoid organism brought about by absorption of toxins from the alimentary canal is, in the view stated above, assumed to be the most important other factor. That the cause of this fresh virulence is the absorption of the bacillus coli toxins from the alimentary canal obtains no support from my cases, for the cases which relapsed gave no reaction with bacillus coli greater than the non-relapsing cases though several examinations were made both before and after the relapse began. This can be seen from Table III. In fact, excluding Coli III., no positive reactions were met with.

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[4] A serum which gives a negative reaction in two hours with a dilution of 1 in 30 is considered not to react.

[5] New York Medical Record, April [illegible]

[6] The Serum Diagnosis of Disease p 114

[7] THE LANCET Oct [illegible] p 1004

[8] Loc cit.

[9] THE LANCET Dec 22 [illegible] p 1727

TABLE III.

Case.	When the examinations were made.	Race of bacillus coli examined.	Dilution employed.	Results.
5	Two days before commencement of relapse.	I., II., III., IV., V., VI., VII.	1 per cent.	Coli III. weak + reaction. Others give negative reaction.
	20 days after commencement of relapse.	I., II., III., IV., V., VII., IX., XII., XIII.	1 in 50	Coli III. weak + reaction. Others give negative reaction.
6	Three weeks before commencement of relapse.	I., II., III., IV., V., VI.	1 per cent.	No reaction.
	One week before commencement of relapse.	I., IX., XII., XIII.	1 in 50	" "
	Two weeks after commencement of relapse.	I., II., IV., V., VI., IX., XII., XIII.	1 in 50	" "

The date of the disease in regard to the time when the reaction was best developed is given in Table IV.

TABLE IV.

Case	Date of disease when reaction was most marked.	Relation of maximum reaction to onset of the relapse.
2	About the fifth week.	—
3	Fourth week.	—
8	End of the fourth week.	—
1	About the seventh to the eighth week.	From two to three weeks after the relapse.
5	Seventh week.	About three weeks after the relapse began.
6	Third to the sixth week.	From a week before and two weeks later than the onset of the relapse.

It is difficult to give a definite date for the other cases not given in Table IV. From this table we see that in the three cases without any complication (Case 2, Case 3, and Case 8) the reaction was best marked about the end of the fourth or fifth week. In the other cases it was best marked after the relapse. In regard to complications other than relapse no special relationship is traceable, nor indeed would any be expected. It is of greater interest to consider these cases in regard to possible bacillus coli infection.

The second object of these investigations was to ascertain whether the blood of enteric fever patients reacted to bacillus coli communis and to elucidate if possible the significance of such reactions. The question of bacillus coli reactions in typhoid fever seems to be a difficult one, and one on which there is great diversity of opinion, observation, and experiment. Courmont[10] finds that the serum of typhoid fever gives a partial positive reaction with bacillus coli, using the same dilution as for bacillus typhosus. He says that the reaction is occasionally more intense with bacillus coli than with bacillus typhosus. Chantemesse[11] obtained negative results. Durham,[12] working with artificially prepared animal sera, found that the blood of animals immunised against bacillus typhosus did not agglutinate bacillus coli races though he obtained well-marked agglutinative effects with bacillus coli in animals immunised against that bacillus. Johnston,[13] working with dried blood, found positive colon reactions in some cases. He says: "A complete colon reaction we have found to be exceptional in ordinary typhoid, and its presence would indicate a condition of coli intoxication sufficient to explain the existence of many symptoms giving to typhoid its ordinary clinical features." Lorrain Smith and Tennant[14] found distinct evidence of bacillus coli reactions, using bacillus coli obtained from the local water-supply and from the spleens of the patients in certain typhoid fever cases and they raise the question of a secondary infection by bacillus coli in cases of enteric fever. In the case of the allied Gaertner's bacillus it seems to be generally admitted that the blood in many, though certainly not in all, cases of typhoid fever contains Gaertner agglutinins. Some of the cases in which bacillus coli agglutinated typhoid sera may no doubt be explained by insufficient dilution of the blood, or possibly the pseudo-clumps occasionally met with in cultures of bacillus coli may not have been guarded against, for, as Stern[15] has pointed out, spontaneous clumping is not infrequently met with in bacillus coli cultures, while Christophers[16] has shown that with low dilutions non-typhoid and typhoid sera will agglutinate bacillus coli very frequently and even in some cases with a dilution of greater than 1 per cent.

A number of different bacillus coli races were tested with sera from typhoid fever cases and from non-typhoid cases (nearly all in 1 per cent. dilution). In all the sera of 15 typhoid fever cases were examined. The result is given in Table V., which shows the reactions of bacillus coli in typhoid fever cases. All the dilutions were 1 per cent. unless otherwise stated.

TABLE V.

Race of coli bacillus.	Number of different cases examined	Number of different specimens of blood examined.	Number of positive reactions.	Number of negative reactions.
I.	12	24	0	24
II.	7	10	0	10
III.	15	33	17 (1 per cent.), 1 (1 in 50)	15 (3 tested 1 in 50)
IV.	9	11	0	11
V.	9	11	0	11
VI.	9	11	0	11
VII.	5	7	0	7
IX.	8	13	0	13
X.	3	5	0	5
XI.	1	5	2*	3
XII.	7	12	0	12
XIII.	8	15	0	15
XIV.	2	3	0	3

* Only partial reactions.

From this table it will be seen that 11 out of 13 different bacilli coli failed to react in 1 per cent. dilution to any of the typhoid sera, though they were tried in a good many cases and not infrequently on several occasions. Coli XI. gave a partial positive reaction twice out of five examinations in the only case (Case 2) examined. As it was only examined in one case and only partial reactions were obtained I have excluded it from further consideration. The cultures died out and so no further examinations were possible. Coli III. gave a majority of positive reactions. Can the fact that Coli III. reacted in such a high percentage of cases be taken as any evidence that typhoid fever blood has a special action on the bacillus coli? The reaction of this variety of bacillus coli to non-typhoid sera must be considered. Some figures are given in Table VI., which shows the reactions of Coli III. to non-typhoid sera.

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[10] La Semaine Médicale, 1896, p 294.
[11] Ibid., 1897, p. 303.
[12] Journal of Pathology and Bacteriology, 1897.
[13] Montreal Medical Journal, March, 1897.
[14] Brit. Med. Jour., Jan. 28th, 1899.
[15] Centralblatt für Bakteriologie, April, 1898.
[16] Brit. Med. Jour., Jan. 8th, 1898.

TABLE VI.

Source of the serum.	Dilution 1 in 100.	Dilution 1 in 50.	Dilution 1 in 20.
Normal blood (P)	—	—	—
Case of empyema (said to have had typhoid fever five months previously)	—	+	—
Case of tuberculous meningitis	—	—	—
Case of tonsillitis	—	—	—
Normal blood (O)	—	—	—
Case of appendicitis	—	+ *w**	+ *w**
Case of pneumonia	—	—	—
Normal blood (S)	—	—	—

* + *w* = positive reaction weak.

From this table we see that out of eight non-typhoid cases no reaction was obtained with any of them in a 1 per cent. dilution, but in two out of four examinations a positive reaction was obtained with a 1 in 50 dilution. Taking Table V. and Table VI. together, and considering 1 per cent. dilutions only, we find that out of 16 typhoid fever cases 10 reacted to Coli III. in one or more examinations, while out of eight non-typhoid cases no positive reactions were obtained. We see, therefore, that Coli III. alone of the different varieties of bacillus coli experimented with was distinctly affected and agglutinated in many of the typhoid fever cases. In most of the cases in which a positive result was obtained it was tested with higher dilutions and the limit of positive reaction was obtained, but in only two cases was a positive result obtained with a greater than 1 per cent. dilution. These were Case 11 (Oct. 26), partial reaction 1 in 500, and Case 4 (Oct. 3rd), partial reaction 1 in 1000. Case 11 was a case of typhoid fever in a child, aged nine years, sister of Case 4. Coli III. was the stock laboratory coli culture and had been in artificial cultivation for certainly longer than a year. It was quite non-virulent and very liable to form pseudo-clumps, and frequently formed a scum on the surface, and the culture nearly always required filtering through ordinary filter paper before use To obtain broth cultures showing no pseudo-clumps special care in regard to the reaction of the broth had to be taken. In other words, it seems to have been a variety of bacillus coli which clumped very readily, and the well-recognised slight action of the special typhoid agglutinins on other bacilli, including bacillus coli communis, seems to have been sufficient in many cases to cause a positive serum reaction. Put in another way, the positive reactions obtained are due to the typhoid agglutinins and this action of Coli III. on typhoid sera does not point in any way to the formation of coli agglutinins. As already stated, many of the bacillus coli races used were obtained from patients in typhoid fever cases and in several instances were tested with the blood of the patient from which they were isolated. In no case was a positive reaction obtained. The above experiments therefore yield no evidence at all of a concurrent bacillus coli infection.

It is difficult to account for the conflicting results obtained by different observers. Some experiments of Van de Velde might be thought to throw some light on the matter. He found, after immunising two horses with two different races of streptococcus, that each serum clumped its homologous streptococcus but not the other streptococcus. The same thing might occur with different bacilli coli, and it is possible that the failure of some observers to obtain coli reactions in enteric fever cases, while success is obtained with other races, may be due to the fact that the appropriate bacillus coli races are not used Durham[17] immunised an animal against bacillus coli, and found that the immunising variety gave a positive reaction with this serum. Besides this culture one variety reacted completely, another fairly strongly, and two others gave a minimum effect, while the remaining five races were perfectly unaffected. This explanation, however, scarcely seems to be feasible, for on the same view we would expect cases of enteric fever to clump with one variety of bacillus typhosus and not with others, and this appears to be only true to a limited extent, nor does it seem to be true experimentally. Still, the differences between the members of the coli group—using the term in a narrow sense and excluding the bacillus typhosus from the group—are much more considerable than any differences between typhoid bacilli.

In regard to the possible relationship of bacillus coli to complications and to relapse, excepting Coli III. no positive reactions were obtained and no relationship is to be traced. The possible connexion with relapse has been considered above and, as Table III. shows, no reaction to bacillus coli developed after the relapse began.

The last question with which I propose to deal is whether typhoid bacilli obtained from different sources clump equally. Widal, Achard and Bensaude, Durham, and most of the earlier observers found no considerable differences between typhoid bacilli obtained from different sources. Van de Velde, on the other hand, found well-marked differences, estimating differences by time of reaction rather than by limit of degree of dilution. Lorrain Smith also found with different typhoid bacilli considerable variation in clumping power. In investigating this question the only accurate way would seem to be to determine the limits of dilution at which positive reactions are still obtained for each of the different cultures used, for, as Gruber and Durham have pointed out, sera are not entirely *specific* but rather *special* in their action, and unless the extreme limits of dilution are employed differences very possibly would not be brought out. Gruber and Durham's remarks were applied to distinct species of bacilli, but if distinct varieties of bacillus typhosus exist they would equally apply to them From the charts, and also from Table VIII., it is obvious that considerable differences exist. Excluding Ty. S and Ty. St., however, we see that the other three typhoid cultures used, though they show differences, yet they are not nearly so marked as when compared with Ty. S and Ty. St. Typhoid cultures S and St. agreed in the fact that they both very readily underwent pseudo-clumping. Sometimes sub cultures contained no pseudo-clumps, especially after filtration through ordinary filter paper, while at other times, using the same batch of broth, marked pseudo-clumps formed in less than 24 hours broth cultures Using broth cultures of varying degrees of acidity or alkalinity did not by any means always insure freedom from these pseudo-clumps. The reactions recorded in this paper could only be worked out when cultures showing no pseudo clumps were obtained. By pseudo-clumps I mean that the hanging drop preparations from the broth cultures, instead of showing the bacilli actively motile and moving all over the field, showed, indeed, many of the bacilli separate and motile, but the others were collected together in clumps, generally loose but well marked and unmistakeable and not to be distinguished from the clumps formed under the influence of the specific agglutinins. We seem to have here two distinct kinds of typhoid bacilli cultures—Ty. M, Ty. B, and Ty. R, which never, or very rarely, formed pseudo-clumps under ordinary circumstances, and Ty. St. and Ty. S, which readily formed pseudo-clumps. All these cultures have been under observation now for at least a year and no pseudo-clumps have ever been noticed in Ty. M, Ty. B, or Ty. R, even when broths of considerable differences of reaction were employed. With Ty. S and Ty St., on the contrary, it was a matter of difficulty to obtain cultures which did not contain pseudo-clumps. A scum on the surface nearly always formed and in most of the observations made this had to be removed previously by filtration. The age of the agar stock from which the broth culture was made seems to be an important factor, but here no constancy or certainty could be obtained. The Ty. S and Ty St. curves of limits of positive serum reaction cannot be compared fully with the other curves, for the different observations were not always comparable; thus, for instance, broths containing a well-marked acidity were sometimes used and factors which seem to affect the agglutinative power were in this way introduced. For this reason in considering the question of serum prognosis, but little importance has been attached to the Ty S and Ty St results when worked out. Ty. S and Ty St. were two races of bacillus typhosus which, so to speak, even when not forming pseudo-clumps yet tended to clump on slight provocation, and the degree and limit of clumping power obtained do not seem to be strictly comparable to the amount of agglutinin in the serum, but to be influenced by other (chemical and physical) factors. On the whole I have found Ty S and Ty. St. to clump to an approximately equal extent, but more considerable differences exist between Ty. B, Ty M, and Ty. R. The differences in agglutinative power shown here (and also those demonstrated by other observers) do not seem to me to be sufficient to justify the conclusion that these races represent several distinct varieties. The decidedly (as a rule) well-marked differences between the Ty. S and Ty. St. group and the Ty. B, Ty. M, and Ty. R group are more easily explained as due to accessory causes—causes which can be acquired and which may be again lost, and yielding differences altogether too variable to merit a differentiation into distinct varieties. I have, for instance, observed the agglutinative power of different typhoid races apparently to increase or decrease under cultivation. Thus when Ty. R was originally isolated, and presumably possessed a considerable degree of virulence, it did not clump at all readily and was not suitable for routine work. It was isolated in March, 1899. Its clumping power seemed to increase later and it became of use for ordinary routine work. The same remarks apply to Ty. M, but I have not noticed such differences for Ty. B or Ty. S. Ty. St. has been isolated for several years. Both Ty. S and Ty. St. appear to be quite non-virulent, five cubic centimetres at least of each inoculated intraperitoneally into guinea-pigs are without the slightest effect while Ty. B and Ty. M possessed at that time considerable virulence. The virulence of Ty. R was not tested. For most of these cultures the ability to clump varied inversely (but by no means proportionately) with the virulence, but this may have been only a coincidence. Horton-Smith[18] from another point of view arrives at the same conclusions. In support of the contention that these differences are not the differences of varieties he states that by using agar instead of broth cultures he could detect very little difference of agglutinative power. The experiments with agar instead of broth cultures which I have made are not sufficiently numerous to record, but on the whole they showed a greater uniformity than when broth cultures were used. Comparing broth and agar cultures I find, as a rule, but not invariably, that the former agglutinated more readily and at a higher dilution than the latter. This is shown in Table VII., where a few examples are given.

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[17] Loc. cit.

TABLE VII.

Typhoid culture.	Case 6 (Oct. 31st).		Case 6 (Nov. 29th).		Case 7 (Nov. 11th).	
	Broth.	Agar.	Broth.	Agar.	Broth.	Agar.
R	+ *w**	+ *w*	—	—	+ *w*	—
B.	+ *w*	+ *w*	+ *w*	—	+ *w*	—
M.	+ *w*	—	+ *w*	—	+ *w*	—

* + *w* = positive reaction, weak. All in 1 per cent. dilution and with a two hours limit.

Summing up the matter the following conclusions seem probably justified. 1. Well-marked differences of agglutinative power undoubtedly exist between typhoid bacilli obtained from different sources, certainly when broth cultures are used, and probably also, but to a less extent, when cultures on solid media are employed. 2. That such differences cannot be considered as sufficient to justify a differentiation into distinct varieties, but are rather to be explained as due to differences of present environment and to conditions of environment which have acted in the past upon the race of bacillus, producing changes not fairly stable and permanent but liable to be again modified. In Table VIII., which gives examples of differences of reaction with different typhoid races, the *limits* of positive reaction alone are given.

TABLE VIII.

Typhoid culture.	Case 2 (Nov. 22nd)	Case 3 (Dec. 5th).	Case 3 (Dec. 12th)	Case 4 (Oct. 31st).	Case 4 (Oct. 17th).
R.	1 in 100	1 in 100	1 in 100	1 in 100	in 50
B.	1 in 100	1 in 100	1 in 500	No reaction, 1 in 100	1 in 50
M.	1 in 100	1 in 100	—	No reaction, 1 in 50	1 in 50
St	No reaction, 1 in 30†	—	—	—	—
S.	1 in 50†	1 in 1000*	1 in 1000*	1 in 500	1 in 500

* 1 in 1000 gave a well marked reaction. No higher dilutions were examined. † Of great interest in that the reactions with Ty. S and Ty. St. were less marked than with *Ty. M, Ty. B, or Ty. R* This I found to be very exceptional.

Cardiff.

ACUTE EMPHYSEMATOUS GANGRENE: A CLINICAL AND BACTERIOLOGICAL DIGEST, WITH DETAILS OF A NEW CASE.

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LATE ASSISTANT TO THE SUPERINTENDENT OF THE CLINICAL LABORATORY, ST. THOMAS'S HOSPITAL.

IN the following paper we have thought it well first to describe a case of this disease which occurred in the practice of St. Thomas's Hospital, with full clinical and bacteriological details, as it illustrates very well one of the varieties of this disease and serves as a basis for the subsequent digest of the published literature. In writing the latter we have given first an account of the bacteriological and then of the clinical varieties, and have tried as far as possible to classify the material in a simple manner—a matter of considerable difficulty owing to the great confusion that exists with regard to nomenclature and the exact nature of the disease. Numerous synonyms have been used, such as "acute spreading traumatic gangrene," "malignant œdema," "*gangrène foudroyante*," "*gangrène gazeuse*," &c., but the title which we have given to this paper seems to give a better idea of the exact nature of the disease—viz., that of an acute specific gangrene associated with the production of gas in the tissues. It is as well to mention further that this condition is entirely distinct from so-called "hospital gangrene" and from gangrene due to causes such as injury or disease of blood-vessels, &c., belonging as it does to the specific infectious diseases such as diphtheria, tetanus, &c.

A man, aged 26 years, was admitted into St. Thomas's Hospital on March 9th, 1900, suffering from a lacerated wound of the right arm. He had been knocked down by a tram and the skin was torn from just below the elbow to a point halfway up the back of the arm. The underlying part of the triceps was also torn. The wound was immediately cleaned and sutured under an anæsthetic. Within 24 hours he complained of great pain and the temperature rose to 105·2° F. The arm was dressed, and below the elbow, over an area of the size of the palm of the hand, the skin was of a brownish red colour. The temperature fell to 102·2° at midnight but rose again on the second day to 103·4° and the pain was considerable. The discoloured part was found to be olive-green in colour and had spread half-way up the wound. The epithelium was greasy and it peeled readily; numerous bullæ were seen on the surface. Emphysematous crackling was easily felt in the tissues but no superficial veins contained air. The dead portion was separated from the living by a narrow zone of a greyish-white colour beyond which a reddish-brown discolouration extended to near the top of the wound. The smell was offensive and the patient was vomiting and looking very ill. Up to the time of Mr. F. C. Abbott's arrival the gangrene had visibly spread. We take this opportunity of thanking Mr. Abbott for giving the case to us. The arm was amputated at the surgical neck of the humerus with skin flaps, the inner being the longer as the gangrene was confined to the outer side of the arm. The muscles were cut short and the wound was scoured with 1 in 1000 perchloride of mercury and sutured. On the third day the temperature fell to 98°, but rose immediately to 103° with recurrence of pain. The flaps were found to be gangrenous, especially the inner. Amputation was performed at the shoulder joint with the smallest possible skin-flaps and the muscles were cut short; the wounds were washed well with 1 in 20 carbolic solution. The patient suffered much from shock and was infused with three pints of normal saline solution and strychnine was injected. On the fourth day the temperature fell to 99·4°, but rose again immediately to 103°. As a streptococcus had been cultivated as well as a bacillus 20 cubic centimetres of antistreptococcic serum were injected into the flank. The wound was examined and gangrene was found to have commenced in the flaps. The flaps were then excised and a large raw surface of about the size of a soup plate was left, which was scoured with 1 in 20 carbolic solution. A second injection of serum was given. On the fifth day the temperature fell to 99 4° and rose again to 101 4° Hot dressings of chlorinated soda were frequently applied The serum injections were continued On the sixth day the temperature was 100 8°. *Several small sloughs were removed from the surface, and it was noticed that bubbles of gas could be squeezed from the remnant of the pectoral muscle.* A cavity was found there and an offensive slough was removed, the smell being identical with that of the bacillus cultures The patient was much better and took food well. On the seventh day the temperature was 102 4° at midnight The wound was cleaner *On the eighth day the temperature was* 102 4° Gas bubbles were found issuing from another pit identical with the former On the ninth day the temperature was 102° A third pit was cleaned out. On the tenth day the temperature was 102° A fourth pit with two openings was found in the remains of the deltoid muscle The wound was now covered with granulations The patient was much better The pits alone were painful On the eleventh day the temperature was 100 2° Two more pits were found On the twelfth day the temperature was normal A seventh pit was found The former pits had been cleaned out with carbolic lotion, the sloughs being first removed. They never extended after this treatment On the twentieth day the pits were obliterated by granulations The wound rapidly contracted up and the patient was discharged cured on the forty-fifth day

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[18] Loc. cit.

The following points in the history of this case are worthy of special mention —1 The dirt infection at the time of the accident 2 The extremely rapid and severe onset in a young and healthy man, the temperature rising to 105 2° within 24 hours 3 The visible spread of the gangrene within two hours 4 The rapid recurrence of the symptoms after each amputation In both cases within about 18 hours the temperature had risen to 103° or so 5 The four operations occurring within four days of his admission 6 The *formation of pits or cavities in the stump during the period* of comparative convalescence The pits were undoubtedly due to the presence and the gas producing capacity of the bacillus, which was indicated by the bubbles and the unmistakable odour But in the open wound the pits did not spread so rapidly, and when once the slough was removed, the pits swabbed, and subsequently syringed with carbolic lotion, they healed readily 7 The septic condition which was present along with the bacillus and was indicated by the bronzing and reddening of the skin, and which preceded the gangrene as it spread

Bacteriology —Cultures were taken from the subcutaneous tissue of the flap, in which gangrene had recurred after the first amputation, immediately on removal from *the body. In all the tubes inoculated a copious growth* resulted, consisting of bacilli and streptococci with well-marked gas production and a very disagreeable fœtid odour This smell was entirely absent in subcultures, but reappeared slightly on coagulated blood serum and very *markedly* in a medium containing blood Sections of the subcutaneous tissue stained with methylene blue also showed bacilli and streptococci in very large numbers The streptococcus failed to grow in subculture, so that a pure growth of the bacillus was at once obtained in the plates *The* bacilli were stout and they varied much in length, had rounded ends, were non motile, and possessed no definite capsule, though in fluid media they tended to stick together in clumps; short chains were also present No *spores* were observed. They stained well and uniformly with all the ordinary *dyes*, but not by Gram's method The organism grew best under aerobic conditions, but was a facultative anaerobe It grew well on all the usual media, best at blood heat, but also at the room temperature, cultures were alive and vigorous at the end of two months In all media, including *Uschinsky* agar, a very copious gas formation was observed, solid media being rapidly fragmented On gelatin the colonies in the depth were round or oval, yellowish white with sharp margins; on the surface white with irregular margins and a uniform fine granularity presenting *no* special characteristics There was no liquefaction The colonies steadily increased in area and thickness, reaching a diameter of from two to three *millimetres in four days* Streaked on agar, a greyish white translucent layer formed, rapidly spreading beyond the needle-track In agar stab growth occurred all along the line of puncture but more freely at the surface The medium was fragmented in from 12 to 18 hours by gas-formation In peptone *beef broth* rapid growth took place, rendering the medium turbid throughout, with a deposit at the bottom, and in two or three days a thick scum on the surface In peptone water the indol reaction was well marked at the end of 24 hours Agar containing litmus was turned blue and did not become acid in the course of 14 days Milk was coagulated in 36 hours On potato there was a thin translucent greyish growth with shining surface.

Two guinea pigs were inoculated in the peritoneal cavity with a 48 hours' culture on coagulated blood serum, both died within 18 hours In both, on section, early general peritonitis was found, in one without any exudation, in the other with a *considerable formation of lymph* Smears on cover glasses from the peritoneum showed large numbers of bacilli *apparently* in pure culture, but none could be seen in preparations of the heart blood. Cultures from the peritoneum, spleen, and heart blood in both cases yielded an unmixed growth *of* a bacillus showing the *same* characteristics as that described above with well marked gas production and fœtid odour A third guinea pig was inoculated in the subcutaneous tissue of the groin from a 48 hours' growth on coagulated blood serum In 24 hours a well marked swelling was present but without emphysema, this gradually subsided in the *course* of *four* or five days without any marked constitutional symptoms A fourth guinea pig was inoculated from a 48 hours' culture on coagulated blood serum obtained from the peritoneum of one of the first guinea pigs, also in the subcutaneous tissue of the groin In 24 hours there was a large swelling at the site of puncture with marked general feebleness, in 48 hours the swelling had increased in size, but there was no emphysema The animal was very ill, not taking food, and the eyes were bleary At the end of three days its general condition was rather better and it was beginning to take food again; it was, however, killed with chloroform On section the swelling showed simply œdema with some extravasation of blood, no gas bubbles, and no necrosis of tissue Cultures *from the swelling yielded a pure growth of the bacillus*, while those from the heart blood remained sterile Microscopically also bacilli were found in the œdematous swelling We take this opportunity of thanking Dr Louis L Jenner who kindly performed the inoculations The bacillus above described is evidently identical with the bacillus œdematis aerobius of Sanfelice, while the coccus which unfortunately failed to grow in subculture was almost certainly the streptococcus pyogenes

DIGEST OF PUBLISHED LITERATURE

Bacteriology —On looking into the literature one is struck by the small number of cases recorded with a bacteriological examination and to see how firmly the idea of its almost universal association with the bacillus œdematis maligni (*vibrion septique*) is rooted in the minds of clinicians This has undoubtedly arisen from the experimental work of Pasteur and Koch, who by inoculations with this organism first produced the condition of emphysematous gangrene; but with regard to its occurrence in man we have been able to find but very few cases in which it has been demonstrated—in fact in most of the cases published the bacteriologist has been at pains to show that the organism he found was not the bacillus œdematis maligni In some of these cases where no name is given we have taken the liberty of classing the bacillus under the group to which, from its published characters, it appears to belong Further, we have left unclassified those cases in which a bacillus was seen microscopically without successful cultivation, though in some of these the author has asserted that the organism was probably the bacillus œdematis maligni We have also tried to avoid confusion by giving each organism the name by which it is more generally known, leaving out the name of the bacteriologist with which it is often associated in the published cases—e g bacillus of Welch and Nuttall, bacillus of Welch and Flexner—a practice which is certainly confusing to anyone not possessing a special acquaintance with the subject

Bacteriologically the cases of emphysematous gangrene fall naturally into two main groups, according as the organism is (1) aerobic or (2) anaerobic These differ further in that the former probably never occur in pure culture, whereas the latter are frequently found unmixed with other organisms, and it will be found that clinically the symptoms produced differ in the two groups, the variations apparently depending on the infection or not with other, generally pyogenic, bacteria, the symptoms produced by mixed anaerobic infections approximating closely to those due to mixed aerobic ones In both groups experiments show-that the bacilli remain strictly local, spreading only by direct extension, and do not occur in the general circulation until a short time after death. This point is one of extreme importance with regard to treatment, as it indicates the possibility, by thorough local removal, of eliminating the source of the toxins which are causing the severe constitutional symptoms.

Group 1. Aerobic.—This includes the smaller number of cases, but is of special interest in that there appears to be only one micro-organism belonging to it and also on account of the close resemblance which this bears to the members of the colon bacilli group. It appears to be identical with the organism described by Sanfelice under the name "bacillus œdematis aerobius" and also independently by Klein (*ein neuer Bacillus des malignen Oedems*), who found it by the injection of garden earth into the subcutaneous tissue of guinea-pigs, where it produced emphysematous gangrene. It is interesting to note that they entirely failed to produce this disease by inoculations with cultures of the organism, for this has been the result of all attempts with cultures from cases in man where this bacillus has been isolated, although Chavigny, by using a culture of the bacillus mixed with one of the staphylococcus pyogenes aureus, produced in a dog an abscess which contained gas and caused a large slough of the superjacent skin and surrounding tissues. Muscatello and Gangitano more recently have produced gangrene and emphysema by inoculation with bacillus œdematis aerobius mixed with proteus vulgaris The uniform results with pure cultures have been the formation of an œdematous swelling without either emphysema or sloughing. The bacillus described above from the case which forms the text of this paper is identical with the micro-organism with which we are now dealing, with the exception that it was non-motile, but this is not a point of much importance, as Klein mentions that the motility in different cultures varies. In other respects the description there given will serve for an account of the bacillus of this group. It will be noticed that it very closely resembles the bacillus coli communis and is, as Sanfelice points out, probably a member of that group, differing only in minor points—viz., the excessive gas-production which takes place even in a medium not containing sugar such as Uschinsky agar, and also in the absence of the characteristic appearance of the colonies on gelatin. This resemblance has been noted by all those who have described it; Chavigny, for instance, aptly terms it "*un microbe très voisin de coli*," while he also suggests that it is identical with Sanfelice's organism. Chiari has recorded a case of the "colon bacillus" occurring in a diabetic patient, and Lindenthal and Hitschmann in Chiari's case and one of their own suggest that the gas-formation is due to the presence of sugar in the tissues, but probably the bacillus was the same as in the case which we have described above, when, as seen *in vitro*, sugars are not necessary for gas-production, and I have included their cases and those published by Bunge and Evans, who describe the organism they found as the colon bacillus, under the heading of "bacillus œdematis aerobius." The micro-organism most commonly associated with this bacillus is the streptococcus pyogenes, but the staphylococcus pyogenes aureus, proteus vulgaris, and others have been described, not uncommonly more than one being present.

Group 2. Anaerobic.—Here we have to deal not with a single organism but with at least two and possibly more, and among these must be mentioned the bacillus aerogenes capsulatus which has been found in both pure and mixed growths. We have arranged the bacilli in the order of frequency with which they have been found, and do not propose to deal at all with those which, though found experimentally in animals to produce gangrene and emphysema, have not been recorded as occurring in man.

1. Bacillus emphysematosus (Fraenkel). This bacillus has been isolated in a fair number of cases; it varies much in length, is stouter than anthrax, and occurs in short chains. It is non-motile, not capsulated, and does not form spores; it stains with the usual dyes and also by Gram's method. It grows slowly in gelatin without liquefaction or gas-formation, but freely in agar containing glycerine and sodic formate, with copious production of stinking gas. It is highly pathogenic to guinea-pigs, producing when injected subcutaneously a foul-smelling emphysematous gangrene, but is less pathogenic to rabbits, while mice are immune. It very closely resembles, and is probably identical with, as Guillemot has pointed out, the bacillus described by Veillon and Zuber under the name of "bacillus perfringens" which was found by them in the pus of many cases of appendicular abscess. This is a point of interest, showing that the bacillus occurs in the intestinal contents, and it may serve to explain some of those cases arising from injury without breach of surface. In this group we have included three cases by Wicklein who, however, did not give a name to the bacillus which he found.

2. Bacillus œdematis maligni (*vibrion septique*). The only recorded instances in which this organism has been isolated are the cases published by Chauveau and Arloing from an outbreak of emphysematous gangrene in the wards of the Hôtel Dieu, Paris, and one can have no doubt after reading their papers that they conclusively proved that the gangrene was due to this organism. Charrin also showed sections of tissues containing the bacillus from a donkey inoculated by Arloing. It is certainly curious that we have been able to find no other cases in which the organism has been cultivated, in spite of the general belief in its frequency, as shown by the fact that in Flügge's text-book on bacteriology it is stated that a whole series of cases in man has been published. Rosenbach in his work entitled "Mikroorganismen bei den Wund-infektions-Krankheiten des Menschen" records two cases in which he found microscopically a sporing bacillus which he believed to be bacillus œdematis maligni but which he failed to cultivate. Slater, Bremer, and Menereul also say that they saw a bacillus which was probably the bacillus œdematis maligni but they failed to cultivate it and they give no reason for their assertion. The bacillus occurs singly or in chains, is of varying length, and is somewhat narrower than anthrax. It forms spores generally in or near the middle. Its motility varies. It stains readily with the ordinary dyes and also by Gram's method. Copious gas-formation occurs in all media and gelatin is slowly liquefied. It is highly pathogenic to most animals, including guinea-pigs, rabbits, and mice.

3. Bacillus aerogenes capsulatus (Welch and Nuttall). This organism has been described in four cases, one by Mann and three by Muscatello and Gangitano. The latter authors have performed a series of very valuable experiments with the organism which they found, and they show that this bacillus, although non-pathogenic to undamaged tissues, produces gangrene with emphysema when the tissues are first rendered less resistant either by mechanical damage or by the injection of bacterial toxins. But unfortunately, they assert, as does Mann, the identity of this bacillus with the bacillus emphysematosus of Fraenkel, whereas this latter produces emphysematous gangrene when injected alone into healthy tissues in guinea-pigs, and, further, is non-capsulated. Partly for this reason, but mainly because the cases differ in important points clinically, as the authors themselves point out, from the disease which we have described above, we have thought it advisable to put these under a separate heading, both in the clinical account and in the bibliography.

Clinical.—Considerable difficulty was experienced in dealing with the cases recorded owing to the insufficient data, both bacteriological and clinical, given. The difficulties ran chiefly along these lines, which may be briefly indicated. It is very rare that the condition of the arteries is recorded and not infrequently the age is not stated. This is an important point, for the gangrene excites inflammation in the neighbouring living tissues and if the arteries cannot supply them with the extra blood demanded the gangrene becomes spreading in character. Should the tissues be otherwise below par so much the more rapid is the spread of the gangrene. The second point is that it is frequently impossible to decide whether the emphysema is due to a specific organism or due to the ordinary decomposition of dead tissues. The time of its occurrence is frequently not noted. The third point is the occurrence of anomalous cases, such as are well attested by Chavigny and Seydel.

The following is a brief outline of the lines upon which the clinical matter has been found to plan out and it is very interesting in its agreement with the bacteriology. First have been considered cases due to mixed infection; secondly, those due to pure infection; thirdly, a few remarks are given as to treatment; fourthly, some anomalous cases are described; and finally are appended a series of cases due probably to the bacillus aerogenes capsulatus.

Cases due to mixed infection.—These cases may result from the action of an aerobic organism, the bacillus œdematis aerobius, or from an anaerobic bacillus combined with pyogenic organisms. The case that forms the text of this paper illustrates clinically those due to mixed infection excellently. Signs of both inflammation and of specific gangrene are present, the former process probably acting as a forerunner to the latter and rendering the tissues an easier prey to the bacillus. The onset occurs within 24 hours and is ushered in by great pain, a high temperature, a rapid pulse, and sometimes a rigor, and is soon followed by vomiting. The region affected is at first red, swollen, and acutely tender. Gas-formation in the tissues is noted early and the gangrene spreads rapidly. A bronze discolouration is seen round the gangrenous patch and precedes the gangrene as it spreads In this area there is no gas-formation and the tissues do not crepitate. The spread of the gangrene may be seen in two hours and is sometimes much quicker than this. If untreated the patient usually dies on the third or the fourth day from septic intoxication. The smell of the gangrene is frequently very foul or it may resemble that of rancid butter. This form of gaseous gangrene is naturally the commonest, from the mode of infection—by earth, dirty wounds, compound fractures, &c. Some have assumed that the bacillus coli communis is the cause of gaseous gangrene in diabetes and that the presence of this latter disease is necessary for the bacillus to produce the former. From the description of the organism by Lindenthal and Hitschmann it is most probably the bacillus œdematis aerobius which produces gas in all media and the presence of carbohydrates is unnecessary. To this variety of gangrene the name of "coli-gangrene" has been given. But it is most probable that these cases are examples of that which has been described above and with which they agree clinically.

In connexion with diabetes it may be well to refer to some difficulties that may arise. In these cases the arteries are diseased and therefore cannot respond to the extra call for blood demanded to form the inflammatory line of demarcation. The tissue at that point dies and the gangrene becomes spreading in character, which is further increased by the bad trophic condition of the tissues, which are themselves below par and owing to the sugar afford excellent pabulum for the growth of organisms. It is, in consequence of the last consideration, easy to see that decomposition will be very rapid and that the gangrene may present the appearance, locally at least, of the acute emphysematous variety. This similarity is further increased by the presence of the bacillus coli communis and its relatives amongst other organisms, which have been described as producing specific gangrene.

Cases of mixed infection with anaerobes are apparently less common and only one clinical description could be found—viz., by Guillemot—which does not differ from the above. Other cases are mentioned by Fraenkel, Lindenthal and Hitschmann.

Cases due to pure infection.—Cases of pure infection are invariably due to an anaerobic bacillus and have not infrequently been recorded, but unfortunately full clinical details of the individual cases are not given. The onset, as in the inflammatory variety, appears usually within 24 hours of the accident. One of the earliest symptoms is great pain in the part affected, accompanied by swelling and gas-formation. The signs of inflammation and suppuration are entirely absent and the part is usually pale, swollen, and emphysematous, with the blue veins standing out like the veins in a piece of marble. The part is very painful, but later it becomes anæsthetic The circulation in the veins becomes stopped and not till then can bubbles of gas be seen in them. If the part is still left it rapidly becomes offensive and undergoes decomposition The spread of the gangrene is extremely rapid and has been variously estimated by authors, as has that of the mixed infection, from one-half to two inches per hour. The rate of spread of the pure infection is naturally not nearly so easily estimated as of the mixed infection Constitutionally the patient shows signs of a profound toxæmia. The temperature is sometimes slightly raised to 100°, but more frequently it is about normal and not infrequently it is subnormal. The pulse becomes progressively more and more rapid and small, but occasionally it may be quite slow or normal in rate. The mental condition also may differ from that of the mixed infection in that the patient seems to be less frequently delirious and in some cases is quite clear in his mind until near the end, which, as in the former type, is usually ushered in by delirium, vomiting, and diarrhœa Even in the extensive literature that it has been our lot to consult we have been unable to find recorded, with full clinical details and a reliable bacteriological examination, a case of pure infection. The above description is mainly based upon that of Lindenthal and Hitschmann who had the good fortune to study four cases of pure infection.

The above description of cases of pure infection is founded upon those due to the bacillus emphysematosus. Recorded cases due to the bacillus œdematis maligni are rarer. Rosenbach has described two doubtful cases. Chauveau and Arloing have described some cases, but they show no marked differences from those due to the bacillus emphysematosus.

Treatment—With regard to treatment little can be said except that early amputation should be performed, and this is further emphasised by the strictly local infection. One word of warning may be given from the case reported in this paper. Lindenthal and Hitschmann say that the infection goes on chiefly along the lymphatics and therefore a mistake was made in using a larger internal flap in the first amputation in our case. Cases have been cited at different times of amputation through emphysematous tissues. It seems doubtful if such an operation could result in the patient's recovery. And where such a result is recorded one is inclined to regard the case as one of putrefactive emphysematous gangrene and not specific On the other hand, quite a number of cases have been recorded in which gangrene has recurred in the amputation stump and has been followed by recovery. Guillemot's case may be cited, as also may that of Tubby and Wright and the case in this paper. The amputation removes a very large amount of the manufactory of toxin and allows the patient to recover, as is shown by the immediate improvement. Amputation through the bronzed part beyond the gangrene may be good practice, though suppuration, as the bronzing is produced by the septic organisms in mixed infections, is sure to happen. This was the case with that dealt with by Tubby and Wright and also in our case. In the cutting away of the flaps at the fourth operation in our case bronze staining was left on the neck and quickly disappeared. Anti-streptococcic serum may be injected possibly with advantage in some cases, especially if the presence of a streptococcus has been proved. These organisms may fulfil the rôle of forerunners and injure the tissues, thus rendering them an easier prey to the specific bacillus. The point may certainly be raised as to the need for the performance of a second amputation for recurrence of gangrene in the stump. A few cases have been recorded of recovery following renewal of the gangrene, but many patients have died from the recurrence. Therefore it may be urged upon general lines that secondary amputation may be performed when the situation of the recurrence allows, and failing this, incisions, drainage, and disinfection. Large and hot dressings of some disinfectant like chlorinated soda are also valuable The treatment for the peculiar pittings which were noticed in the case here described has been mentioned in the account already given.

One paper has been written upon the serumtherapy by Leclainche. He deals entirely with the subject from a veterinary point of view and with the serum derived from cases immunised with cultures of the bacillus œdematis maligni. As this bacillus is rarely found in the emphysematous gangrene of man the paper is of little practical value to us. The veterinary text books are very silent upon the subject of gaseous gangrene and this is to be expected as it has been found experimentally that many animals are refractory to inoculation experiments

Anomalous and subacute cases.—Besides the above examples of pure and mixed infection and the various clinical types of an acute gangrene a number of cases exist in which the clinical characteristics are different. Chavigny has suggested from a study of his case that these were cases of subacute gaseous gangrene and also that they arose from auto infection through the blood and probably from the bowel There must be a quantity of records of such cases, but owing to the lack of the important details it has been impossible to include them in the bibliography. The usual difficulty is to decide whether the emphysema is the result of ordinary putrefactive changes or whether it is due to a specific gangrene. Examples of such cases are well worth reproducing.

A male, aged 21 years was thrown from a horse on April 24th, 1896, and sustained a comminuted fracture of his left femur and fracture of his left tibia and fibula; neither injury was compound There was no pulse in the anterior or the posterior tibial arteries On the second day the limb became warmer and the pulsations of the arteries were noticed after 48 hours from the accident. The limb progressed most favourably save for some loss of sensation. On the fifth day the patient had some slight rise of temperature, but it was not until the twelfth day that gangrene appeared on the foot and was heralded by rise of temperature and the usual constitutional symptoms; locally it was characterised by early gas-formation and was both rapid and spreading. Amputation was performed through the knee-joint on the fourteenth day—i.e., within 48 hours of the onset of the gangrene. Three days later suppuration and gangrene recurred in the stump and the patient became jaundiced one day later—viz., on the eighteenth day. There was little or no fever throughout the illness, the appetite was good, and the mental condition was clear and active until the death of the patient, which occurred on the twenty-fourth day after the appearance of the gangrene. Bacteriologically an aerobic bacillus was found in pure culture.[1] Chavigny points out that throughout the course of this case the symptoms were all subacute as compared with those of *gangrène gazeuse foudroyante*. But a bacillus was isolated which agreed on all points with some of those obtained from the clinically acute cases. He also found experimentally that the virulence of the bacillus was increased if septic organisms were injected with it. He says that this subacute form is different in its causation and symptoms from the ordinary acute cases, and is produced by auto-infection probably from the bowel. Seydel,[2] describes a somewhat similar case but which was more subacute than Chavigny's. A man received an injury without wound to his foot. Gangrene did not appear until the thirteenth day and did not spread rapidly, so that amputation was not performed until the twenty-fifth day Death occurred on the thirtieth day. Bacteriologically immense numbers of streptococci and staphylococci were found, but he failed to obtain any other organism. As he makes a special point of the very early appearance of emphysema in the tissues there must have been some specific gas-producing organism present. The gas was present in large quantities. Milliard and Manley may be mentioned amongst a large number who record somewhat similar cases, but owing to the lack of full bacteriological and clinical data little can be made of them. It is interesting to note that no subacute case of pure infection has been recorded.

Cases probably due to the bacillus aerogenes capsulatus.—There is still another set of cases anomalous clinically and of which the bacteriology is not quite definite. These cases are reported as being due to the bacillus aerogenes capsulatus. Muscatello and Gangitano have published two cases of pure infection and one of mixed infection, as has also Mann. These cases are briefly reproduced.

Pure Infection.

CASE 1.—A healthy man had his popliteal artery tied and an aneurysm excised. The gangrene appeared within 36 hours. The temperature rose to 105 4° F. and emphysema was noted. On the second day after the gangrene appeared the leg was amputated through the thigh which was followed by recurrence of gangrene next day. The wound was opened up and disinfected, the man recovering.

CASE 2.—A woman, aged 45 years, underwent nephrectomy through the loin. On the fifth day the temperature rose to 100 4° F., on the sixth day to 101·4°, on the eighth day to 103 8°, and she had a rigor. Free incision, lavage, and drainage were done, after which the temperature at once rose to 106°, but she recovered.

The characteristics of this gangrene with pure infection are given as follows: (1) early emphysema and toxæmia; (2) absence of inflammation; and (3) very little tendency to spread. It differs from the cases of pure infection already described in that the latter show (1) great and rapid spreading; (2) apyrexia in contradistinction to temperatures of 105·2° and 106° F.; and (3) that the gangrene does not yield easily to incisions and drainage, thus being of infinitely worse prognosis. On the other hand, they agree in the early and great emphysema and the absence of signs of inflammation.

Mixed Infection.

Muscatello and Gangitano have published one case.

CASE 1.—A man, aged 30 years, sustained a fracture of the os calcis and hæmatoma of the dorsum of the foot, which was incised. Within 24 hours there were swelling and inflammation of the foot and high fever. During the next three days the gangrene, which was emphysematous, spread nearly to the knee and on the fifth day the knee crepitated. On the sixth day amputation was performed through the thigh. 36 hours after the operation there was recurrence in the stump with fever and inflammation. The wound was thoroughly disinfected and the patient recovered. In the amputated limb were found streptococci, staphylococci, and the bacillus aerogenes capsulatus. The authors class this case with their others due to mixed infection with streptococci and anaerobic bacillus.

Mann in the "Annals of Surgery" also records a case.

CASE 2.—A man, aged 47 years, had a blister on his hand for one week and then it began to swell, accompanied by an acute onset and a rigor. On the first day incisions were made and improvement followed; the temperature was 102° F. On the second day the temperature was 99 2°; the hand became very painful on the third day. On the fourth day the patient had two rigors with a temperature of 105·5°. Extensive incisions were made and the limb was placed in a hot bath of perchloride of mercury. Six hours later the temperature fell to 104°; nine hours later it was 103°. On the fifth day the temperature was 102°. In three days' time the sloughs separated and the wounds slowly healed. A bacteriological examination yielded cultures of streptococci and the bacillus aerogenes capsulatus.

These cases of mixed infection with the bacillus aerogenes capsulatus differ from those of pure infection in that they are more spreading in character. In fact, the cases of mixed infection approximate more closely to those due to mixed infection above described than do the corresponding ones due to pure infection. In both cases the gangrene recurred in the stump and yielded to disinfection, recalling the similar result in those due to pure infection of the bacillus aerogenes capsulatus. The influence of the septic organisms is shown by their causing the mixed infection to be the more spreading in that the tissues are first injured. This emphasises the point already made, though it is doubtful if the presence of septic organisms renders the mixed infections previously described more rapid than the pure infections. In both varieties of cases, the pure and the mixed, the gangrene due to the bacillus aerogenes capsulatus is of an infinitely better prognosis than is that due to the organism just described.

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(* We have been unable to obtain this paper and cannot vouch for the accuracy of the reference, but a good abstract is given by Chavigny.)

DIPHTHERIA AT PENARTH.—In consequence of a severe outbreak of diphtheria at Penarth the district council offices have been fitted up as an isolation hospital. This is the second time that this building has been utilised for this purpose.

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[1] Chavigny, La Presse Médicale, July 16th, 1893, p. 26.

[2] Munchener Medicinische Wochenschrift, 1888, xxxv., p 41.

FIBROID TUMOUR AS A COMPLICATION OF PREGNANCY AND LABOUR.

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THE following two cases of the complication fibroid tumour and pregnancy which have been under my care during the last year I have thought of sufficient interest to record, from the diversity of the symptoms produced and the line of treatment necessitated.

The site of the tumour was about the same in each case, yet in the first case there was nothing during utero-gestation to lead up to the diagnosis of its presence, the symptoms appearing with the onset of labour, associated with eclampsia, sapræmia and septic peritonitis following, both attributable to the presence of the tumour. In the second case the tumour produced its symptoms early (at the third month), necessitating abdominal section and enucleation of the tumour, and it is remarkable from the fact that, notwithstanding active manipulation of the uterus at the time of operation, the pregnancy went to term and a full-time child was born.

CASE 1. *Labour complicated by puerperal eclampsia; fibroid tumour; sapræmia; septic peritonitis; abdominal hysterectomy; recovery.*—A woman, aged 38 years, a primipara, was admitted to the Lying in Hospital, Liverpool, on Nov. 30th, 1899, being sent by Mr. W. R. Main of Heswall, with the history that the patient was at about the full period of utero-gestation, and had been seized with convulsions on Nov. 29th and that there was a tumour in the abdomen. The patient had travelled from Heswall (10 miles) in an ambulance carriage, and when admitted was only partially conscious, could not be roused to answer questions, was restless, especially when touched, and occasionally moaned as if in pain. Abdominal examination presented a full-time uterus in which occasional contractions were felt. In the right iliac fossa, close up to the uterus, reaching a point on the level of the umbilicus and seeming to pass down into the pelvis, was a hard tumour which appeared to be fixed to the right side, and was dull on percussion except at its upper border, where the note was resonant. Per vaginam the cervix was felt high up and admitted the tip of the forefinger. No urine had been passed, but there were no fits. The diagnosis was that of a renal or an ovarian cyst complicating the labour, and as her condition seemed better than when Mr. Main had last seen her she was given 30 grains of chloral and bromide with 10 minims of tincture of digitalis every four hours. On Dec. 1st she had had a fairly good night; she had had no fits and had passed 14 ounces of urine, the specific gravity of which was 1015, acid, one-third albumin, and no blood or casts When seen at 9 45 A.M. she was lying on the left side, unconscious; she was breathing heavily; the face was cyanosed, conjunctival reflex was present, the pulse was 148, and the temperature was 98·6° F. Per vaginam the cervix was now obliterated, the os was high up and far back, dilated so far as to admit the finger, and was rapidly dilated so as to admit the whole hand. The presenting part was the vertex, or rather a portion of it represented by the scalp, with a parietal bone; no sutures or fontanelles could be distinguished but a wide membranous space on either side of the parietal bone; a second parietal was felt posteriorly and to the left side; an ear was felt high up on the right side of the pelvis. There was no bulging of the abdominal wall above the symphysis pubis, and the diagnosis was that of a "dead fœtus." The labour was allowed to progress unaided until 4 45 P.M. when, there being no advance since morning except that the soft vertex had been pushed through the os like a bag of membranes, forceps were applied above the brim and delivery was easy; there was delay with the shoulders and the third stage (no hæmorrhage and no uterine contraction), in consequence of which the hand was introduced into the uterus, where the placenta was found lying, already detached, and was removed. The uterus was douched with iodine water (four minims to the pint). The pulse was 108. The patient was more conscious. On Dec 4th, the lochia being offensive, a vaginal douche of permanganate of potash was given three times. The temperature was 101° on the next day, the 5th. As her condition gave rise to some anxiety the uterus was douched and curetted, offensive blood-clot being removed, and the uterus was packed with double cyanide gauze. The position of the tumour was now in the middle line of the abdomen and was freely moveable; it was of a soft solid consistence and could not be felt from the vagina, so that diagnosis of a dermoid ovarian tumour with a long pedicle was made. On the 6th the patient was better. The temperature was 99·4°, and her pulse was 118, but there was marked tenderness over the left side of the abdomen. On the 8th, during the night, the patient had a rigor and the temperature went up to 104·2°, and the pulse to 140. At 10 A.M. the pulse was small, 132, and the temperature was 102·4°. The abdomen was much distended, tympanitic, and tender, especially over the tumour. The patient was obviously suffering from septic peritonitis, which was thought probably to be associated with a twisted pedicle; if left alone she would certainly die, and her only chance was abdominal section. My colleague Dr. A. J. Wallace, being in the hospital at the time saw her with me and agreed with this opinion, whereupon we arranged for operation the same afternoon (the 8th).

The abdomen was opened by the usual median incision and on opening the peritoneum offensive blood-stained serum escaped. Passing the hand into the abdomen the tumour was found to be a fibroid attached to the fundus of the uterus by a broad pedicle, and was lying retroverted in the pelvis, where it was adherent by recent peritonitis and was with difficulty separated from the intestines and the floor of the pelvis. The incision was prolonged up to the umbilicus to enable the tumour to be withdrawn, and in delivery of the growth a small slough was found where the tumour was bent upon the uterus, and during manipulation my finger passed into the wall of the uterus at this point. There were several smaller fibroids in the walls of the uterus, and feeling that the operation should last as short a time as possible hysterectomy was preferred to myomectomy as presenting the best chance for the patient. Baer's operation was performed, the stump of the cervix was covered in with peritoneum, and the broad ligaments were sutured. An opening was made through the pouch of Douglas into the vagina, and gauze was packed from the peritoneal cavity to the vagina, and further drainage was provided for by a glass tube from the lower angle of the abdominal incision. The peritoneal cavity was thoroughly cleansed with saline solution and the wound was sutured with silkworm gut and dressed with double cyanide gauze. On Dec. 9th the patient slept for two and three-quarter hours during the night She complained of severe abdominal pain; the abdomen was swollen and tender, but the temperature was normal and the pulse was 128. The tongue was dry. On the 10th the dressing was changed; two drachms of sero-purulent offensive fluid were removed through the drainage-tube. On the 12th the dressing smelt offensively; it was removed and a sero purulent discharge oozing from the abdominal incision was found The sutures were removed and the whole line of incision was one large putrid slough going down to the muscle. This was brushed over with pure carbolic acid, and leaving the wound gaping bran and borax poultices were applied In three days (the 15th) the wound cleaned up, and there was a free drain through to the vagina. From this she rapidly improved and left the hospital quite well on Jan 5th, 1900.

One point in the convalescence is of value. A few days after the operation, finding the pulse remaining quick and small and feeble, 10 minims of tincture of digitalis were given every four hours and continued; one morning, however, the temperature fell to 97° and the pulse rose to 160, and was intermittent and barely perceptible. Her skin was moist and her appearance was dusky; there was vomiting of bilious fluid. The tongue was dry and brown. Food had been pushed, so that the attack looked like either an acute septic absorption or stomach derangement, and it was felt that probably the digitalis was upsetting her. The digitalis was discontinued and a dose of calomel was given and the patient starved for 24 hours and rapidly improved.

The points which I wish to bring under notice are, firstly, diagnosis. From the position of the tumour on the right side and in the lumbar and iliac regions, from its apparently being fixed, and that the bowel note was found in front of it, it seemed to present the features of a renal tumour. Mr. Main, however, had stated that he had moved the tumour and had pushed it out of the pelvis, therefore I judged it was a tumour with a long pedicle and possibly ovarian. Then after delivery the great mobility of the tumour and its soft solid feel gave me the impression of its being a dermoid from vaccine lymph. The yellow organism showed tetrads, and these tetrads are to be seen in the preparation, but unfortunately it is mixed with the white. The preparation was made from a white and yellow colony, or from the yellow colony, but it shows white and yellow. The third preparation is one of opaque lymph and you will see that there are colonies of organisms in it. I am sorry that I cannot show you a preparation of clear vaccine lymph. It is a most difficult thing to show and in the time at my disposal I was not able to search out what I wanted, so I can only describe the difference between opaque lymph and the clear standard vaccine lymph. In clear standard vaccine lymph you see very few organisms, or next to none. These organisms are isolated. They are very minute and they measure about the $\frac{1}{24000}$th part of an inch in diameter. The organisms of the cultivations under the microscope are 0·1 to 0·3 of a micro-millimetre according to the mode of preparation. If you roll them too much you may see the larger forms of cocci. The units of the tetrads, for instance, may vary from the tenth of a micro-millimetre to one micro-millimetre in diameter. I attribute that to defect in preparation.

The question came to be, what did all this mean? I began to look on all these different cultivations, opaque lymph, variolous lymph, and clear vaccine lymph, as different materials. All these materials were of different composition, and it was evident that the natural material had a different physiological action from the cultivated material. In trying to explain this I was confronted with the classification of bacteria. At that time bacteria were only beginning to be studied exactly and the battle raged fiercely between iso-morphism and pleo-morphism. A distinct bacterial form, according to Koch, corresponds to each infective disease, and this must be shown before it is proved that this bacterial form is the cause of the disease. At the same time he admits that the pathogenic forms which give rise to scarlet fever, variola, and vaccinia are so minute as to be difficult to recognise owing to their minuteness, and he advocates cultivations in the animal body so as to be able to show their infectivity.

Now, with these views before me—that all organisms were either spherical, rod-shaped, spirillum, or something of that kind, and that one could not pass into another; that if you said the cocci became bacilli you were a heretic; and that the thing must not grow but must always be the same—it seemed to me that there was a want of logic about the whole thing, and I rather went perhaps beyond the mark in attacking the classification of bacteria to suit my own views. I could not but see that these preparations showed different sizes of organisms. I did not know why, but there was no doubt that they did show different sizes of organisms. Then again, although they grew, it did not follow that they changed their species, and growth seemed to be a natural condition of all organisms which had life, and when they were so minute we had, as it were, to take into account their growth forms as well as the exact bacterial form which was displayed at the time that I observed them. Now the bacterial form in this clear lymph appeared to be a very minute spore. I assumed that owing to the behaviour of lymph on drying it could not be a vegetative condition of organism; that the material, whatever it was, had very strong resistant power to destruction. So, first in a communication to the Royal Society of Edinburgh, and again in a book which I published 14 years ago, I advocated the view that the organism in vaccine lymph was a spore. I also advocated, I must say more than I should have done, pleo-morphism, not the mutability of species, but the possibility of growth forms of cocci. I still hold these views, because I am not able to distinguish these from minute organisms which, say, may be produced by yeast. Pasteur showed that yeast adhered to the skin of grapes, but that as long as the grape skin was sound it took no effect. When there was a crack in the skin, however, the yeast attacked the grape and fermentation took place. I do not know the size of the grape spores, but it seems to me that between the vegetative condition of an organism and the reproductive condition of the organism there might be not only a difference of size but also a difference of action. Acting on this idea I formulated a sort of scale of growth for cocci from the minute spore of the cocci to a large form seen in lymph. If I had known as much about bacilli as I do to-day I might have said that these were spores of bacilli which we found in lymph. As a matter of fact I did say in criticising Zopf's classification that he had named three of his classes as cocci, and if one of these grew to be bacilli, they ought to be called spores of bacilli. So we come to this conclusion—that the organisms of the lymph are spores. Where, I think, I went wrong at that time was in thinking that these spores could grow in their own exhausted nutrient material. Since my observations have been published the whole subject has been thoroughly thrashed out, and it has been shown by Dr. Klein and Dr. Copeman that these white, yellow, and orange organisms are saprophytic, that they have nothing to do with the vaccine organism, and that they are extraneous organisms and are contaminations.

Now these views quite fit in with my own work. I am prepared to find that these are saprophytic organisms. What I maintained 14 years ago was, that the active principle in the lymph consisted of spores, that these cultivated spores, even if they were developments of the spores of lymph, were incapable of producing vaccinia, but at the same time that they were the cause of opacity in lymph. It is now a well-established fact that the cause of opacity in lymph is a natural cultivation of the organisms in it. I thought at the time that the spores in the lymph might develop. Since I have looked more carefully at the matter in the light of recent observations I think you cannot look for development of spores in the lymph, that there must be contamination to account for opacity, because the spores are the resting-stage of the organism, the stage at which they can reproduce themselves, and they have exhausted their pabulum by the time they appear in the vesicle, so that we cannot expect them to grow into cocci or bacilli or anything else.

Simultaneously with my own observations, Dr. Neil Carmichael of Glasgow found cocci in lymph. He considered that they were the active principle. He was able to inoculate them in 10 per cent. of the cases of children whom he had vaccinated. He did not consider that failure in 90 per cent. of the cases was sufficient to cause it to be disputed that cocci were the active principle in vaccine lymph, but that cultivation diminished their infectivity. We are possibly both wrong, but it is a remarkable fact that both Voigt and Garré have also failed to cultivate these organisms. Voigt believed that he had cultivated the vaccine organisms and could reproduce vaccinia in the calf, but he found as his generations departed from the original cultures that they diminished in potency. Garré, on the other hand, was able to inoculate calves with his cultivations, and from calves he could vaccinate children, but when his cultivations were inoculated into the human subject directly he failed.

Since the observations which I have detailed Dr. Klein and Dr. Monckton Copeman have made further observations. They have cultivated lymph in all sorts of ways and Dr. Copeman has shown that these organisms in my reports are extraneous organisms. So far as I know, they have not got any nearer the cultivation of the vaccine organism, but I am glad to see from recent papers that they corroborate my view that the active principle in an active vaccine material is a spore. They account for there being no other organism in the lymph by the fact that the organisms that produce them have probably given way to spores before they appear in the lymph, and they describe the spore-bearing bacilli which produce these spores. It is almost an induction that if you have spores there bacilli may be the cause of them, more especially as "micrococci do not produce spores" (Klein). At the same time their attempts at propagating the spores, either in the human or in the animal subject, have entirely failed. Dr. Copeman thought that he had got cultivations of his bacilli from egg and Dr. Klein has used glycerine agar and solid serum and so on for cultivating his organisms, but so far without success. The subject is one of difficulty and complexity and one can only hope to be able to put a stone in the building, which I have no doubt will be completed at some future time, by the successful cultivation of these vaccine organisms.

ACTION-AT-LAW AGAINST A MEDICAL MAN.—At the Pontypridd County Court on Nov. 7th, before Judge G. Williams, an ex-steward of the Ferndale Constitutional Club sued Dr. J. Williams for an alleged slander. The alleged slander was that Dr. Williams on April 9th had accused the man of disobedience, drunkenness, and dishonesty. The judge held that the defendant was perfectly justified in the words which he had spoken and gave judgment for him with costs.

REMARKS ON TWO CASES OF LANDRY'S PALSY.

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SINCE the attention of the medical profession was first directed by Landry in 1859 to the form of paralysis which bears his name, and the description of which was based on 10 cases, many instances more or less similar have been put on record from time to time. Authorities differ among themselves greatly as to the criteria which should determine the admission of any given case to the category of "Landry's disease" Some limit the term to a rapidly ascending form of palsy with no affection of sensation or with very slight sensory phenomena only; some admit the possibility of marked anæsthesia; while others would exclude cases with obvious changes in the spinal cord and peripheral nerves on the ground that instances exist apparently without either. From this it is clear that a more extensive pathological study of the disease may show that the term "Landry's paralysis" includes several conditions which may be related to one another but are not identical, and, like all such terms, it must be used provisionally and clinically and not as corresponding to a definite pathological equivalent.

With this preface I shall therefore narrate two cases which in my opinion are examples of the disease, and then make a few remarks on the reasons which have led me so to classify them, as in some respects they do not fit with the concise description met with in certain of the text-books.

CASE 1.—The patient was a man, aged 40 years, whom I saw in consultation with Mr G. B. Hillman of Castleford in June, 1899. This man had always had a tendency to "throw on" his club, upon small provocation, so that when some 10 days before, he complained of pains in his legs, followed on the next day by some indefinite pains in his back; *there was nothing in his condition to sound a note of* alarm, and it is possible, as Mr. Hillman suggested, that the march of the earliest symptoms may have escaped accurate observation. The day before I saw him, however, his legs were decidedly weak, and some hours before our consultation Mr. Hillman observed partial right sided facial palsy. We examined the patient together He was not looking very ill and was not suffering. He had almost complete motor palsy of his legs; when he tried to move his feet or his toes the effort was immense and the result was almost *nil.* The muscles of the trunk were weak and, although the intercostal muscles acted all the way down and the diaphragm also acted, yet the respiration was *mainly of the superior costal type. The patient's hands* were very feeble, especially the right hand, and there was general weakness of the arm and forearm, the movement of extension of the forearm being especially affected. The shoulder muscles were strong and the power of shrugging the shoulders was well up to the normal standard. The sterno-mastoids, especially the right, were weak. Thus the patient could not raise his head from the pillow and rotation of the head was *lessened in extent, speed, and strength.* There were slight dysphagia and some weakness and alteration in the voice, but no palsy of the palate. There was partial facial palsy of Bell's type on the right side, with some weakness of the right external rectus and consequent homonymous diplopia, which was constant The deep reflexes were all abolished. There was marked anæsthesia affecting the whole of the lower extremities and the extreme lowest part of the abdomen, with very questionable affection of sensation in the arms and hands. The patient had to wait some time before succeeding in passing water, but there was no actual retention or incontinence. The pupils were equal and active There were no trophic lesions or vaso-motor disturbances An indefinite history of exposure to cold was made out We gave a hopeless prognosis, which was justified, for the patient died on the following afternoon In a letter to me Mr. Hillman wrote: "I saw him again the same evening The paralysis of the right external rectus was much more marked than when you saw him, the throat was much more affected, and there was a good *deal of difficulty in swallowing*, while the chest movements were almost confined to the upper ribs. Next morning there was no movement of the lower ribs or of the abdomen Speech was almost gone. There was slight deflection of the tongue to the right on protrusion. He had passed urine into the bed during the night, but it appears he had tried to explain his want and his friends did not understand him. He was quite unable to swallow. At two o'clock in the afternoon he remained quite conscious but could not speak; the palsy of the external rectus was now complete, the face and hands were becoming cyanosed and he was obviously dying. At 3.40 he became markedly cyanosed and he died about four o'clock with slight spasm of the face."

In this case the salient features were the premonitory pains, the rapidly developing palsy, more or less, but not *strictly* ascending in character, with some affection of the cranial nerves, loss of reflexes without marked affection of the sphincters, and decided anæsthesia of a more limited distribution than that of the motor palsy, the whole terminating in respiratory palsy in about 11 days.

CASE 2.—I was associated in this case with Mr. A. Smith of Stanningley. The patient, a woman, aged 24 years, was admitted under my care into the Leeds General Infirmary on July 1st, 1900. She was the youngest of a family in whose history no special diathesis could be made out. She herself had had chorea on three occasions about 11, 13, and 15 years previously and she had had influenza some time in 1898 She had been robust and muscular. She had been confined of her first child three years before and this was followed by a miscarriage 12 months after, and this again by a living child in August, 1898. The labour was normal and she did well *for 10 days. Then the temperature went up to 103° F.* and remained high for four days, and she made a *slow recovery and never looked herself again. Four* months after her confinement she said that her work was a burden to her, and her child was weaned. She dated her illness from about one month prior to her admission into the infirmary, when she noticed that the palm of her left hand was numb The numbness spread up the arm and at the end of a fortnight it had reached the left side of the neck and the head. Here it stayed for a few days and then began to descend the left side until it reached the groin. Thence, after a short delay, it advanced further down the limb, which in turn became numb in its whole extent. Her *condition at the time was well described in a letter from* Mr Smith, who wrote: "The anæsthesia for both heat and pain was very well marked over the whole of the arm and forearm, less marked on the inside, and still less on the left leg; the right side was quite normal. The muscular sense as tested by weights was normal on the right side, distinctly impaired on the left." In about 48 hours numbness began on the right side, first in the hand extending up to the elbow, then in the right leg, which was affected at first on its inner and anterior aspect, the numbness then extending down to the toes. All these sensory phenomena came on before the motor affection, which was gradual in onset, and it was by no means clear whether the arms or the legs were the first to be *affected. On admission into the infirmary she expressed herself* as feeling quite well so far as her general health was concerned. There was great motor weakness; she could walk with assistance, but dragged the left leg. The grasp of the left hand was much impaired, and the muscles generally were very flabby, especially on the left side. The respiratory movements were normal. The deep reflexes were present and the left knee-jerk was slightly increased The sensory phenomena were the more marked There was marked, but not complete, anæsthesia everywhere, except on the face, and that to all forms of stimulation. She complained of her feet feeling as cold as ice, yet they were found quite warm to the touch. On the 13th I dictated the following note to the clinical clerk: "To-day we find profound anæsthesia over almost all the cutaneous areas supplied by the spinal nerves, though a prick can be felt in the left leg and gentle pinching can be felt in the left upper arm, though not in the shoulder of the same side. The cutaneous areas supplied by the cranial nerves appear to be normal *To day, also, we note the greater weakness of the* left arm as compared with the right and the increase of patellar jerk. The left side of the chest and the left rectus abdominis do not act so well as the right, and generally the motor weakness is greater" On the 28th she went home at her own request. On August 5th and 6th she had to have her urine drawn off, and on the 7th she passed both urine and fæces into the bed. Her appetite remained good. On *the 9th the articulation was affected and there was dysphagia.* This got worse and on the 11th her breathing became laboured and she died from asphyxia.

The duration of the illness was thus much longer than in the case of the first patient described, lasting as it did about two and a half months from the first appearance of the numbness. Sensory phenomena were the earlier and the more pronounced, and at one time were so markedly unilateral as to lead me strongly to suspect functional disorder, but on examination I found that there were no deafness, no limitation of the field of vision, and no colour-blindness on the anæsthetic side—symptoms which, as Charcot points out, are fairly constant in hysterical hemianæsthesia. The spread of the anæsthesia was most irregular, while a striking feature in the case was the persistence of the deep reflexes and their actual increase on the left side.

In both of these cases I am confident that spinal myelitis, in the ordinary sense of the term, may be safely excluded, for the paralysis, both motor and sensory, was so marked and extensive that, if due to this condition, it must have been associated with a more unquestionable affection of the sphincters and with at least some tendency to the occurrence of bedsores

There is no doubt that the term used by Landry, "acute ascending palsy," carries with it the conception of a disease beginning below and affecting the parts in an upward *direction* until, the respiratory centres being affected, death ensues, and in many cases this doubtless is the course of the disease. Ross, however, holds that Landry used the term "ascending" not in this sense, but to indicate that the palsy was centripetal, affecting, that is, the distal part of the limb before the proximal. If, however, we bear in mind the peculiar relation of the spinal nerves to the limbs, which is such that those muscles which act on the distal part of the limb are innervated from a lower part of the spinal cord than that which presides over the more proximal muscles, we shall find that, even if it were an accurate conception of the disease that it is a process invading the spinal cord from below upwards, this tendency of the distal part of the limb to be affected before the proximal would be just what might be expected, and so the paralytic phenomena would be ascending both in the ordinary sense of the term and in that as interpreted by Ross. There are, however, some cogent reasons against an ascending spinal lesion—I use the term in its widest sense to include toxic processes—being an essential pathological conception for the clinical syndrome. Thus, in some cases, as in that of the naturalist Cuvier quoted by Fagge, the upper limbs were affected before the lower; in many cases the arms, affected *after* the legs, were affected *before* the abdominal muscles, and in my first case, with great weakness of the legs and arms, there was normal strength of the muscles of the shoulders, while the ponto-medullary centres, or the nerves leading from them, were affected, as indicated by the palsy of the sterno-mastoid, of the face, and of the external rectus. Most cases, however, are certainly characterised by a general extension of the paralysis from below upwards, as, indeed, my first case strikingly shows; but a progressively upward extending lesion, structural or nutritional, of the spinal cord, will not by itself account for all the phenomena of the disease, and in many cases would be strikingly at variance with those which are present.

By those who incline to the view that Landry's palsy must find a place in the class of peripheral neuritis or in a toxic condition affecting chiefly the peripheral nerves, it is pointed out that the little which is known of its causation points in that direction, for alcohol, exposure to cold, and exposure to the poison of the exanthemata, are probable causes of each, while the existence of splenic and glandular enlargement suggestive of some toxic process is common to both. This is certainly the view which commends itself most to my mind, and, as other points in favour of the two affections being classed together, I may mention the early shooting pains and malaise, the frequent march of the palsy from periphery to centre, and, above all, the varying combination of motor and sensory phenomena which is found in both affections. This latter variability is well known in peripheral neuritis. I may instance the painful palsy of alcoholic causation and the usually painless palsy of lead, both admittedly due to affections of the peripheral nerves, and which may fairly compare respectively with instances, such as those which I have related, in which the sensory phenomena were marked, and those more common cases where *sensation is less affected*. But that Landry's palsy cannot be accounted for by an affection of the peripheral nerves alone is almost certain. In my first case I note that the paralysis of the external rectus of the eye and of the face were on the same side, and from the known proximity of the sixth and seventh nuclei this is strongly suggestive of a central affection as against a peripheral affection.

There is no doubt that our conceptions of peripheral neuritis must be widened, and the researches of Dr. F. W. Mott and others on the anatomy and physiology of the neuron make it incumbent on us to enlarge the boundaries of this class of diseases, or possibly to re-label some of them. Thus when we say of anyone that he is suffering from alcoholic neuritis we neither express, nor do we overlook, the fact that the poison does not act only on the nerves, but that the centres in the cerebrum are also affected, and it is, of course, only in this sense of the term that I support the provisional classing of Landry's palsy in the group known as peripheral neuritis. And if, as Westphal was the first to suggest, the disease is due to an infective process, it is not unreasonable to hold that various parts of the nervous system may be affected in different cases, or even in one and the same case, for we are aware that poisons of known nature have a selective influence on various parts of the nervous system—morphia on the brain, strychnia on the cord, curara on the motor nerve endings, atropine on the eye, lead especially on the nerves of the extensor muscles of the forearm, and alcohol sometimes, I believe, on the motor nerves only, and at other times on the motor and the sensory nerves both as well as on nerve centres.

In one of my cases the knee-jerk was abolished, in the other it was increased, just as we find in different instances of alcoholic paralysis; and this seems to point to the probability of the lower motor neurons being affected in some cases and the upper in others. So, also, in the same case we have evidence in the great paralysis of the limbs, centripetal in character, and not associated with any affection of the sphincters, of a peripheral lesion, and at the same time evidence of a central lesion in the association of facial and ocular palsy on the same side.

It will be noted that in both the examples which I have recorded the sensory phenomena were early and well marked, and that in Case 2 they were for a long time far more striking than the motor phenomena. It is pointed out by Dr. Judson Bury that many writers exclude cases in which sensory phenomena are conspicuous, but he clearly shows from a reference to Landry's original paper that those who admit such cases (viz., Nauwerk and Barth and Ross) are more correct than those critics (Bailey and Ewing) who would exclude them; for Landry, while stating that generally motor symptoms predominate, also clearly expresses the view that "sensibility and mobility may be equally affected," and as Dr. Bury very cogently remarks, "If Landry's paralysis means anything, it means the disease originally described by Landry."

Leeds.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF ACUTE RHEUMATISM WITH PREVIOUS MITRAL REGURGITATION FOLLOWED BY PERICARDITIS.

By ALBERT R. HENCHLEY, L.R.C.P., L.R.C.S. EDIN., L.F.P.S. GLASG.

IN March, 1900, I was attending a boy in this village suffering from acute rheumatism with mitral regurgitation, and during the latter part of his illness, when he was practically convalescent, the mother asked me if I would call and see another son of hers the next day in a village a mile away. On arriving there the following day (March 26th) I found the lad, aged 17½ years, in bed, with both knees and ankles and the left shoulder swollen and painful. He said that he had been bad for seven or eight days with first one joint swollen and then another, and thinking he had "caught a chill" he had hoped that it would pass off. *His temperature was 103° F.*, his respirations were 28, and his pulse was 90 His bowels had been open twice that morning but previously they had been confined. He was sweating freely. On examining the chest I found that the area of cardiac dulness was increased, the impulse being in the fifth left interspace, below and slightly external to the nipple. There was a well-marked mitral systolic murmur which was to be heard distinctly in the back of the same side. His previous illnesses were measles and (?) scarlet fever, the latter when he was about three years of age, and the medical man in attendance then is said to have remarked that it had affected his heart. Nine months previously I had refused to pass him into a friendly society on account of his having a systolic murmur at the apex.

I had the joints covered with cotton-wool and flannel. I also advised bathing his chest and head with tepid water and gave him a mixture containing 10 grains of sodium salicylate, 10 grains of potassium bicarbonate, and four minims of tincture of digitalis, to be taken every four hours, and two teaspoonfuls of brandy, also every four hours. By April 1st his temperature had dropped to 100°, his pulse was 90 and his respirations were 30. No other joints had been affected in the meanwhile, but those that were had considerably lessened in size and he was suffering from no pain. On examination of the heart I found it to be considerably increased in size, reaching to the right of the right border of the sternum, above nearly to the lower borders of the second ribs, and practically as before on the left side. Friction sounds were to be heard over this area By the 3rd the joints were normal in size and painless and the sweating had subsided, but the temperature had risen to 103·2°, the pulse was 120, and the respirations were 40 The urine was diminished in quantity to 44 ounces in 24 hours I stopped the sodium salicylate and substituted 30 grains of diuretin every four hours. The brandy was continued and the bathing was stopped. The patient was kept propped up in bed almost at right angles to it, as otherwise orthopnœa was so pronounced. During the next five days, with occasional small doses of antifebrin, the temperature dropped to 101°, but there were no signs of absorption of the effusion taking place I ordered the chest to be painted once daily with tincture of iodine (half strength) and gave three grains of iodide of potassium every four hours By the 12th the area of cardiac dulness was markedly diminished; the temperature was 99·4° in the morning and 100·2° in the evening. The urine had now reached about 60 ounces daily. The painting of the chest with iodine and the administration of iodide of potassium were stopped, as an iodide rash had appeared. On the 20th the patient's temperature was normal and remained so, and his heart had resumed its normal size. He was, of course, still kept in bed and all available and suitable nourishment was administered. In the beginning of June the parents particularly wished him to be taken home. A carriage and pair was kindly lent and he was placed on a stretcher and put in it and taken at a walking pace. A few days afterwards I was fetched early in the morning to him and found that he had commencing signs of backward pressure from the heart failing The lungs were congested at the bases, the liver was enlarged, and there was œdema of the legs, ankles, and feet. I gave him a hypodermic injection of one-hundredth of a grain of strychnine sulphate and ordered half a wineglassful of champagne every two hours. The next day he seemed much better and was ordered a mixture of digitalis and an alkaline aperient Then he developed a sudden swelling of the left forearm and hand with simple phlebitis, probably due to thrombosis of the axillary vein; the right arm being quite normal in size In the course of 10 days this got better, but otherwise he became gradually worse and he died on June 26th.

Now that there is so much discussion on the classification of acute rheumatism it seems worth while drawing attention to the coincidence of two members of the same family being affected at the same time Although not living in the same house the deceased had visited his brother frequently before he had to take to his bed I believe it is not a common occurrence to recover from pericarditis when there is a previous diseased condition of the valves of the heart.

Blagdon, near Bristol.

A CASE OF COMPLETE INVERSION OF THE UTERUS

BY DAVID DURRAN, M B. GLASG.

OWING to its great rarity the following case of complete inversion of the uterus ought to be placed on record. According to Playfair this accident was only observed once in upwards of 190,800 deliveries at the Rotunda Hospital since its foundation in 1745. Various explanations have been given to account for its production. In the present case there was a suspicion that pressure on the abdomen was improperly applied, but the midwife who was in attendance would not admit that there was undue pulling on the cord. The case was as follows.

On Jan 30th, 1899, I was called to a woman in labour. On my arrival I found her in bed, pale, with a small and feeble pulse, cold clammy skin, and evidently suffering from shock The midwife informed me that a little over an hour before a child was born and that along with the after-birth something came down the like of which she had never seen before but which she thought was the womb This she returned. There was great loss of blood and the patient had been in a fainting condition ever since. It may be mentioned here that the patient was 25 years of age, strong, and in good health. She had been married seven years and this was her third child. On examination I discovered a large globular mass of the consistence of muscle tissue filling the vagina and bleeding profusely. Bimanual examination showed the absence of the contracted uterus and instead a cup-shaped depression was easily felt, which made out the case to be one of complete inversion of the uterus. Manipulation restored the organ in a few minutes to its natural condition. The inverted uterus was first firmly grasped by the hand and gently squeezed, being at the same time pushed slightly upwards The tips of the fingers were then applied to the fundus and by steady pressure in the proper axis of the pelvis the uterus was felt to resume its natural shape. The patient made a good recovery and everything went on well until the eleventh day after the confinement, when delusions showed themselves, and in a few days the case developed into one of acute puerperal mania presenting the usual symptoms, which necessitated asylum treatment There was evidence of hereditary tendency, but the determining cause at that time was no doubt the shock from the accident referred to as well as exhaustion from the great loss of blood After several months in the asylum the patient returned home and is now in very good health.

Thurso, Caithness.

UNUSUAL CONDITIONS AT BIRTH.

BY A J. RICE OXLEY, M.A. OXON., M.B. DUB., M.R C S ENG.

CASE 1. *Fracture of the clavicle: normal presentation.*—A patient of mine was delivered of her third child a short time ago. At my visit the following day the nurse asked me to look at a "sharp hard swelling at the top of the right side of the chest." On examination I found that the infant had a fractured clavicle. Delivery had been very rapid—so rapid that I was unable to arrive in time; but the nurse, a skilful one, assured me that she had in no way interfered during the progress and that it was normal in every way "except for its being very quick indeed" Such an occurrence is, of course, not very remarkable in some cases of difficult labour, but is surely very unusual in a case of the above-mentioned type, I may add that union was quite satisfactory.

CASE 2 *Congenital thickening of the sterno-mastoid.*—Shortly after delivery (by forceps) the nurse called my attention to a lump at the side of the neck of the infant. I had exercised comparatively little traction and diagnosed the case as "congenital swelling of the sterno-mastoid." This thickening was not a hæmatoma I am sure, and has now almost disappeared without any limitation of movement. I gave small doses of grey powder, but as the tendency of these thickenings is to clear up by themselves it is impossible to ascribe any definite effect to this preparation.

Streatham, S W.

PROPOSED BACTERIOLOGICAL LABORATORY.—The sanitary committee of the Plymouth Corporation have decided to approach the Devon and Cornwall County Councils and the Stonehouse District Council in reference to the formulating of a scheme for the establishment of a joint county and municipal bacteriological laboratory in conjunction with the borough of Plymouth

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—Morgagni *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF TETANUS; SUBDURAL INJECTION OF ANTI-TETANIC SERUM; RECOVERY.

(Under the care of Mr. A. E. Barker.)

In the present state of our knowledge as to the therapeutic value of the intracranial injection of anti-tetanic serum it is very desirable that as many cases as possible of this ingenious treatment should be put on record. The injection of the serum into the subdural space is simpler and less likely to do harm than the injection into the brain substance, and therefore is to be preferred if it seems to be equal in efficacy. Of 25 cases that have been recorded of treatment by intracranial injections, 14 patients died and 11 recovered.[1] For the notes of this case we are indebted to Mr. Percy Stedman, house surgeon.

A man was admitted into University College Hospital under the care of Mr. Barker on May 4th with the following history. 14 days previously he went into his yard, slipped down, and cut the side of his head. A friend washed the wound for him with Condy's fluid and bandaged it up. He felt little the worse for the fall and went on with his work as usual until May 1st. On this day he felt that his neck was getting stiff and he experienced a curious sensation of something crawling up the back of his neck; he saw his medical adviser who sent him to bed. On the next day the stiffness at the back of the neck had increased and the head was twisted to the left side. The following day the jaw and also the back of the legs began to get stiff. He had no twitchings or convulsions.

On admission, on the right side of the head, over the lower and posterior part of the parietal bone, was a wound through the skin, about one square inch in size. It had a distinctly sloughy appearance and around it there was a large amount of œdema. He complained of pain and stiffness at the back of his neck and of inability to open his mouth; he could not turn his head to the right, neither could he raise himself from the bed. The back was arched and the legs were rigid; he perspired very freely, being covered with beads of sweat. On making an effort the patient was able to open his teeth to the extent of a quarter of an inch: through this a small indiarubber tube had been inserted by which the patient was fed with milk. The arms were unaffected, the thorax and abdomen moved well on respiration, but the abdominal muscles were rather hard. The pulse, respiration, and temperature were normal.

In the absence of Mr. Barker from town Mr. Victor Horsley decided to inject anti-tetanic serum. The head was shaved over the parietal bone and the sloughy wound was excised. The skull was trephined with a quarter-inch trephine and the needle of the injection syringe was passed into the sub-dural space and seven and a half cubic centimetres of anti-tetanic serum, prepared at the Jenner Institute, were injected Whilst the patient was under the anæsthetic the spasm of the muscles only showed slight tendency to relax. During the following four days 20 cubic centimetres of serum were injected into the flanks. The abdomen became very rigid and the right arm also became rigid. Gradually increasing doses of chloral had been administered to the patient since his admission until he was taking 60 grains per diem: this was continued.

No improvement took place for a week when the rigidity of the muscles of the neck and abdomen began to pass off. From this time onward the patient made an uninterrupted recovery, the rigidity passing from the legs last, and at the end of three weeks from his admission into the hospital all the stiffness had passed off.

ROTHERHAM HOSPITAL.

A CASE OF TUBAL GESTATION WITH RUPTURE IN A WOMAN PREVIOUSLY OPERATED UPON FOR TUBAL GESTATION WITH MISSED LABOUR.

(Under the care of Mr. J. B. Lyth.)

One of the more frequent causes of sterility in women is an obstruction to the passage of the ovum along the Fallopian tube. If this obstruction be bilateral and complete the sterility is absolute, but if it be unilateral, or not complete, fertilisation may occur. This is then especially likely to take place in the Fallopian tube, for the spermatozoon can pass through an opening which is too small to allow the passage of an ovum. For the notes of the case we are indebted to Dr. J. S. Martin, house surgeon.

A married woman who had had one child born dead 10 years previously was admitted into the Leeds Infirmary in November, 1892, under the care of Dr. James Braithwaite, to whose courtesy Dr. Martin is indebted for an account of her case while there. She had a history of 10 months' pregnancy. There was no history of rupture of the sac. After nine months the child appeared to have died. On Nov. 30th an operation was undertaken and a large full-grown dead child was removed. It lay in a cyst which was an expanded portion of the left broad ligament. The placenta was attached to its posterior wall and was removed. The edges of the cyst were stitched to the peritoneum, the cavity was drained, and the patient made a good recovery. She had no further pregnancies and remained well until six weeks before her admission to the Rotherham Hospital. She had some irregular hæmorrhages and these in the light of her previous experience she regarded as evidence that she was again pregnant. She thought that she would be three or four months gone. Six weeks before admission she had an attack of abdominal pain with collapse, sickness, and jaundice. The attack lasted a couple of days. She had six attacks before her admission. On May 22nd, 1900, and on the morning of the 23rd she had another attack. She was in great pain and her blanched lips and feeble pulse indicated internal hæmorrhage. Her temperature sank to 96° F. An injection of strychnine was given and a quarter of an hour afterwards she rallied. The pain and sickness continued through the day. On the following day (May 24th) she was better and it was possible to make an examination of the abdomen. There was a tumour reaching well above the umbilicus and lying medially but somewhat inclined to the right. The scar of the previous operation lay to the left of the umbilicus. In the afternoon she had another attack similar to that of the 23rd. She recovered again and on the 26th she was so much better that Mr. Lyth proceeded to operate.

An incision was made, starting from a point one inch below and to the right of the umbilicus, and continued downwards for about three and a half inches. On opening the peritoneum a mass of blood-clot came into view. Mr. Lyth passed his hand first around and then through this and his hand entered the sac. Placental tissue and a piece of umbilical cord four inches in length were found, but no fœtus. The pregnancy was in the fimbriated end of the right Fallopian tube or between it and the ovary. The sac had in the course of its growth become adherent to the omentum, the wall of the pelvis, the small intestine, and the posterior part of the body of the uterus. The uterine end of the Fallopian tube had become adherent to the sac. Between this and the fimbriated extremity there was a free loop. The placenta lay upon the upper surface of the sac. The site of the rupture could not be discovered. Before a pedicle could be made it was necessary to remove the placenta. After this all the free portions of the sac were cut away. Two portions of the sac were so closely adherent to the omentum and the pelvic wall that it was necessary to leave them. From the size of the sac the pregnancy was about the fifth month. During the operation the patient lost a good deal of blood and saline infusion was resorted to. A glass drainage-tube was inserted and the wound was closed.

The patient made a good recovery. The wound was syringed daily with a solution of boroglyceride (1 in 20). There was diarrhœa from May 30th to June 2nd, which was probably the result of absorption of septic products On June 1st the tube was removed and the wound was closed. On the morning of the 4th the temperature rose to 99 4°. This led to an examination of the wound and the discovery of a localised abscess containing a good deal of offensive purulent matter. This was evacuated, a rubber drainage tube was inserted, and the cavity was syringed with iodoform emulsion. The wound was now dressed daily, pieces of placental tissue coming away from time to time. The tube was removed on July 2nd and the wound was completely healed on July 26th, the date of her discharge

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[1] Practitioner, 1899, vol. ii, p. 80

Remarks by Dr. MARTIN.—The above case may be of interest not alone on account of its rarity but as illustrating the fact that some women are liable to abnormalities of gestation on both sides of the body. Such cases would point to some abnormality in the formation of the uterine appendages delaying the passage of the ovum rather than to accidental causes. Greig Smith in his "Abdominal Surgery"[1] mentions some six or more cases recorded by various observers. In the same work he states that the condition is likely to occur in women who have been sterile for long periods or who have shown "inaptitude for conception." This statement is borne out in the above case, there being an interval of 10 years between the first and second pregnancies and one of eight years between the second and third Neither at the first nor at the second operation was any malformation of the uterus or tubes observed, but it is possible that under the circumstances such malformation may have been overlooked. I am indebted to Mr. Lyth for permission to publish the case and to Dr. Braithwaite for the permission to use the notes which he kindly sent me.

SALOP INFIRMARY.

A CASE OF INTRA THORACIC GROWTH SIMULATING HEART DISEASE

(Under the care of Dr E. CURETON)

THE diagnosis of mediastinal tumours is always attended with difficulty, and the growths may attain a large size before being recognised. The physical signs usually point to localised pleural effusions or to pulmonary consolidation; occasionally, as in the case recorded below, the interference with the heart's action may lead to signs suggestive of disease of that organ. A few cases have been recorded in which an intra-thoracic growth has given a fairly distinct shadow on a Roentgen ray photograph, and we may hope that by improvement in skiagraphy the diagnosis of these tumours may be simplified

A man, aged 27 years, was admitted into the Salop Infirmary on July 7th, 1900. The patient had had shortness of breath for three months and pain in the præcordial region for six months; both pain and dyspnœa had become worse during the last month The patient stated that he had never had rheumatism or chorea

On examination the upper border of the heart was found to be at the third rib, the right border was at the right edge of the sternum, and the left border was just external to the left nipple. The impulse was forcible and heaving and was best felt in the fifth space one inch internal to the left nipple. A loud systolic murmur was heard at the apex and conducted into the axilla; a systolic murmur was heard at both bases and conducted to each clavicle, the second sounds were clear A systolic murmur was heard over the middle of each lung. The pulse was irregular and strong and the radial artery felt thickened The feet had been swollen and were slightly so on admission The left lung was duller on percussion in front and behind than the right, and the heart sounds were not so clear The sounds heard in the axilla were natural There were no adventitious sounds. The subsequent history of this patient up to his sudden death on July 12th was uneventful; he appeared to be better and asked to be allowed to go home.

Necropsy —On post-mortem examination the mediastinum was found to be filled with a mass of new growth involving the glands at the root of the lung and surrounding the base of the heart and great vessels. The growth extended into the neck on each side of the trachea and on the left side along the subclavian artery, being firmly adherent to the tissues at the back of the clavicle The left lung was to a large extent taken up by the growth except in the axillary border, and there was a patch of old pleural adhesions over the upper third in front and in the axilla. The heart was pushed forward and hypertrophied, the pericardium was thickened and adherent, and the coronary veins were enlarged and very tortuous In the pericardium there were patches of new growth, but the heart muscle was not apparently implicated No valvular lesions were found. The parietal pleura on the left side was studded with the growth, as was also the diaphragm New growth was found in the pancreas, both in the head and in the tail, which was adherent to a mass of growth involving the left suprarenal capsule; there were also some patches in the capsule of the left kidney. The remaining abdominal viscera appeared to be normal.

Remarks by Dr. CURETON —*The growth described above* has been examined by the pathologist to the hospital Mr. T. L Webb, and pronounced to be a lympho-sarcoma. For the above recorded notes I wish to thank our deputy house physician, Dr. Cecil Reynolds.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

After-results of Vaginal Hysterectomy performed for Cancer of the Uterus.

A MEETING of this society was held on Nov. 13th, Dr. F. W. PAVY, the President, being in the chair.

Dr. A H. N LEWERS read a paper on the After-results in Forty Consecutive Cases of Vaginal Hysterectomy performed for Cancer of the Uterus. He grouped the cases as follows: in 12 cases there had been no recurrence; in 18 cases there had been recurrence; four cases had died; in two cases the nature of the disease could not be proved by examination of the specimens; in three cases no definite information was obtained as to recurrence; and in one case the disease proved to be primary tuberculous ulceration of the cervix. Omitting Case 39, in which little more than a year had elapsed (without recurrence), there were 11 cases (or 27 5 per cent) remaining well from two to more than seven years subsequent to the operation. Dr. Lewers believed that this high percentage was largely due to the careful selection of cases. His rule had been to examine under anæsthesia and only to operate on those cases in which, according to the physical examination, the disease seemed to be limited to the uterus itself, and he had for *some time* past *only* performed the supra-vaginal amputation of the cervix for very early cases and cancer of the vaginal portion, in which there was a limited and superficial growth. He had performed 33 amputations of this kind, but these were not included in the paper. In each of the 12 cases of vaginal hysterectomy in which the disease had not recurred the specimen had been independently reported on by Mr J. H. Targett (of the Clinical Research Association), and his report was given in the paper. In each of the same 12 cases full details were given also of the evidence on which it was claimed that the disease had not recurred. Dr. Lewers believed that on this point the evidence was more precise and in fuller detail than had been given previously, over a series of cases The conclusions arrived at from a consideration of the cases reported in the paper were as *follows*: 1. That in a certain proportion of cases patients suffering from cancer of the uterus might be relieved by operation for periods of many years—in some cases for so long a time, seven years and upwards, that there seemed a probability that the relief might be permanent 2 The proportion of cases in which this result could be expected must remain very small so long as patients generally only sought advice at a late stage of the disease. 3 The great desideratum was early diagnosis. Especially important was the more general recognition of the gravity of bleeding occurring after the menopause, or, at an earlier period of life, between the menstrual periods. It was almost equally important to bear in mind that patients suffering from cancer of the uterus might, and generally did for a relatively long period, look quite well; and they might appear to be well nourished, and even fat Two later passed a great quantity involuntarily. An interesting feature about this family was that the father presented ataxy, various sensory perversions, gastric crises, and slight ptosis in one eyelid.—Dr. EWART remarked that some of the features of the case suggested Friedreich's ataxy in an early stage and he proposed that the case be referred to the committee.—Mr. WEEKS, in reply, said that the absence of nystagmus and tremor was rather against Friedreich's disease.

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[1] Vol. I, p. 4[illegible]

Dr. MORGAN DOCKRELL exhibited two cases of Adenoma Sebaceum, one in a child, aged six years, and the other in a woman, aged 24 years. In both the condition was congenital. There were a number of small sebaceous tumours of about the size of millet seeds over which the skin presented telangiectasis. They had started and were most plentiful, as usual, on the face. Some years ago, when he had been looking up the subject, there were only 10 cases recorded, but at the present time there were some four or five cases attending St John's Hospital. There were two interesting features about these cases. In the first place, it was generally believed that the disease was associated with the occurrence of fits and a want of intelligence, but in neither of these cases did these features exist. In the second place, a warty condition was usually thought to be associated with the disease, but in neither of these patients was there any lesion of the kind. He had carefully studied the histology of these cases and coloured sketches, photographs, and microscopical specimens were exhibited showing that it was a true adenoma of the sebaceous glands. There was marked dilatation of the lumen of the blood-vessels corresponding to the telangiectasis.—Dr. JAMES GALLOWAY remarked that it was very interesting to observe two cases illustrating different stages of this rare affection. The disease ought to be regarded as a congenital defect in the development of the skin rather than a subsequent overgrowth. It was not really overgrowth though there was enlargement of the vessels. The term "adenoma sebaceum" was not a suitable one. It had been adopted before the pathology of the disease had been studied.—Dr. ALFRED EDDOWES referred to a case under his care. The child was exceptionally bright and intelligent.—Dr. DOCKRELL, in reply, pointed out that the microscopical examination showed a true adenomatous growth. There was an overgrowth without any loss of the tubuli or acini of the glands.

Dr. DOCKRELL also showed a case of Hyaline Degeneration of the Skin (a condition which corresponded somewhat to the colloid milium of Besnier). The patient was 20 years of age and she had had all her life small translucent waxy tumours beneath her eyelids. The case was a unique one and he had the opportunity to study the histology of the affection. The change was not an adenomatous one, but there was cystic enlargement of the glands, the cysts being distended with hyaline material. Dr. Unna had expressed the opinion upon the microscopical specimens from the case which had been submitted to him that the change was not adenoma but a special hyaline degeneration of the connective tissue, "a special disease of the coil glands and surrounding tissue undergoing first hypertrophy and then degeneration." Microscopical specimens and drawings were exhibited.—Dr. GALLOWAY remarked that cases resembling this had been shown at the Dermatological Society He complimented Dr. Dockrell upon the microscopical specimens exhibited. Owing to the newer methods, by the use of acid aniline stains which he had employed the histological condition had been revealed. The specimens undoubtedly showed that the elastic tissue had undergone degeneration. The elastic fibres were broken and they were swollen at the ends. The term "hyaline degeneration" had been applied very irregularly to indicate what was sometimes called hyaloid or vitreous changes The process of hardening had to be taken into consideration. He was glad that Dr Dockrell had drawn attention to the coil glands; it was only in these and in their neighbourhood that the degeneration took place. The disease was probably clinically allied to what had been previously spoken of as xanthelasma, colloid, or colloid milium.—Dr. DOCKRELL, in replying, remarked that no doubt there were cases which might resemble this one clinically, but unless histological examinations were made it was not possible to come to a conclusion as to their identity or not. He wished to emphasise the importance of making microscopic examination in all cases, when a very marked difference would be found to exist. As to the point that there was any uncertainty in diagnosing hyaline and colloid degeneration, it must be remembered that there were many different forms of hyaline degeneration, such as that found in actinomycosis, that found in lupus erythematosus, and in lichen planus; but in all cases it was easy to diagnose it from true colloid material under the microscope. He hoped on a future occasion to exhibit a case presenting the clinical appearances of xanthoma though histologically showing a colloid condition of the sebaceous glands with a hyaline appearance of the coil glands and connective tissue.

Mr. WALLIS showed a case of Baker's Cyst in a man, aged 44 years. He presented a swelling just below the left knee; the joint also contained fluid. The fluid aspirated from the swelling exactly resembled synovia, but there was no apparent communication with the knee-joint. Scars of old syphilitic lesions in the skin were to be seen on both legs of the patient.

Dr. A. EDDOWES exhibited a man, aged 47 years, presenting Coronal Baldness of 15 years' duration combined with alopecia areata of 18 months' duration, the latter having started on the skin.

The PRESIDENT exhibited a Deformity of the Tibia in a boy, aged 16 years. One and a half years ago he had been injured while jumping. The limb subsequently gave him some trouble and splints were applied. Now there was swelling of the foot due to outward curvature of the tibia, indicating that some injury had happened to the epiphysis, probably a fracture.

CLINICAL SOCIETY OF LONDON.

Sequel to a Case of Hydatid of the Liver.—The Mid-Diastolic Murmur.

A MEETING of this society was held on Nov. 9th, Sir R. DOUGLAS POWELL, the President, being in the chair.

Dr. NORMAN DALTON read a paper on the Sequel to a Case of Hydatid of the Liver, showing also the result of abdominal section on ascites The patient was a girl who, at the age of 11 years, was under the care of Dr. Thomas Barlow at the Hospital for Sick Children, Great Ormond-street, for hydatids of the liver. While in the hospital she passed hydatids per rectum and also expectorated bile from the right lung. She recovered and remained well until the age of 16 years, when ascites set in, and she was admitted into King's College Hospital under the care of Dr. Dalton. After a time it became necessary to tap the abdomen every fortnight, so an exploratory abdominal section was performed by Mr. Watson Cheyne in the hope that a new hydatid, or some remains of the old, might be found and removed. However, nothing which could be removed was found, but it was noticeable that no adhesions were present except at the top of the liver round the fistula into the lung. The wound healed well, but paracentesis was necessary twice in the first fortnight after the operation. After this, however, the ascites did not recur and the patient was quite well for five years. Examination during this time showed that a small quantity of fluid remained in the hypogastrium, while the rest of the peritoneal cavity was thought to be obliterated by adhesions. In May, 1899, the patient died at the age of 23 years from septic peritonitis, which appeared to be due to bruising of the intestines in a ventral hernia at the site of the operation scar. At the post-mortem examination the old cyst was found in the liver, communicating below with a dilated bile duct and above, through the diaphragm, with a dilated bronchial tube. Glisson's capsule was greatly thickened and the liver showed a cirrhosis which had spread from Glisson's capsule inwards. The peritoneal cavity was obliterated by old fibrous adhesions, except in the hypogastrium, where there was a collection of turbid fluid. There were also a few loculi among the intestines and these contained pus. The omentum and mesentery were short, thick, and fibrous, showing chronic peritonitis. It seemed probable that the almost complete cure of the ascites was due to the formation of extensive adhesions, which Dr. Dalton believed would not merely stop the ascites by mechanically filling up the peritoneal cavity, but would really relieve the portal congestion by opening up communications between the portal capillaries and those which joined the veins in the abdominal wall. Dr. Dalton also thought that the cause of the extensive adhesion was the exposure to the air of the endothelium which covered the peritoneum. In ascites this endothelium was ill-nourished and any irritation might lead to the formation of adhesions. In support of this idea was the fact that cases of tuberculous peritonitis in which ascites was present were often cured by abdominal section; and presumably in those cures extensive adhesions formed. This case distinctly encouraged the plan of treating the ascites of cirrhosis of the liver by abdominal section because for the last 10 years of the patient's life the hydatid was practically cured and the condition was really that of cirrhosis of the liver.—The PRESIDENT remarked, *à propos* of the effect which adhesions had in preventing the occurrence of ascites, that he had noticed that cases of cirrhotic ascites presented a better prognosis when there was an unequal distribution of fluid. He mentioned such a case in which after several tappings the ascites disappeared altogether. In the end this case terminated somewhat like the one brought before the society. The patient was suddenly seized with severe pain and generalised peritonitis and died in a few days, the seizure being probably due to a laceration of the adhesions, followed by hæmorrhage into the abdominal cavity. He agreed with the suggestion that the favourable course pursued by cases with adhesions was due to the establishment of a collateral circulation.—Mr. HOWARD MARSH remarked that the subject was important in relation to the new method of treating ascites by the artificial production of adhesions after the manner adopted by Mr. Rutherford Morison of Newcastle. Laparotomy was performed and the omentum was fastened to the abdominal wall so as to make artificial adhesions. He had done the operation himself on one occasion successfully and he believed that several of Mr. Morison's cases were successful.—Dr H D. ROLLESTON wished to draw attention to the rationale by which adhesions relieved both the ascites and the other symptoms in cases of cirrhosis of the liver. Mr. G R. Turner and himself had brought the subject before the Medical Society last year and they had collected some 15 cases in which operation had been performed.[1] After a study of these cases they had come to the conclusion that it was not only by the production of a collateral circulation that benefit was conferred. It was not only the ascites but the patient's other symptoms which were relieved, and this latter could not be accounted for by the establishment of the collateral circulation, for animals in which the portal and the general circulation were joined became uræmic, and Mr Morison himself had noticed that the patients became low after operation. He suggested that artificial peritoneal adhesions brought more blood to the surface of the liver and so improved its nutrition, as the result of which compensatory hyperplasia of the liver took place.—Dr. ALEXANDER MORISON assumed that general adhesions such as those described by Dr. Norman Dalton acted by limiting abdominal expansion and inducing an increase of thoracic aspiration. While not questioning the possible correctness of views entertained by surgeons as to the service capable of being rendered to absorption from the peritoneal cavity by establishing a collateral circulation through adhesions, he believed this contention remained to be proved. On the other hand, striking effects in the removal or cure of recurrent ascites might be witnessed by such a complete circular strapping of the abdominal cavity after paracentesis as prevented that cavity expanding and which of necessity lead to exaggerated thoracic aspiration. He quoted cases in support of his contention and suggested that the more general adoption of the method he advised would obviate the necessity for recourse being had to the methods recommended by some surgeons—Dr. F. S. TOOGOOD referred to a patient who was admitted into the Lewisham Infirmary in March, 1893, with a history of hæmatemesis and melaena who had been tapped every two weeks, several pints of fluid being removed He performed Mr. Rutherford Morison's operation upon this patient, but in the following September she developed a strangulated ventral hernia through the cicatrix This was operated upon and four months later another hernia occurred, but there was no recurrence of the ascites after the artificial adhesions had been produced The liver when touched at the operation had felt typically hobnailed —Dr NORMAN DALTON, in reply, pointed out that the production of adhesions was not quite equivalent to the establishment of direct venous connexion because in the former the blood passed through the capillaries before entering the circulation Hernia was undoubtedly one of the dangers in these cases of ascites treated by operation. He mentioned a patient who died from ventral hernia and remarked on the difficulty of obtaining a tightly closed wound.

Dr. T. STACEY WILSON read a paper on the Diastolic Cardiac Sound which caused Spurious Reduplication of the Second Sound at the Apex (sometimes called the third sound of the heart). The paper was illustrated by numerous cardiograms and it was based upon two cases which were narrated. The sound under discussion was known also as the mid-diastolic murmur. He accepted the theory that the diastolic sound was in all probability caused by the passage of blood through the mitral valve at the commencement of the diastole. The cardiographic tracings showed that the second sound occurred at or just after the commencement of the diastole; they also showed that the third sound occurred at the commencement of the period of muscular relaxation and this marked the commencement of the third phase of the ventricular cycle. The first sound marked the commencement of ventricular contraction, the second sound marked the commencement of ventricular expansion, and the third sound marked the commencement of ventricular relaxation. In cases where the third sound was well marked the cardiogram would exhibit a short, sharp rise immediately following the fall due to muscular relaxation. This oscillation he proposed to call the "suction recoil wave." A study of this wave showed that in cases where the third sound existed there was evidence of increase of tension within the ventricle just after the onset of ventricular relaxation. Dr. Wilson's method consisted of listening himself to the cardiac sounds while he worked the time recorder, an assistant superintending meanwhile the cardiographic tracings. His observations went to show that the mid-diastolic murmur, or, as he preferred to call it, the third sound of the heart, would occur—(1) whenever there was a narrowing of the mitral orifice; or (2) whenever the auricle held more blood than the ventricle could draw through the normal mitral orifice during its expansion movement; and these conditions would occur in (1) mitral stenosis; or (2) whenever the auricle was dilated so as to hold more blood than the ventricle; or (3) probably whenever the ventricular muscle was too weak to empty the auricle as rapidly as normal. In support of these propositions he showed cardiograms from several cases of mitral disease in which the third sound was well marked and dwelt at some length upon one case in particular which threw considerable light upon the cause and meaning of this sound. The case was that of a girl who suffered from mitral regurgitation and pericarditis and in whom there was a well-marked third sound. The cardiogram was of a peculiar description and instead of showing the usual small recoil wave following the diastolic fall of the lever of the cardiograph it showed an extremely prominent one consisting in a pointed elevation nearly as high as the systolic rise itself. This was evident all over the heart and its occurrence seemed to give conclusive evidence that after the onset of muscular relaxation the ventricle was distended and subsided again. The force producing this diastolic distension of the ventricle being its own aspiratory action on the blood in the auricle, the child did not suffer from the ordinary symptoms associated with mitral regurgitation. There was no dropsy or cyanosis, but her symptoms more resembled aortic disease, especially in so far as pallor, faintness, and anginous pains were concerned. She died in a syncopal attack and at the necropsy it was found that there was mitral incompetence but no stenosis, in spite of the presence of the third sound. There was no dilatation of the left ventricle or of the right side of the heart The left auricle was, however, greatly dilated, holding nearly twice as much as the ventricle. The absence of compensatory dilatation of the ventricle was no doubt due to the adhesion of the pericardium and explained the anomalous symptoms during life —Dr H. D. ROLLESTON was glad to find that Dr. Wilson's observations confirmed the hypothesis suggested in a contribution by himself and Professor Roy in a paper published in the *Journal of Physiology* in 1887, in which they had found that the negative pressure in the ventricle amounted to something like 60 millimetres of mercury—an equivalent of quite half the driving force (positive pressure) of the ventricle. He suggested that the mid diastolic murmur was due to this suction action of the left ventricle Dr. A. L. Galabin in 1873 had attributed this murmur to the irregular contraction of the auricle, but Dr. Wilson's cardiograms confirmed the view that it was due to the action of the left ventricle He much preferred the term "mid-diastolic murmur" as being a more suitable term than the "third heart sound."—Dr. A E SANSOM remarked that he did not

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[1] THE LANCET, Dec 16th, 1899, p. 1660 "Surgical Treatment of the Ascites of Cirrhosis by the Artificial Production of Peritoneal Adhesions."

like the term "third heart sound" because the sound did not belong to the normal heart. It was a murmur interpolated in the diastolic period, and it was only heard under morbid conditions. It was one of considerable practical importance. There were several kinds of sounds heard in this the diastolic period. In the first place there was what was called the reduplicated second sound; secondly, there was the series of murmurs described by Bristowe as early, middle, and late diastolic sounds; and thirdly, there was what was known as the cantering rhythm of the heart. All observers were agreed that the reduplicated second sound had its origin at the mitral orifice, and he (Dr. Sansom) believed that it generally indicated (at any rate, in a young subject) the supervention of mitral stenosis; he believed that its causation was the suction action of the ventricle. But sometimes the murmur might be due to adhesions; it might also be due to enlargement of the ventricle or the auricle might be too weak or too strong.—Dr. A. **Morison** thought that in discussing this subject they should be certain that different speakers had the same phenomena in mind. He drew a sharp distinction between the reduplicated second sound heard at the apex in mitral constrictions and any form of so called cantering rhythm or bruit de galop He had been in some doubt as to the phenomena which the author of the paper had in view until he heard him phonetically imitate the sound he desired to explain. It appeared to him that the sound which Dr. Wilson imputed to the inrush of blood from the auricle during diastole against the mitral segments was in reality a phenomenon to be accounted for by the transmission to the apex of an accentuated and reduplicated basic second sound, obscured at the base and modified in tone by such transmission. The careful observation of tone or timbre of sound he thought of the highest importance in this connexion. He regretted that he could not agree with Dr. Sansom that the audibility of such a sound in the scapulo-vertebral region, especially in young subjects, indicated a mitral situation as its place of origin. He purposely refrained from the discussion of any form of cantering rhythm—a phenomenon associated with other conditions than mitral disease —which he thought could be otherwise accounted for than on the hypothesis advanced by Dr. Wilson.—Dr. **Seymour Taylor** remarked that the subject was not yet altogether worked out but in all probability the sound under discussion indicated mitral stenosis. He thought that the inrush of blood during the diastolic period might be likened to the rush of people into a theatre. He did not like the term "reduplicated second sound," because the sound, however caused, was essentially pathological. All murmurs were produced by muscular force and their intensity depended upon the force behind it. It followed, therefore, that a loud murmur in mitral stenosis was a good sign. When the murmur disappeared it indicated that the auricle and ventricle were becoming weak.—The **President** remarked upon the intricacy of the subject. He would like to know the relation of the sounds described by Dr. Wilson to the cardiac impulse.—Dr. **Forbes Ross** remarked that he could not quite follow Dr. Wilson's descriptions How was it possible that the valves could be kept tense by muscular relaxation? A presystolic murmur was often called a rough first sound and he believed that many of these obscure murmurs might be caused by roughening of the pericardium.—Dr. **Wilson**, in reply, remarked that without doubt a great variety of murmurs could be heard which were produced outside the heart. The murmur to which he referred corresponded to one of the forms of the cantering bruit. As a rule, the presence of the third sound to which he referred was an indication of mitral stenosis. He believed that the filling of the ventricle was entirely due to ventricular suction, excepting just at the end of the diastole.

Dr. **Hugh Thursfield** exhibited a child of about seven years of age who was the subject of Widespread Rheumatic Nodules on the Scalp, Arms, and elsewhere, and Rheumatic Periostitis of the Right Tibia, in whom there was no history or evidence of syphilis.

OBSTETRICAL SOCIETY OF LONDON.

Ectopic Pregnancy.—Notes on Cases and Exhibition of Specimens.

A meeting of this society was held at 20, Hanover-square, on Nov. 7th, Mr. **Alban Doran**, the President, being in the chair.

Dr. E. O. **Croft** read a paper on an Anomalous Case of Ectopic Pregnancy, probably Ovarian. The history and physical signs pointed to a diagnosis of some form of extra-uterine gestation, and the sac and its contents, found entire, were removed by abdominal section. There was free bleeding from rupture during the operation, and although it was soon controlled by ligature of the broad ligament the patient did not rally and died a few days afterwards. The necropsy revealed an absence of peritonitis and the pelvic organs were removed for further examination. The sac, before rupture, contained the complete ovum—a fœtus of about four months' growth, with placenta, membranes, and amniotic fluid. There was no blood or clot in the sac. Its relations were those of an ovarian tumour with short pedicle. The surface of the cyst contained follicles (? Graafian), and no separate structure corresponding to an ovary was evident on the same (right) side. The microscopical evidence of ovarian tissue in the wall was uncertain. The Fallopian tube was present and was uninjured; the fimbriated end was free and patent, and the layers of the mesosalpinx were undisturbed. The uterus was intact and the appendages on the opposite (left) side were normal. The possibility of the pregnancy being ovarian was suggested.

Dr. A. H N. **Lewers** then read a paper on a case of Repeated Ectopic Gestation in the same patient on whom laparotomy was performed on each occasion. The case was that of a patient, 29 years of age, who had been the subject of ectopic gestation on two occasions. There had been no uterine pregnancy. The first ectopic pregnancy occurred early in 1894. Laparotomy was performed in March, 1894, and the left Fallopian tube was removed, containing a tubal mole. This specimen was reported on by a committee of the Obstetrical Society of London.[1] The ostium of the tube was open but not dilated. The case on that occasion was one of threatened tubal abortion. In May, 1900—i.e., after an interval of a little more than six years—the patient was again the subject of ectopic gestation and laparotomy was again performed. The parts removed consisted of the right Fallopian tube and ovary and a tubal mole. The ostium of the tube was widely dilated and the mole had either been expelled into the peritoneal cavity or was lying loose in the dilated ostium at the time of the operation, so that on the second occasion the case was one of complete tubal abortion. The patient recovered well on both occasions. Reference was made to Dr. J. Haig Ferguson's paper on Repeated Ectopic Gestation in the same Patient[2] from which it appeared that, while there was a considerable number of cases reported of repeated tubal pregnancy in the same woman, laparotomy performed twice on the same woman was only mentioned in 14 cases. According to the same authority the interval between the ectopic pregnancies in the same patient has varied from six weeks to five years. In the case described by Dr. Lewers the interval, which was more than six years, seemed therefore to have been exceptionally long. Reference was also made to Dr. Edgar's paper on the same subject, published in the *Edinburgh Medical Journal* for 1899.

Dr. P. **Horrocks** thought that the specimen shown by Dr. Croft was well worthy of further examination and report by a sub-committee. He did not think that the fact that ovarian tissue was not found in all parts of the wall was proof that it was not an ovarian ectopic gestation. Neither could he see any *a priori* reason why an ovum should not become impregnated and develop whilst still in a Graafian follicle. Referring to Dr. Lewers's case Dr. Horrocks said that he had seen one or two instances of such repeated tubal gestations. He related a case in which he had removed a ruptured tubal gestation sac eight years ago and again six years ago. Dr. S B. Jolly of Sydenham had diagnosed the condition on the second occasion, but Dr. Horrocks rather doubted its probability owing to the extreme rarity of a repeated tubal gestation. The diagnosis was, however, confirmed by operation and verified by chorionic villi being microscopically proved to be present.

After some remarks by Dr. W. S. A. **Griffith**,

Mr. J. **Bland-Sutton** said that he could not satisfactorily discuss the question of ovarian pregnancy on a specimen in which the gestation had gone so far as it had in Dr. Croft's specimen. He would be convinced of ovarian pregnancy when he saw "an early embryo and its membranes contained in a sac in the ovary." This he considered a fair requisition and it corresponded with the facts on which the present not interpose that resistance to dilatation of the heart present in the healthy condition.—Dr. F. G. PENROSE referred to the work of *Dr. F. H. Poynton whose experience* was to the effect that myocarditis was generally present in cases of dilatation.—Dr. WILLIAM EWART remarked that the action of the cardiac valves and walls (as pointed out by Dr. Sansom) might suffer from fibrosis developing at the base of the heart, such as might result from pericarditis even when the latter did not lead to great effusion or adhesion. In a heart the valves of which were already damaged this additional influence might aggravate the valvular defect and explain the dilatation.—*Dr.* FISHER, in reply, stated that in his first case there had been a slight interstitial myocarditis. In his second case there was naked-eye evidence of recent degenerative changes, and Professor Stanley Kent had found in cultures from the heart muscle a diplococcus resembling that recently described by Dr. Poynton and Dr. A. Paine.

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[1] Transactions of the Obstetrical Society of London, vol. xxxviii., p. 87.

[2] Edinburgh Medical Journal, 1899, p. 145.

Mr. R. CLEMENT LUCAS exhibited an Infant, six months old, in whom the Rectum Terminated in the Vagina. The anus was absent and there was no depression at its normal site. The rectum opened at the posterior part of the orifice of the vagina, between the hymen and the fourchette, by an aperture of about the size of a crow's quill. The deformity had passed unnoticed until the child was four months old. Mr. Lucas proposed, first, to establish a permanent anus in the normal position, and, later, to endeavour to close the vaginal aperture by a plastic operation.—Mr. ALFRED H. TUBBY had had a *similar case under his care at the Evelina* Hospital and had operated twice for the relief of the condition with a good result. His patient was a year old.

Dr. JAMES TAYLOR showed a lad, five years of age, affected with Mongolian Imbecility. The patient had a short head, somewhat compressed antero-posteriorly, epicanthal folds, and the mental peculiarities usually associated with this condition. His temper was good. The limbs and little fingers were free from deformity. The child, however, showed a curious power of over-extension of the fingers (and, indeed, of all the joints). There was a suspicion of congenital syphilis.—Dr. FLETCHER BEACH said that in his experience syphilis accounted for only 1 per cent. of these cases. He pointed out that thyroid extract was useless in Mongolian imbecility.—Dr. G. E. SHUTTLEWORTH stated that about 5 per cent of the children at the Royal Albert Asylum were Mongolian imbeciles. He had found deformity of the little finger common in many of the children of Mongol type presented for admission to the special schools of the London School Board. He was inclined to consider that a Mongol represented permanently a fœtal stage of development—*in other words, that such a child came into the world unfinished, and remained so, more or less,* all his or her life. Some 40 per cent. of such children were found to be the youngest members of large families, and anything that depressed the procreative powers of the mother might conceivably be a factor in the production of the cases.—Dr. TAYLOR, in reply, said that with regard to syphilis Dr. G. E. Sutherland in 25 Mongols had ascertained that syphilis was present in 11. He thought that Mongols were not uncommonly the first-born and not the last-born of a family.

Mr. TUBBY showed a child, aged three months, with Cephalhæmatoma over the Right Parietal Bone. The labour had not been protracted, the presentation was vertical, and *forceps* had not been used. The swelling, which had gradually become larger, was not noticed until a day or two after birth. The tumour was not hot or tender or red; its margin was crateriform and hard where it merged with the skull.

Mr. TUBBY also exhibited a girl, aged six years, suffering from a Congenital Anterior Dislocation of the Right Hip *and showed some radiograms The summit of the great* trochanter lay an inch above Nélaton's line and the head of the femur could be felt lying posteriorly to the anterior superior iliac spine. An attempt had been made to remedy the condition by forcible movements after dividing the tendons of the adductors, sartorius, and the tensor vaginæ femoris, but the deformity had recurred.—Mr. J. JACKSON CLARKE, in connexion with this case, brought forward several interesting skiagrams. One of his patients, a girl, aged two years, had been treated by the method adopted by Mr. Tubby and was now practically cured. He agreed with Mr. Tubby in thinking that up to the age of about four years these cases could be cured by operation.

Mr. SYDNEY STEPHENSON showed a case of early Myxœdema associated with Ectropion in a girl, 12 years of age. The skin over the cheeks, nose, upper lip, and eyelids was pinkish and swollen, so that the lines of expression were obliterated, especially on the left side of the face. The swelling was firm and did not pit on pressure. Around the eyelids the skin was rough, dry, and covered with fine, branny scales. There was no general œdema of the body. The *hands and feet were somewhat "podgy."* The nails were brittle. Speech and movements were slow and deliberate. The lower lids and corresponding puncta lacrymalia were slightly averted. The upper lids were congenitally short. The isthmus of the thyroid gland could be felt. There were no supra clavicular pads. The urine was free from albumin. The temperature was 98·2° F., the respirations were 19, and the pulse was 80. The child was sensitive to cold.—Dr. PERCY G. LEWIS, in connexion with this case, showed photographs and gave details of myxœdema in young subjects.—Dr. FISHER recalled a case of intermittent albuminuria which appeared much like this.—Mr. STEPHENSON, in reply, said that the urine had been examined seven or eight times, but albumin had never been found. The character of the œdema, the slowness of the speech, and the "stodginess" of the hands appeared to militate against the case being one of intermittent albuminuria, as suggested by *Dr. Fisher.*

Dr. G. E. SUTHERLAND showed an instance of Extreme Adiposity in an infant, aged eight months, who weighed 29½ lb. The child had been fed exclusively upon the breast. *The general health had been good, there had* been no gastro-intestinal disturbances, and, although extremely fat, the infant could sit up and move her limbs actively. There was no family history of lipomatosis, but two other children had also been stout as infants. In this case the fat was diffused generally over the body and extremities. There was slight rachitis. Examination of the maternal milk showed the presence of 8·2 per cent. lactose and of 0·44 per cent. proteids, the other constituents being normal.—*Dr.* SANSOM *observed that the child had a* placid, healthy expression, and he thought that there was no adiposis neurotica. It was remarkable that the milk included so large a proportion of lactose, an observation that he supposed had been confirmed by repeated analyses.—Dr. EDMUND CAUTLEY inquired whether the infant had been given anything besides mother's milk. He had seen an infant who weighed 27½ lb. at the age of six months, but the parents had been in the habit of giving articles of food other than breast milk.—Dr. WAYLAND C. CHAFFEY regarded the case as one not of lipomatosis but of simple increase of fat.—Dr. SUTHERLAND, in reply, *said that he thought the child did not suffer from* lipomatosis, at least in the pathological sense. Four ounces of the breast milk, drawn off in the morning, had been analysed by Mr. Pakes of Guy's Hospital. Dr. Sutherland was satisfied from his inquiries that the child had had no food other than breast milk.

Dr. J. H. SEQUEIRA showed a case of Polyuria in a child, aged three years. Excessive thirst and increased frequency of micturition had been noticed *since the age of eight months* following an attack of whooping-cough. There was no history of injury. On coming under Dr. Sequeira's care the child weighed 16¼ lb., the skin was dry and pale, and there was evidence of rickets. The temperature was normal; there were no signs of disease of the abdominal or thoracic organs. The pale urine had a specific gravity of 1010 and an alkaline reaction. It contained albumin (at times reaching 1 per cent.), but no deposit or casts. The quantity of urine averaged 36 ounces a day and once it reached as much as 47 ounces. The child had lost a pound and a quarter in weight in the five months during which he had been under Dr. Sequeira's observation. The condition *appeared to depend* upon a chronic dilatation of the renal arteries and as such would probably be classed as one of diabetes insipidus, although the constant alkalinity of the urine and the occasional presence of albumin were held to militate against this view. Dr. Sequeira found that the urine could be rendered temporarily acid by the administration of the acid phosphate *of sodium* in five-grain doses three *times a day, as advised by Dr. Robert* Hutchison.—Dr. SANSOM, who endorsed the diagnosis, regarded the case as a very valuable one.—Dr. LEWIS had been working at an allied subject—namely, bed-wetting in children, which he believed to be due to polyuria and to be associated with the indigestion of starchy foods. It could be stopped at once by an anti-diabetic defective.—Mr. JOHN GRIFFITH expressed his strong opinion that the disease was a congenital and not an infantile one, referring it to defective development of enamel cells in the sixteenth week of fœtal life rather than to anomalous calcification.—Mr. BENNETT briefly replied, and in answer to the President's question he stated that he had not carefully investigated the family history.

The following cases and card specimens were shown:—

Mr. SIMEON SNELL: Epithelioma of the Cornea. The patient was a soldier aged 45 years, with a history of injury seven years ago. In May, 1898, the growth was removed, but it recurred. Mr. Snell first saw the patient in August, 1900, when the growth filled the inter-palbebral space. The eyeball was enucleated, and the growth was shown to be an epithelioma.

Mr. JOHN GRIFFITH: A specimen of Osteo-sarcoma of the Orbit.

Mr. TREACHER COLLINS and Mr. A. VERNON FORD: A case of Bullet Wound of the Orbit followed by Blindness of Both Eyes. The patient was with Admiral Sir E. H. Seymour's expedition for the relief of Pekin. He was shot through the head with a bullet, and it was found that in one eye the choroid was ruptured while in the other the retina was detached.

Mr. A. W. ORMOND: A Chancre of the Upper Lid at the Retrotarsal Fold.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Salpingo-oöphorectomy.—Some New Methods in Pelvic Operations on the Female.

A MEETING of this society was held on Nov. 8th, Dr. H. MACNAUGHTON-JONES being in the chair.

The following specimens were shown:—

Dr. R. T. SMITH: A case of Degenerating Fibro-myoma.

Mr. CHARLES RYALL: A case of Hysterectomy for Fibromyoma.

Dr. MACNAUGHTON-JONES: (1) A case of Hysterectomy for Fibro-myoma; and (2) a case of Broad Ligament Cyst.

In the discussion on these specimens the following speakers took part: Dr. HEYWOOD SMITH, Dr. HERBERT SNOW, Dr. ARTHUR GILES, Dr. J. J. MACAN, and Mr. RUTHERFORD MORISON.

Dr. MACNAUGHTON-JONES read a short communication on a case of Salpingo-oöphorectomy.

Mr. RUTHERFORD MORISON (Newcastle-on-Tyne) read a paper and gave a lantern demonstration on Some New Methods in Pelvic Operations on the Female. The operations considered were as follows. 1. Abdominal resection of the sigmoid or upper portion of the rectum. This operation was intended for cases in which suppuration of the left uterine appendages involved the bowel to such an extent as to demand its removal or in which the abdomen was opened for a cancerous growth of the sigmoid in mistaken diagnosis for a diseased and enlarged ovary. The steps of the operation were: (1) the diseased bowel was excised; (2) a glass bobbin, with indiarubber tube attached, was tied tightly into the upper end of the sigmoid flexure; (3) the indiarubber tube was passed down from above through the lower cut and into the rectum, where it was aided to pass through the anus by the finger of an assistant; (4) the tube was drawn upon till the ligature on the upper cut end of the bowel was inside of the lower cut end of the bowel; (5) a ligature was then passed round immediately below the lower cut end and tightly tied (this made the junction watertight); and (6) the tube was again pulled upon, whilst the lower portion of the bowel immediately below the button was steadied till by traction from above a short intussusception was produced. This was maintained by a few Lembert's sutures. In from four to eight days the ligatured sloughing bowel separated and the tube was thus released. He had done this operation 14 times—in two cases for complicated pyosalpinx and in 12 for malignant disease. Seven patients died. The percentage mortality was therefore high but might be diminished by avoiding the mistake he had made of performing this operation in cases of obstruction with loaded colon, for experience had taught him that in these cases the colon should be emptied by a preliminary colotomy before a radical operation was attempted. 2. An operation for certain forms of parametric abscess. Mr. Morison divided cases of pelvic cellulitis into three classes: (1) the floor of the broad ligament was involved—the abscess pointed towards the vagina; (2) the cellular tissue of the broad ligament between its peritoneal folds was invaded—the abscess pointed above Poupart's ligament; and (3) the lymphatic vessels and glands alongside the iliac vessels were affected and the abscess was found high up on the back wall of the pelvis or in relation to the psoas and iliacus muscles. In the third form the pus was out of reach from the vagina and having had two fatal cases in which he evacuated the pus by opening the abdomen he devised the following plan. The abdomen was opened by an incision three or four inches long made in the middle third of a line drawn from the centre of the back of the ilio-costal space behind to one inch above the symphysis in front. Through this incision the diagnosis was confirmed by palpation of the uterus, ovaries, and tubes, and the relations of the abscess were ascertained. The incision was next prolonged to the back of the ilio-costal space, through the oblique and transversalis muscles, leaving the transversalis fascia and peritoneum intact. The peritoneum and fascia were then held forward with forceps and with the left hand in the abdomen as a guide the index finger of the right hand introduced posteriorly opened the abscess by bluntly perforating the transversalis fascia under the thickest part of the swelling. A drainage-tube and iodoform gauze packing round it completed this part of the operation. Twenty cases operated on by this method had all recovered. 3. The control of the uterine arteries in abdominal hysterectomy. Since completing his notes he had found that his plan was neither new nor peculiar to himself. The special point about it was that the uterine arteries were seized with forceps and the uterus was cut away before the vessels were ligatured. 4. Operation for incontinence of urine in the female. In a case of incontinence with a patulous urethra he performed the following operation. An incision one inch long was made in the middle line of the abdomen midway between the umbilicus and the symphysis down to the peritoneum. The patient was then placed in the lithotomy position and a circular incision was made round the orifice of the urethra. A second incision was made through the anterior vaginal wall along the course of the urethra and for one inch on to the base of the bladder. The urethra and neck of the bladder were then entirely separated. A pair of closed hæmostatic forceps was next passed down from the opening above the pubes close to the pubic symphysis and into the vagina; the end of the urethra was caught in the forceps, drawn upwards, and attached to the skin of the incision in the abdominal wall. The remainder of the incision was closed round the urethra and an indiarubber catheter was tied in the bladder and projected from the anterior abdominal wall. On the seventh day the dressings were dry and the wound was healed. He had only hoped to make a continent bladder which could be readily emptied by the catheter, but more had been gained, for the bladder would now hold one and a half pints of urine against every effort to make it leak, such as coughing, straining, and alterations in posture; and when the patient was in good form she could easily and entirely empty it by voluntary effort.

In the discussion on the paper the following speakers took part: Dr. SNOW, Mr. SKENE KEITH, Dr. P. Z. HEBERT, Dr. WILLIAM TRAVERS, Dr. HEYWOOD SMITH, Dr. E. A. NEATBY, Mr. RYALL, Dr. R. H. HODGSON, Dr. GILES, and Dr. MACNAUGHTON-JONES; and Mr. RUTHERFORD MORISON replied.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Oct. 19th, Dr. A. ERNEST SANSOM being in the chair.

Dr. THEODORE FISHER showed a specimen of Rheumatic Dilatation of the Heart from a patient who died from cardiac failure one year after an attack of acute rheumatism. The heart was hypertrophied as well as dilated and weighed 19½ ounces. The valves were healthy and the pericardium was adherent only over a small area, about two inches square, near the apex of the left ventricle. Dr. Fisher mentioned another case in a child, 11 years of age, with rheumatic nodules, where there was an almost entire absence of valvular disease. The heart was found to weigh 11¼ ounces.—Dr. J. H. SEQUEIRA discussed the *rôle* played by the pericardium in such cases and pointed out that an inflamed and softened pericardium could not interpose that resistance to dilatation of the heart present in the healthy condition.—Dr. F. G. PENROSE referred to the work of Dr. F. H. Poynton whose experience was to the effect that myocarditis was generally present in cases of dilatation.—Dr. WILLIAM EWART remarked that the action of the cardiac valves and walls (as pointed out by Dr. Sansom) might suffer from fibrosis developing at the base of the heart, such as might result from pericarditis even when the latter did not lead to great effusion or adhesion. In a heart the valves of which were already damaged this additional influence might aggravate the valvular defect and explain the dilatation.—Dr. FISHER, in reply, stated that in his first case there had been a slight interstitial myocarditis. In his second case there was naked-eye evidence of recent degenerative changes, and Professor Stanley Kent had found in cultures from the heart muscle a diplococcus resembling that recently described by Dr. Poynton and Dr. A. Paine.

Mr. R. CLEMENT LUCAS exhibited an infant, six months old, in whom the Rectum Terminated in the Vagina. The anus was absent and there was no depression at its normal site. The rectum opened at the posterior part of the orifice of the vagina, between the hymen and the fourchette, by an aperture of about the size of a crow's quill. The deformity had passed unnoticed until the child was four months old. Mr. Lucas proposed, first, to establish a permanent anus in the normal position, and, later, to endeavour to close the vaginal aperture by a plastic operation.—Mr. ALFRED H. TUBBY had had a similar case under his care at the Evelina Hospital and had operated twice for the relief of the condition with a good result. His patient was a year old.

Dr. JAMES TAYLOR showed a lad, five years of age, affected with Mongolian Imbecility. The patient had a short head, somewhat compressed antero-posteriorly, epicanthal folds, and the mental peculiarities usually associated with this condition. His temper was good. The limbs and little fingers were free from deformity. The child, however, showed a curious power of over-extension of the fingers (and, indeed, of all the joints). There was a suspicion of congenital syphilis.—Dr. FLETCHER BEACH said that in his experience syphilis accounted for only 1 per cent. of these cases. He pointed out that thyroid extract was useless in Mongolian imbecility.—Dr. G. E. SHUTTLEWORTH stated that about 5 per cent. of the children at the Royal Albert Asylum were Mongolian imbeciles. He had found deformity of the little finger common in many of the children of Mongol type presented for admission to the special schools of the London School Board. He was inclined to consider that a Mongol represented permanently a fœtal stage of development—in other words, that such a child came into the world unfinished, and remained so, more or less, all his or her life. Some 40 per cent. of such children were found to be the youngest members of large families, and anything that depressed the procreative powers of the mother might conceivably be a factor in the production of the cases.—Dr. TAYLOR, in reply, said that with regard to syphilis Dr. G. E. Sutherland in 25 Mongols had ascertained that syphilis was present in 11. He thought that Mongols were not uncommonly the first-born and not the last-born of a family.

Mr. TUBBY showed a child, aged three months, with Cephalhæmatoma over the Right Parietal Bone. The labour had not been protracted, the presentation was vertical, and forceps had not been used. The swelling, which had gradually become larger, was not noticed until a day or two after birth. The tumour was not hot or tender or red; its margin was crateriform and hard where it merged with the skull.

Mr. TUBBY also exhibited a girl, aged six years, suffering from a Congenital Anterior Dislocation of the Right Hip and showed some radiograms. The summit of the great trochanter lay an inch above Nélaton's line and the head of the femur could be felt lying posteriorly to the anterior superior iliac spine. An attempt had been made to remedy the condition by forcible movements after dividing the tendons of the adductors, sartorius, and the tensor vaginæ femoris, but the deformity had recurred.—Mr. J. JACKSON CLARKE, in connexion with this case, brought forward several interesting skiagrams. One of his patients, a girl, aged two years, had been treated by the method adopted by Mr. Tubby and was now practically cured. He agreed with Mr. Tubby in thinking that up to the age of about four years these cases could be cured by operation.

Mr. SYDNEY STEPHENSON showed a case of early Myxœdema associated with Ectropion in a girl, 12 years of age. The skin over the cheeks, nose, upper lip, and eyelids was pinkish and swollen, so that the lines of expression were obliterated, especially on the left side of the face. The swelling was firm and did not pit on pressure. Around the eyelids the skin was rough, dry, and covered with fine, branny scales. There was no general œdema of the body. The hands and feet were somewhat "pudgy." The nails were brittle. Speech and movements were slow and deliberate. The lower lids and corresponding puncta lacrymalia were slightly averted. The upper lids were congenitally short. The isthmus of the thyroid gland could be felt. There were no supra-clavicular pads. The urine was free from albumin. The temperature was 98·2° F., the respirations were 19, and the pulse was 80. The child was sensitive to cold.—Dr. PERCY G. LEWIS, in connexion with this case, showed photographs and gave details of myxœdema in young subjects.—Dr. FISHER recalled a case of intermittent albuminuria which appeared much like this.—Mr. STEPHENSON, in reply, said that the urine had been examined seven or eight times, but albumin had never been found. The character of the œdema, the slowness of the speech, and the "stodginess" of the hands appeared to militate against the case being one of intermittent albuminuria, as suggested by Dr. Fisher.

Dr. G. E. SUTHERLAND showed an instance of Extreme Adiposity in an infant, aged eight months, who weighed 29½ lb. The child had been fed exclusively upon the breast. The general health had been good, there had been no gastro-intestinal disturbances, and, although extremely fat, the infant could sit up and move her limbs actively. There was no family history of lipomatosis, but two other children had also been stout as infants. In this case the fat was diffused generally over the body and extremities. There was slight rachitis. Examination of the maternal milk showed the presence of 8·2 per cent. lactose and of 0·44 per cent. proteids, the other constituents being normal.—Dr. SANSOM observed that the child had a placid, healthy expression, and he thought that there was no adiposis neurotica. It was remarkable that the milk included so large a proportion of lactose, an observation that he supposed had been confirmed by repeated analyses.—Dr. EDMUND CAUTLEY inquired whether the infant had been given anything besides mother's milk. He had seen an infant who weighed 27½ lb. at the age of six months, but the parents had been in the habit of giving articles of food other than breast milk.—Dr. WAYLAND C. CHAFFEY regarded the case as one not of lipomatosis but of simple increase of fat.—Dr. SUTHERLAND, in reply, said that he thought the child did not suffer from lipomatosis, at least in the pathological sense. Four ounces of the breast milk, drawn off in the morning, had been analysed by Mr. Pakes of Guy's Hospital. Dr. Sutherland was satisfied from his inquiries that the child had had no food other than breast milk.

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Dr. George Carpenter showed a case of typical Epiphysitis in a child, seven weeks old. The family history suggested syphilis. The child was anæmic and "snuffled" loudly. Both upper extremities were affected. The cutaneous manifestations present were not characteristic. An x-ray photograph failed to demonstrate the obvious changes at the epiphyses.

LIVERPOOL MEDICAL INSTITUTION.

Unusual Form of Rodent Ulcer.—Dermatitis Herpetiformis.—Pulmonary Tuberculosis.—Disease among Natives in Nyassaland.

The third meeting of the session of this society was held on Nov. 8th, Dr. A. Bernard, the senior Vice-President, being in the chair.

Mr. F. T. Paul showed a patient suffering from an Unusual Form of Rodent Ulcer and said that it was unlike anything he had ever seen before. It was a very large tumour of the left side of the face, measuring five and a half inches across and from two to three inches in thickness, and had the structure of the glandular type of rodent ulcer. There were no secondary deposits. The patient was a man, aged 43 years. At 19 years of age he knocked the skin off the cheek below the eye; this never properly healed and at 32 years of age the late Mr. H. O. Thomas excised a small sore; at 34 years of age he was operated on by Mr. Robert Jones; and at 35 years of age by Mr. Paul who examined the growth and pronounced it rodent ulcer. It returned within a year and had been growing since to its present dimensions. Mr. Paul considered all forms of so-called rodent ulcer to be varieties of carcinoma of the appendages of the skin. The ordinary form was carcinoma of the sebaceous glands, but cases like the present probably originated in the sweat glands.—Mr. Rushton Parker remarked that any difficulties of nomenclature alluded to by Mr. Paul probably arose from the use of the term "rodent ulcer" in the British Islands and abroad the terms "carcinoma," "haut-krebs," or "skin cancer" were used for the same class of cases, irrespectively of variety. He considered Mr. Paul's case to be an ulcerated carcinoma of the skin of the face but not "rodent" in a physical sense, as there was a gain rather than a loss of substance; but its histological characters were obviously a variety of what was known as "rodent carcinoma."

Dr. J. Stopford Taylor read notes of a case of Dermatitis Herpetiformis Multiformis in a man, aged 66 years, which ran an acute course in about 14 days, and when hopes of recovery were entertained pneumonia supervened and death resulted. An unusual and unprecedented symptom was the great quantity of serum which exuded from the erythema-multiforma-like type of the eruption situated upon the back and buttocks. This condition was rightly described as a chronic disorder, yet this was his second acute case followed by a fatal termination.—Dr. F. H. Barendt considered that the pneumonia was incidental and not a consequence of the skin lesions. He alluded to herpes gestationis which clinically was the same disease occurring in pregnancy. The etiology was still obscure; probably it would be cleared up when their knowledge of toxins became more exact and definite.—Dr. R. J. M. Buchanan referred to two cases; in one the herpetic eruption resembled confluent small-pox, but the association of croupous pneumonia cleared up the uncertainty of diagnosis; in the other the herpetic eruption appeared after the acute pneumonia was advanced and the pneumococcus was present in the exudation from the vesicles.—Dr. Stanley A. Gill called attention to the connexion there seemed to be between skin and pulmonary diseases and cited a case in which a patient when cured of eczema suffered from asthma which was only relieved by the reappearance of the eczema.

Dr. Buchanan read notes on cases of Pulmonary Tuberculosis in reference to the probable origin of the invasion. In many cases the tuberculous history was definitely referred to an attack of so-called influenza. He offered the suggestion that many of the so-called sporadic attacks of influenza were probably the expression of the initial infection with the tubercle bacillus and that special attention should be given to the diagnosis of tuberculosis in its primary invasion. Dr. Buchanan related three cases of pulmonary tuberculosis in which he had traced the source of infection. The cases, previously healthy, were infected in offices where clerks suffering from consumption had been employed. He had been able to persuade the employer in one of the cases to have his offices disinfected and the office books stoved.—Dr. A. G. Gullan cited a case under his care where he had been able to trace a definite source of infection. He considered the stage of convalescence following true influenza, which was always associated with great debility, very liable to the infection of tuberculosis.—Dr. C. J. Macalister directed attention to the fact that a number of seamen suffered from phthisis notwithstanding their open-air life and he advocated care in regard to cleanliness and ventilation of their quarters.

Mr. J. S Kellett Smith read a paper upon Disease among the Natives of the Nyassaland Plateau, compiled from notes in his medical diary kept during the exploration of the country in the years 1895–96. Anthropometrical statistics of various tribes were given and the general physical development of the native was described. Points of interest brought forward were the existence of tetanus and rabies, the absence of deformities, and the question of hernia. Umbilical herniæ were shown to be very frequent and to disappear spontaneously during the earlier years of life. Inguinal herniæ were practically unknown and Mr. Smith thought that this was accounted for chiefly by the position in which the newly-born infant was nursed, with the legs embracing the mother's flank and the inguinal regions supported by the conforming pressure of the mother's side, and in later life by the posture adopted by the native when disposing himself to the necessary eliminating function. Syphilis seemed to be incapable of permanence among the natives of this country. All scars tended to become keloid, but the keloids never took on malignant tendency. Especially was it notable that in this primitive part of Africa malignant tumours, whether of epithelium or connective tissue, seemed to occur so rarely as to be practically unknown.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Undescended Testicle, Congenitally Misplaced Testicle, and Congenital Deficiency of Testicle.—Multiple Tumours of Unusual Type.—Exhibition of Cases and Specimens.—Election of Office-bearers.

The first ordinary meeting of the eightieth session of this society was held on Nov. 7th, Dr. A. G. Miller, the President, being in the chair.

Professor T. Annandale read a paper on the Operations for Undescended Testicle and for Congenitally Misplaced Testicle, with a Note of a Rare Form of Congenital Deficiency of the Testicle. He stated that the condition of misplaced testicle was not common: The testicle might, however, be situated (1) on one side of the perineum; (2) in front of the pubes at the root of the penis; or (3) in the region of the saphenous opening. In any situation it might become very troublesome on account of inflammation or if associated with a hernia. The testicle underwent degeneration when it was not in the scrotum, and it thus became functionless when it was retained in the abdomen or in the inguinal canal. Mr. Joseph Griffiths's experiments with the testicle in dogs in this connexion were narrated briefly. In the *British Medical Journal* of Jan. 4th, 1879, Professor Annandale described a case in which he had successfully removed the testicle from the perineum and replaced it in the scrotum in a child aged three years. The important details of the operation were: firstly, the incision, then the careful exploration of the spermatic cord; the drawing out of the cord and testicle and the division of all attachments; the opening up of the scrotum, placing the testicle there, and fixing it by catgut sutures. If the cord were too short it might be lengthened by careful traction and division of the cremasteric fibres. The operation should be performed in early childhood. In the case of undescended testicle much trouble might arise from inflammation or involvement in a hernial sac. In the child attempts to bring it down into the scrotum should be made first. Usually such testicles were small and atrophied, yet a chance to develop should be afforded them by replacing them in the scrotum. If one testicle were already in the scrotum there was no such great indication for replacing the other one. In the case of adults Professor Annandale invariably removed such undescended testicles when he had to operate for hernia. In young persons an attempt to replace the testicle and to keep it down by steady traction by catgut stitches should be made. Congenital deficiency of the testicle was comparatively rare, but two cases had lately come under his observation. In the first case the patient was a youth, aged 18 years. The left side of the scrotum was small and at the upper part of it a soft body was felt, but this possessed no testicular sensation. An incision was made over this, exposing the cord and sac. The cord was found to be natural and it ended in this soft body. Both were removed. The other case was almost exactly similar, but it occurred in a man, aged 26 years. The specimens removed showed that the vas deferens was well developed and passed down to the lower part of the soft body ending in a closed extremity. There was no trace of testicular substance. The body in both cases consisted merely of convoluted vas deferens surrounded by a dense envelope. In such rare cases operation might be justifiable in order to relieve mental or local disturbance.—Professor J. CHIENE drew attention to the priority of Professor Annandale's operations for misplaced testicle. He usually classed undescended testicle into three groups: (1) those in the abdomen; (2) those in the canal; and (3) those in a double condition. Where the testicle was in the abdomen he thought it best to leave it; if it were in the canal in children to apply a U-shaped truss in order to try and push it down; and if at puberty to remove it.—Mr. HAROLD J. STILES stated that all undescended testicles might be excised, as in every one which he had examined there was an entire absence of testicular substance.—Mr. SHAW McLAREN, Dr. WHITE BALLANTYNE, and Dr. THEODORE SHENNAN made some remarks and Professor ANNANDALE replied.

Mr. J. M. COTTERILL and Dr. D. A. WELSH contributed a short note on a case of Multiple Tumours of Unusual Type (with exhibition of patient, specimens, and lantern demonstration). The patient, a man, aged 24 years, had been under observation for more than five years suffering from multiple superficial tumours. Many medical men had seen the case, but no definite opinion had been arrived at. The previous history of the patient was perfectly good, as was also his family history. In 1893, when at work as a joiner, the patient fell a distance of 22 feet and injured his right wrist. He soon recovered, but four months later a small red painless point appeared at the back of the right wrist. He attended regularly twice a week at a hospital in Glasgow. The disease was there called a "gumma." The ulcer did not, however, improve, though it was scraped and cauterised. Erysipelas supervened and the hand became drawn to the ulnar side. The ulcer became larger, irregular, and eroded more deeply, exposing the lower end of the ulna. Sedatives were applied to the ulcer and tonics were administered internally. He was treated at the Edinburgh Infirmary by iodide of potassium in doses of from 10 to 20 grains thrice daily along with mercury. The patient left the hospital and returned in some months' time to have the arm amputated as there was a secondary growth in the epitrochlear gland. The arm was therefore removed above the elbow-joint in December, 1896. Two years later the patient returned with a small pimple on the forehead and a growth on the outer side of the left elbow. The ulcer on the forehead was tender and grew larger, though it was treated. Eventually it was excised, as was also a lump over the deltoid muscle. After another interval of two years he returned on July 4th, 1900, with a growth on the right great toe on the site of an ingrowing toe-nail. There was also a similar growth on the left great toe and another on the second left toe. There were also other ulcers present over the body—e.g., on the nates, on the top of the head, in the scar on the deltoid, &c. All these were removed, including the toes themselves. As regards the views which had been held respecting this case Mr. Cotterill said that with regard to tuberculosis the ulcers had never had the characteristic appearance and there had been no undermining of the edges or secondary glandular infection. As to epithelioma the age of the patient was against that view, as was also the fact of the healing of the ulcers. The absence of glandular involvement and the unusual sites also militated against that diagnosis. As regarded syphilis, the growths had not a gummatous appearance nor had the ulcers had any of the characteristic chamois-leather sloughs; the glands had remained unaffected, and in spite of treatment by iodides and mercury the disease had progressed. The chronicity of the course and the facts of the healing and the absence of internal manifestations almost negatived the idea of sarcoma. As to rodent ulcer the position was extraordinary and every tissue on which the ulcers were situated was eaten away. As to the diagnosis of chronic farcy there was no initial acute attack or any nasal trouble. The patient's mode of life hardly exposed him to such infection and the duration of the disease (seven years) was far beyond the average. Inoculation of guinea-pigs with virus from the patient gave negative results. Mycosis fungoides appeared to be precluded, as there was no fungation in this case but merely erosion.—Dr. WELSH exhibited lantern slides in illustration of this case and stated that, pathologically considered, epithelioma might be dismissed, as also rodent ulcer, for in this case the epithelial structures of the skin were not involved. There were great variations in the structure of the nodules from different areas and so the growths partook more of the nature of the chronic granulomata. Organisms were sought for but none were found.—Professor ANNANDALE thought that the case looked like one of recurrent fibroid tumours which were very liable to degenerate.—Mr. F. M. CAIRD thought that it was closely allied to syphilis and said that some abnormal cases of syphilis did not react to iodide of potassium or mercury.—Dr. NORMAN WALKER gave reasons for thinking that it was a case of rodent ulcer, while Mr. STILES thought it was not in the least like rodent ulcer.

The following cases and specimens were shown:—

Dr. ALLAN JAMIESON showed: 1. A case of Acne Keloid. The patient was a woman, aged 40 years, who had been under treatment seven years previously for boils on the back of the neck. She remained well until about three years ago when these boils reappeared and continued to do so for about 18 months. At the end of this time a small tumour of half the size of a marble formed at the centre of the neck. This underwent progressive enlargement and especially since the birth of the patient's last child. The tumour was now a large dense hard body lying across the back of the neck, freely moveable, and fairly smooth on the surface. It presented numerous apertures, from each of which a brush-like arrangement of hairs protruded. The patient experienced some relief when these hairs were pulled out, and on firm squeezing pus could be expelled from these apertures. The case was one of acne keloid, the fibrous tissue being developed from the former pustules. Its situation was classical. Unna found fault with the name because no comedones were present in this disease. The name might not be etiologically correct and "pustulo-keloid" might be the best name to give it. The keloid developed in the acne scars and lately Dr. Jamieson had seen a young man who had several hundreds of small keloid growths on his back and chest, arranged obliquely from above downwards and outwards. As regards treatment electrolysis might be employed, but no local applications seemed to have much effect. 2. A case of Tylosis Palmæ. In this case the disease could be distinctly traced back for five generations and possibly it extended still further back. The patient was a boy, aged five years. At birth it was noticed that he had a peculiar yellowish semi-translucent thickening of the skin of the palms. At present the lines of flexion were well marked and the thickening covered the entire palms and the same was present on the feet. Sensation over the areas affected was interfered with. There were two other children in the same family, but they were quite healthy. The patient's mother and the other members of the family were similarly affected, as were also the grandmother and seven among the brothers and sisters, and the great-grandmother and some of her family as well, as the great-great grandmother. The disease had chiefly affected the female line. It was related to ichthyosis, if it were not indeed a form of that condition, and it was due to the persistence of the fœtal epitrichium which had not been thrown off after birth. No treatment (as by salicylic acid, &c.) had had any permanent effect, as the skin grew just as thickly afterwards. The mother found it best merely to rub the thickened skin down with pumice stone. 3. A Case for Diagnosis. The patient was a woman, aged 36 years. There were three growths on the upper part of the left side of the chest; they first appeared about three months ago. One of these growths was large and pink and covered by vascular ramifications. The growth was purely in the skin and the axillary glands were not enlarged. The skin between the growths was atrophied and scar-like, though this was not due to previous growths. In all probability it was an epithelioma of the skin.

Dr. G. A. GIBSON showed two cases of Friedreich's

Ataxia. There were five in the family and three members of it suffered from this disease. The patients shown were two brothers, aged 26 years and 21 years respectively. In the eldest the disease began while at school, the first symptom being difficulty in walking. At present he had a complete loss of the cutaneous and tendon reflexes; there was an entire absence of sensory disturbance; the action of the muscles of the whole body was weak, and there was well-marked nystagmus. The same conditions were present in the younger brother, but in his case some of the cutaneous reflexes were retained. In both the characteristic symptoms—e.g., slurring of the words in reading and great tremulousness on attempting voluntary motion—were present. The gait in neither was typically ataxic but it was unsteady, with reeling at times. There was almost no impairment in the field of vision and the Argyll-Robertson phenomenon was not present.

Dr. H. G. Langwill exhibited a youth, aged nearly 19 years, who suffered from Regurgitation of Food after Eating. The lad was quite undeveloped physically and appeared to be not older than about 13 years. He was apparently healthy until three years ago, when he began to complain of pain after eating, and this ended in sickness usually within a quarter of an hour. If he did not vomit then the pain lasted for about an hour. There had never been hæmatemesis or melæna. He could retain fish and light food with greater ease. About a year ago along with the pain after eating he began to suffer from regurgitation of food. He could not eat sufficient food to appease his appetite and was consequently always hungry. The pain had not been so severe during the past year, but he had always complained of weight and swelling over the stomach. At present he could only take food in small amounts and he required a long time in which to masticate and to swallow it—as, for example, for breakfast he ate only half a slice of bread and a small cupful of milk and took an hour in which to eat this. The fluid which was regurgitated was always from two to three ounces in amount, alkaline or neutral in reaction, and had never contained hydrochloric acid. He had not grown since the age of 13 years and now he weighed only 3 st. 8½lb. (two years ago his weight was 5½ st.). Physically nothing wrong could be detected excepting enlargement of the submaxillary glands. On feeding him with the stomach tube not more than two or three ounces could be injected, any excess being regurgitated alongside of the tube.

Dr. Byrom Bramwell showed a rare case of Pre-ataxic Tabes. The patient was a man, aged 33 years, who had suffered much from frequently recurring gastric crises. These attacks of vomiting began four years ago and occurred usually at intervals of six weeks. Each attack might last 10 days. During these he had no pain but could retain nothing on the stomach. He had no dyspeptic troubles other than these. At first the vomit consisted of food; afterwards it was bile-stained fluid, then it was coffee-coloured, and lastly it was clear The vomit was intensely acid, scalding the throat and making it resemble the scarlet fever throat. The pupils were different in size and did not respond to light (Argyll-Robertson sign). The knee-jerks were quite brisk. The patient had not had syphilis. He had had some attacks of pain so severe as to keep him awake at night and he experienced some difficulty in starting the act of micturition. He had had temporary analgesia over the thorax.

Mr. David Wallace showed the Middle Lobe of the Prostate removed by Suprapubic Cystotomy. The specimen was from a man, aged 68 years, who suffered from extreme hæmaturia and required the constant use of the catheter. The bladder was opened in order to rest it, but the prostate was found to have a well-marked pedunculated middle lobe very suitable for removal which was done. The recovery was perfect and within six hours of the operation the urine was free from blood. On the sixteenth day the patient passed urine per urethram and did not now require to use the catheter.

Dr. Byrom Bramwell exhibited a Tumour of the Right Frontal Lobe.—The patient was a man, aged 23 years, who in 1897 showed the general symptoms of an intracranial tumour. Vision was entirely lost in the right eye; the knee-jerks on both sides were exaggerated. There were no localising symptoms and the memory and mental condition were good. He was trephined over the right motor area with relief to the headache, but a degree of hemiplegia ensued. A large hernia cerebri formed and soon grew to the size of a man's fist. He was discharged in July, 1897, and lived until August of this year. The hernia increased in size until it was as large as the head itself (21½ inches in circumference and five and a half inches deep). There was a constant drain of fluid from a small aperture. The great points of interest were the absence of localising symptoms and the large size of the tumour, which destroyed almost the whole of the frontal lobe, and the fewness of the symptoms.

The following gentlemen were elected as office-bearers for the ensuing session:—President: Dr. Alexander Gordon Miller. Vice-Presidents: Dr. James Dunsmure, Dr. Charles Underhill, and Dr. James Andrew. Councillors: Sir John Batty Tuke, Dr. McKenzie Johnston, Dr. Graham Brown, Mr. David Wallace, Dr. John W. Ballantyne, Dr. George Kerr, Dr. Kenneth Douglas, and Mr. H. J. Stiles. Treasurer: Dr. Harvey Littlejohn. Secretaries: Mr. I. M. Cotterill and Dr. Melville Dunlop. Editor of Transactions: Dr. William Craig.

A large number of new members were admitted to the society.

Sheffield Medico-Chirurgical Society.—A meeting of this society was held on Nov. 8th, Dr. E. Wearne Clarke, the President, being in the chair.—Dr. A. J. Hall showed the following cases:—1. Dermatitis Herpetiformis in an elderly woman. The affection had lasted on and off for four years, during which the patient had had repeated attacks of polymorphous painful eruptions in almost all parts of the body. At present there was no eruption but intense pigmentation wherever the spots had been. 2. Eczema of the Hands and Face due to occupation—"occupation dermatitis." The patient, a young woman, was a "wiper of pocket-knife blades," in which avocation she used lime freely. Acute dermatitis attacked both hands and was followed by a similar affection of the face. Dr. Hall contended that there was no hard-and-fast line between eczema and so-called occupation dermatitis and that it was inaccurate to cease to designate as eczema an affection which would otherwise be classed as such directly an external irritant had been discovered. In this case the eruption on the face was not the direct result of the irritant but a reflex secondary outbreak in a distant part of the body. 3. Two cases of Lupus Erythematosus in elderly women. 4. Tertiary syphilide presenting unusual appearances, being probably modified by occurring in a seborrhœic patient.—Dr. W. T. Cocking showed (1) a case of Pseudo-hypertrophic Paralysis in a boy, aged eight years; and (2) a case of Charcot's Disease of the Right Knee in a woman, aged 49 years.—Mr. C. Atkin read notes of a case of Obstruction of the Bowels from Tuberculosis ending Fatally from Hæmorrhage. A woman, aged 37 years, was sent to the Royal Infirmary suffering from obstruction of the bowels. After copious enemata, &c., the bowels were well opened. The symptoms then pointed to hypostatic pneumonia though some abdominal tenderness persisted. The woman was enormously fat and enteric fever was excluded. After a fortnight's irregular temperature hæmatemesis occurred, followed by copious bleeding from the bowel. Post mortem, three or four large tuberculous ulcers were found, the alimentary canal from the duodenum downwards was full of blood, the peritoneum was studded with masses of tubercle beginning to caseate, and with miliary tubercle. No ulcer was found in the stomach, therefore the blood must have regurgitated through the pylorus.—Mr. Atkin also related notes of a case of Gastric Ulcer for which pyloroplasty had been tried. Though symptoms had persisted for five years no ulcer was discovered. The operation was chosen in preference to gastro-enterostomy as the pylorus was free from ulceration, though spasmodically stenosed. The girl gained considerably in weight after the operation. The menses were never irregular.—Mr. Atkin also showed a young married woman, aged 26 years, on whom he had performed Colotomy for Cancer of the Upper Third of the Rectum. There was a history of pelvic cellulitis on the left side six months before, and no other symptoms till those of acute obstruction of the bowels appeared. The growth was fixed and could not be brought up into the wound; there was secondary growth in the peritoneum.—Mr. Atkin also showed a Uterus which he had removed for cancer which was apparently localised to the interior of the organ.—Dr. J. W. Martin read the notes of a case of Acute Inversion of the Uterus in a primipara, aged 26 years. Six hours after a perfectly normal labour the patient became collapsed and profuse hæmorrhage set in. The inversion was reduced by taxis and the patient made a good recovery.

West Kent Medico-Chirurgical Society.—The second meeting of the forty-fourth session of this society was held at the Royal Kent Dispensary, Greenwich, on Nov. 2nd, Dr. Septimus Sunderland, the President, occupying the chair.—Dr. James Donelan read a paper on Tracheal Hæmorrhage as a Sequel of Influenza. He drew attention to this affection as a source of error in the diagnosis of the cause of hæmoptysis. The evidences of the disease were a history of recent influenza, persistent cough with tickling in the throat, the occurrence of hæmoptysis in quantities varying from a few drops to four or five ounces in 24 hours, and an absence of fever except temporarily when the amount of blood lost was large or when the patient was much alarmed. The most important evidences were the laryngoscopic observation of congestion of the veins of the subglottic plexus and the occurrence of bleeding in this situation. These could only be observed with certainty in the period of calm which intervened between one attack and another and while a little oozing from the veins was still going on. The veins in most of the cases appeared to follow the direction of the inter-cartilaginous spaces, though sometimes they formed a close plexus crossing over from one space to another as far down as the fifth or sixth ring. Dr. Donelan had collected 12 cases occurring in hospital and private practice from 1895 to the present time. Nine of the patients had made good recoveries and had never had any trace of pulmonary trouble. Three developed pulmonary tuberculosis and two had died. The reason for the inclusion of these cases amongst the 12 was that there was no evidence of tuberculous infection when the hæmorrhage occurred and chiefly because it was observed to proceed from the subglottic venous plexus and not from any point lower down. The treatment was that commonly employed for pulmonary hæmorrhage—rest, opium, ice, hamamelis, and ergot or ergotin. Dr. Donelan referred to the absence of literature on the subject of tracheal hæmorrhage; the only article on the subject that he was acquainted with was that of Professor Massei, which appeared last year in the Italian Archives of Laryngology, entitled "*Chronic Hæmorrhagic Tracheal Catarrh.*" The cases, however, did not occur in connexion with influenza, though in other respects the history was the same. Professor Massei had also expressed surprise that an affection which must be of somewhat frequent occurrence and which might easily lead to serious error in diagnosis should be practically unnoticed in medical literature.—Dr. F. Moon, Dr. F. T. Taylor, Dr. F. S. Toogood, Dr. J. H. Keay, and Dr. Weekes took part in the discussion which followed.—Dr. Donelan then gave a demonstration of a Few of the Commoner Positions adopted in the Operation for Naso-Pharyngeal Adenoids. He was strongly in favour of the position with the head *extended over the end* of the table, as it permitted a more deliberate and careful removal of the offending tissue and was free from most of the sources of danger and inconvenience which rendered the sitting or lateral positions objectionable.—A discussion followed. A vote of thanks to the lecturer concluded the proceedings.

Manchester Medical Society.—A meeting of this society was held on Nov. 7th, Dr. T. O. Railton, the President, being in the chair.—Dr. Thomas Harris, in opening a discussion on the Open-air Treatment of Tuberculosis, referred to the pathological and clinical evidence which they had of the arrest of pulmonary tuberculosis. He considered, however, that it was much better to speak of an arrest of the process rather than to describe it as a cure, as so frequently the disease became lighted up again. He described the various points in the open-air treatment. The putting on of a large amount of fat which so many of the patients did under the treatment was not to be considered in every case a satisfactory feature, as *this putting on of fat* was sometimes associated with a great amount of discomfort to the patient, and in a large number of cases, although fat was accumulated, the pulmonary disease was not stayed. Dr. Harris referred to the importance of providing sanatoria for advanced cases and thought that such would be especially advantageous to medical officers of health in preventing an extension of the disease. He also considered that investigations as to the cause and prevention of tuberculosis should occupy a foremost place in any crusade against the disease and that more was to be hoped from a study of preventive medicine than from the open-air treatment of tuberculosis in sanatoria or other places. Dr. Harris referred especially to the great danger which existed of sanatoria being conducted by unscrupulous persons, or of their becoming places of quackery, or places where payment of a dividend was the first consideration; and although there were many satisfactory and well-conducted sanatoria in this country he considered that medical men should be very careful as to what sanatorium they recommended to their patients.—The following gentlemen took part in the subsequent discussion: Professor S. Delépine, Dr. James Niven, Dr. H. R. Hutton, and Dr. E. S. Reynolds.

Glasgow Pathological and Clinical Society.—A meeting of this society was held on Nov. 12th, Mr. H. E. Clark, the President, being in the chair.—Dr. James Kerr Love read a paper and demonstrated cases showing the Evolution of the Mastoid Operation.—Dr. Henry Rutherfurd showed: 1. The Parts from a Post-mortem Examination on a case in which Cholecystenterostomy had been performed six months previously for Intense Jaundice. There were a tumour of the head of the pancreas, gall-stones in the common duct, cholangitis, and abscess in the lungs. The bimucous fistula had closed and infection had probably travelled from the bowel up the common duct, the papilla of which had not been absolutely occluded. 2. Specimens illustrating Thrombosis and Embolism in Surgical Conditions. 3. Parts from two cases in which Innominate Aneurysm had been treated by Distal Ligature. 4. A Head, a Tumour, and a Spinal Cord from a case which had been operated on for Encephalocele.—Dr. R. S. Thomson showed samples of Intestinal Sand from Six Cases. The condition occurred in the subjects of mucous colitis and was perhaps not so uncommon as was supposed.—Dr. J. McGregor Robertson showed Ehrlich's Ocular and demonstrated its use in counting blood corpuscles.—Dr. J. S. McKendrick showed a series of Blood-film Preparations.

Folkestone Medical Society.—A meeting of this society was held on Nov. 2nd, Dr. Tyson, the President, being in the chair.—One new member was elected.—Mr. H. A. Powell read notes of a case of Congenital Heart Disease developed at the age of three years, accompanied by a gangrenous condition of the gums, and leading to necrosis of the jaw. Perchloride of mercury was applied and the child eventually recovered.—Mr. Powell also related the case of a vigorous and healthy man, aged 48 years, who was suddenly attacked by Diffuse Cellulitis of both buttocks and perineum due to a perforating ulcer of the rectum high up. On the second day of the acute symptoms free incisions were made and at a depth of four inches a mass of foul sloughing tissue was laid open Antistreptococcic serum was also injected. Mr. T. Bryant and Dr T Eastes both saw the case in consultation. The patient made a good recovery. The sloughs came away on the fifth day, most of the wounds healed in three weeks, and he left his bed in another fortnight. Mr. Powell remarked on the probable origin of the case and its bacteriological aspect.—Dr. Eastes, Dr. P. G. Lewis, Dr. Livington, Dr. W. J. Tyson, Dr. Chubb, and Mr. W. F. Chambers also spoke.

Clinical Society of Manchester.—The opening meeting of this society for the current session was held on Oct. 16th. The following office-bearers for 1900-1901 were elected. President: Mr. F. A Southam. Vice-presidents: Dr. T. A. Helme and Mr. J. E. Platt. Honorary Treasurer. Dr. C. H. Braddon. Honorary Librarian: Dr. J. W. Smith. Committee: Mr. W. G Booth, Mr. G. H. Broadbent, Dr. A. Brown, Dr J. Gray Clegg, Dr. J. Daniel, Dr. W. E. Fothergill, Dr. J. W Hamill, Dr. James Holmes, Mr. C. F. H. Kitchen, Dr. M P. Ledward, Dr. E. T. Milner, Dr. R. T. Parkinson, Dr. E. S. Reynolds, Mr. J. Rust, and Mr. F. H. Westmacott. Honorary Auditors: Dr. A. B. Fulton and Dr. E. J. Walker. Honorary Secretary: Mr. J. H. Ray.—The President opened a discussion on the Treatment of Appendicitis (Medical and Surgical) in its three following forms: (1) Simple or catarrhal (non-suppurative); (2) suppurative (*a*) local abscesses, and (*b*) diffuse suppuration (purulent peritonitis); and (3) recurrent appendicitis.—An interesting discussion followed.

West London Medico-Chirurgical Society.—An ordinary meeting of this society was held on Nov. 2nd, Dr. P. F. Schacht, the President, being in the chair.—The minutes of the last meeting were read and several new members were elected.—Mr. T. R. Atkinson showed a card specimen of Tubal Pregnancy.—Mr. J. Jackson Clarke showed two patients illustrating some points in his paper on Some Phases of Rheumatoid Arthritis and Gout. This paper was, however, postponed by consent until the next meeting in order to give time for the reading of a paper by Mr. G. Lenthal Cheatle on Some Personal Experiences of the late Boer War. The paper was illustrated by a very fine collection of photographs which were shown on a screen by means of a lantern. Mr. Cheatle also showed a number of shells, bullets &c., collected from the battlefield.—A hearty vote of thanks was accorded to Mr. Cheatle for his interesting paper and the meeting terminated.

Reviews and Notices of Books.

Life and Letters of Thomas Henry Huxley. By his Son, LEONARD HUXLEY. London: Macmillan and Co. Two vols. 1900. Pp. 1007. 13 engravings. Price 30*s.* nett

TWO royal octavo volumes, including over one thousand pages between them, make a very large book, but not by any means too large a book to devote to the life of Huxley, crowded as it was with incident and varied by the most diverse public and private occupations. And when we had read the book our wonder was rather how so much had been included in the space. Mr. Leonard Huxley presents us with a complete account of his father's chief writings, doings, and sayings; but he has effected a saving of space by forbearing to attempt a critical digest of Professor Huxley's contributions to biological science. For such a digest other modes of publication are, no doubt, preferable. Incidentally, it need hardly be said, there is a great deal of comment upon biological discovery and philosophical view; but here, as elsewhere, the biographer wisely allows Professor Huxley to tell his own story, and that mainly by means of letters.

The feature of these two volumes is, in fact, the enormous amount of correspondence, dating from the very late "forties" and extending to three days before the death of Professor Huxley in 1895. These letters afford no evidence of priggish compilation for the purposes of subsequent publication; on the contrary, indeed, they sometimes verge upon the indiscreet, as letters written between friends are apt to do. But Mr. Leonard Huxley, by the judicious use of dots, dashes, and initial letters, has pruned away all that could possibly cause any annoyance, however slight, to persons living or to the relatives of those who are now dead. Professor Huxley was, as everybody knows, one of those who fearlessly expressed his opinions and that with decision and precision; it would be therefore impossible to water down any of his straightforward observations of men and things. "A hammer-handed man," observed an eminent divine to the present writer some years ago—a remark which conveyed, and was probably intended to convey, the impression that Professor Huxley was apt to hit the right nail, and that well upon the head.

The first volume begins with the inevitable searchings after family trees, the eagerness of the search being, however, tempered by an apt quotation from the professor himself, who remarked that "My own genealogical inquiries have taken me so far back that I confess the later stages do not interest me." At any rate, Huxley's father was a schoolmaster at that now suburban but then pastoral place called Ealing. The influences of early surroundings upon a man of genius are often the subject of inquiry and some philosophising, but there does not seem to be a great deal to extract from the early circumstances of Huxley's life. His father had "that glorious firmness which one's enemies call obstinacy"; his mother, he tells us, was a lady of extraordinary energy and emotions. Heredity, therefore, may have done and probably did do a fair amount for the *savant*: but Ealing, Coventry, and Rotherhithe do not seem impressive when we think of Agassiz among Swiss glaciers, and Buckland surrounded by the bones of ichthyosauri and plesiosauri at Lyme Regis. It is a curious example of the wise perversity of fate that Huxley was a biologist *malgré lui*; he wished to be an engineer or at least somebody in the mechanical line. Fate in the guise of Sir Joseph Fayrer walked down the steps of Charing Cross Hospital with young Huxley and directed him to apply for an appointment in the medical service of the Navy. It is interesting but futile to speculate as to whether, if the other event had occurred, we should have had among us a colossal scientific expert. Probably not, since on another page the well-known classification of those who are apt to banish the truth concludes with the superlative "expert witness." Professor Huxley's worst enemy could hardly accuse him of withholding the truth; indeed, he was apt to rub it in with salt and pepper.

The voyage of the *Rattlesnake*, to which ship Huxley was now appointed, was the means of his achieving greatness; it is hardly too much to say that the observations and reflections made upon that journey contained the best part of his subsequent work in pure science. On his return to England he found himself celebrated and was in the following year (1851) elected a Fellow of the Royal Society, the youngest Fellow on record, since the number of elections in each year had been reduced to 15. Huxley's opinion of the scientific men of his day is in many ways remarkable. It shows plainly that a certain hackneyed phrase about the tendency of man to err is by no means a platitude, and is a warning to all of us not to be too positive in our judgments as men, and perhaps also as examiners. The two leaders in zoological science are said to be Owen and Edward Forbes. "The rest of the naturalists stand far below these two in learning, originality, and grasp of mind. Goodsir of Edinburgh should, I suppose, come next, but he can't write intelligibly. Darwin might be anything if he had good health." This order would, we suppose, at the present day be almost exactly reversed. There is a good deal about the late Sir Richard Owen in these earlier pages; Huxley found him kind and courteous, and was gratified at being told by the great anatomist, whom he thanked for his assistance in the matter of the F.R.S., that the election was entirely due to his own merits. At a dinner at the Geological Club Huxley met Lyell, Murchison, De la Beche, and Owen. "Owen was," he wrote to his sister, "in my estimation great, from the fact of his smoking his cigar and singing his songs like a brick." Later, as the world knows well, there was much friction between the conservative followers of Cuvier and the young man who introduced into comparative anatomy a new order of things. The friction led to some smart sayings, and some of the sparks thus evolved are truly Huxleyan in their phrasing. "What a capital title it is they give him of the British Cuvier. He stands in exactly the same relation to the French as British brandy to cognac." In fairness to both great men we give a final appreciation by Huxley of this very nickname, contained in a review of Owen's scientific position. It runs thus: "It was not uncommon to hear our countryman called 'the British Cuvier,' and so far, in my opinion, the collocation was justified, high as the praise it implies."

Huxley is known to his generation for the magnificent clearness and sanity of his views and the large range of his outlook. He not only had sympathies that were boundlessly broad, but a gift of expression and exposition both with tongue and pen. "If my opinion were to be taken," says Montaigne, "I should think the slow speaker would be more proper for the pulpit and the other for the bar." As we knew him Huxley was a deliberate and impressive speaker, and it is clear that he in the main occupied the pulpit, though at times he was an advocate rather than a preacher. One of these latter occasions is dealt with by his son at some length. We refer to the celebrated meeting of the British Association at Oxford in 1860, the year after the publication of "The Origin of Species." It was held at that time by men of leading, if not of light, that Darwin's explanation of the cause of evolution was, as Professor Lankester has aptly put it elsewhere, a "capricious and anti-theological assertion that men are descended from monkeys." This was the limited view of persons of real culture and education. At the long west room at the Museum, now occupied by the library, the evolutionists, the anti-evolutionists, and their supporters held forth on Saturday, June 30th, in that year. The Bishop of Oxford "spoke for full half an hour with inimitable spirit, emptiness, and unfairness. ...... In a light scoffing tone, florid and fluent, he assured us there was nothing in the idea of evolution; rock pigeons were what rock pigeons had always been. Then turning to his antagonist with a smiling insolence he begged to know was it through his grandfather or his grandmother that he claimed his descent from a monkey?" A great deal of obloquy has been heaped upon the bishop for his part in the proceedings of that *historic day*; *no doubt he appealed to the ignorant* prejudices of his hearers who were naturally in those virtuous days of horse-hair furniture gratified by such an attitude. But *need we crow so very much*? It strikes us *forcibly* that many worthy persons would arise in their might at the present day, and protest in a precisely similar fashion, if doctrines, which they thought impious because they could not understand them, were promulgated by a man of science and then denounced by a bishop. The personality of the bishop appears to us to be purely rhetorical and not to show any of the "insolence" which has been seen in it, and Professor Huxley's reply was fully as vigorous as the speech which preceded it. What chiefly is hard of understanding in these milder times is why *tantæ animis cælestibus iræ*. Huxley was fighting for freedom of opinion and deprecated authority. It is curious that in these latter days, when the positions of affairs are exactly reversed, the same old human love of authority should crop out in precisely the same way. Freedom of opinion then meant the right to hold more or less the Darwinian views on the origin of species. Nowadays it almost means the right to dissent from them. In presenting a Royal Society medal to Darwin the *President of the Society of that day was carefully* watched by Huxley, who suspected him of the intent to introduce some observation depreciatory of natural selection. The slighting remark was duly made, and that was, perhaps, the last flicker of the fierce flame that raged and attempted to destroy the natural explanations of the phenomena of Nature. Now the flame is precisely as vigorous, but it has been kindled by the then opposition, the school that in the "sixties" was fighting for freedom of thought. Quite recently a book purporting to overthrow some of the conclusions of Darwin and his adherents was published and was reviewed in savage terms because of its attempt to criticise the founder of modern zoological speculations. On the other hand, the most ridiculous assumptions, if they tend to support natural selection, are at once accepted and their authors more than occasionally lauded with surprising fulsomeness. We write as *orthodox believers in the generally* accepted teachings of evolution, but with some doubts upon details. And whatever may be the right way to clear up these doubts, which we share with many people, the wrong course is to stifle discussion. It is noteworthy that Professor Huxley did not commit himself to some of the more extravagant excrescences which have now appeared upon the very trunk of the Darwinian tree of knowledge.

From such a mass of information as that with which Mr. Leonard Huxley presents us in these volumes it is hard to pick out plums of general interest, not in the least from the lack of them but from sheer embarrassment of riches. Huxley knew intimately a large proportion of the illustrious people of his time and as he lived a long life the list is almost interminable. His strong *objection to statesmen was natural in a* man of his constitution and is made abundantly obvious again and again. In inviting Ministers to the dinner of the Royal Society Huxley, "thinking to please the *Society*, made a shot at some Ministers. The only two I know much about are Harcourt and Chamberlain, and the devil (in whom I now firmly believe) put it into my head to write to both. The enormous stupidity of which I had been guilty in asking Chamberlain under the circumstances ...... never entered my head until this afternoon." He did not think highly of our statesmen as philosophers. There are criticisms of Lord Salisbury's address to the British Association at Oxford and of Mr. Balfour's philosophical speculations. Of the latter his estimation sinks lower and lower the more he reads of the "Foundations of Belief." Gladstone, as everyone knows, was severely handled by him in the *Nineteenth Century*. There is an amusing tale told about Carlyle. Huxley confesses to the great influence which the sage had had upon him, *particularly because he* "had *inspired* him with his undying hatred of shams and humbugs of every kind." But it appears that the veneration was not by any means returned. "Years after [the publication of '*Man's Place* in Nature']," writes Mr. Leonard Huxley, "near the end of his life, my father saw him walking slowly and alone down the opposite side of the street, and touched by his solitary appearance crossed over and spoke to him. The old man looked at him and merely remarking, 'You're Huxley, aren't you? The man that says we are all descended from monkeys,' went on his way." The great Napoleon's nephew, the Prince of Canino (why does Mr. L. Huxley give him the sporting title of "Casino"?), noted in his day as an ornithologist, attended the first meeting of the British Association which Huxley attended. He is described as being "singularly like the portraits of his uncle, and seems a very jolly, good-humoured old fellow. I believe, however, he is a bit of a rip. It was remarkable how proud the Quakers were of being noticed by him." The last sentence is somewhat cryptic to us. *Of Darwin there is* naturally much said. A large number of letters exchanged between these two great men are given in full by Mr. *Leonard* Huxley. "The cheeriest letter-writer I know" was Huxley's verdict upon the promulgator of Natural Selection. To be able to address that revered person as "My dear Darwin" seems to us to be the most dizzy height of eminence at which a man could arrive. Copious letters, mainly to Sir J. Hooker, Sir Michael Foster, and Professor Tyndall, deal with every possible variety of topic, from scientific questions of the day and of the past to views upon the conduct of Governor Eyre of Jamaica, the proposed Gresham University for London, and the sea serpent. It was his interest in, and clear expression of views upon, such matters of general talk that really gained for Huxley his widely extended fame. To the general public he was a strong exponent of views generally at variance with *those of respectable mediocrity*; he was not pictured as the hard-working student sitting among bones and fossils and producing monograph after *monograph of fundamental* importance. Towards the end of his life a physical incapacity for bending over a dissecting-table unfortunately cut short the steady output of contributions to science which had marked all of his previous career. But when busy with all kinds of commissions and other duties he would jump into a cab and snatch a brief half-hour of zoological work in his laboratory at South Kensington. We mention this because Huxley the breezy critic of men, manners, and systems has rather dimmed the public recollection of Huxley the great biologist.

One side of Huxley's character is admirably developed by his son in these volumes. Huxley was as delightful and whimsical in his private and family life as he was uncompromising in his public life. The following letter was written to a daughter who had requested an autograph for a friend:—

The Epistle of Thomas to the Woman of the House of Harold.

1. I said it was an autograph book; and so it was.
2. And naughty words came to the root of my tongue.
3. And the recording angel dipped his pen in the ink and squared his elbows to write.
4. But I spied the hand of the lovely and accomplished but vagabond daughter
5. And I smole; and spoke not; nor uttered the naughty words.
6. So the recording angel was sold;
7. And was about to suck his pen.
8. But I said, Nay! give it to me.
9. And I took the pen and wrote on the book of the autographs letters pleasant to the eye and easy to read.
10. Such as my printers know not; nor the postman; nor the correspondent who riseth in his wrath and curseth over my epistle ordinary.

It will be consolatory to all our readers who have ever failed to obtain an appointment which they sought to learn that Huxley was for long most unfortunate in his attempts to secure a professorship. Three places refused him—viz., Cork, Aberdeen, and Toronto. The professors of that day in these universities cannot be congratulated upon their insight; however, after a lapse of 50 years or so it is somewhat of an anachronism to be angry with the stupidity of one's forerunners.

Mr. Leonard Huxley concludes these two fascinating volumes with a list of his father's "Essays, books, and scientific memoirs," which fills no less than 16 pages, and with an excellent index.

The Theory and Practice of Hygiene (Notter and Firth). By J. LANE NOTTER, M.A., M.D. Dub., Professor of Hygiene in the Army Medical School, Netley, Colonel, Royal Army Medical Corps, &c.; and W. H. HORROCKS, M.B., B.Sc. Lond., Assistant Professor of Hygiene in the Army Medical School, Netley, Major, Royal Army Medical Corps. London: J. & A. Churchill. 1900. Pp. 1085. Price 25*s*.

WE are glad to welcome a second edition of this work and to see that although it has been considered desirable to re-write many of the former chapters and to make several alterations it has not been found necessary much to increase the size of the volume. The book is still used as a manual and is, indeed, the standard manual in hygiene both in this country and in America; but if its size be further increased it will pass from the manual class into a different category—a change which many would regret. The present volume contains but 51 more pages than the first edition, yet space has been found for 39 pages devoted to the bacteriological examination of water, a subject which during the last few years has assumed a position of great importance, equalling, if not surpassing, that of the chemical analysis. For this portion of the work Colonel Notter is indebted to Major Horrocks, the assistant professor of hygiene in the Army Medical School. Major Horrocks's special section deals with his subject systematically and, considering the space, very lucidly; he treats of the "collection of water for bacteriological examination," of "quantitative bacteriological analysis" (which he points out is of less importance than the qualitative), of "the preparation of water plates," of "qualitative bacteriological examination," and of the classes of micro-organisms. He then devotes some pages to the experimental researches on the duration of life of the bacillus typhosus in water and sewage and to the methods which have been suggested for the demonstration of the bacillus typhosus in water and to those proposed for the isolation of the cholera spirillum from water. There is a succinct summary of the procedure recommended for the bacteriological examination of water and a page on the methods of testing water filters will be found very useful. Major Horrocks's work shows very considerable thought and care and he is to be congratulated on having contributed much valuable independent information to this new edition. Miss Triscott is also to be highly commended for the pains she has taken in the preparation of the five new plates illustrating this section of the work.

During the last few years many aspects of hygiene have undergone rapid changes and the law of progress has shown itself in almost every part of the science. The parts of the volume now under review which show the most considerable alterations from the subject matter of the first edition are those relating to water-supplies, sewage disposal, immunity, disinfection, and infective diseases.

The chapter on Water occupies 142 pages, 22 more than in the first edition; in it all that is valuable in chemical analysis is accurately set forth, so that the careful student can with its aid carry out the various processes without difficulty. The portion of the work which treats of Air, Ventilation, and Heating is practically the same as in the former issue and is of the highest value.

In the fourth chapter, on Food, there is a useful section under the heading Shell-fish and Infection, in which Dr. Bulstrode and Dr. Klein's report to the Local Government Board upon oyster culture in relation to disease is epitomised and the late Sir Richard Thorne's summary is given in five short paragraphs. The characteristics of the outbreaks of disease transmitted by milk, as set forth by Mr. W. H. Power, are brought prominently forward and the question of the preservation of milk receives considerable attention.

In the section on Habitations much useful and practical information on the important question of Hot-Water-supplies is introduced.

Chapter X., on the Disposal of Sewage and Refuse, has been considerably amplified. Here, under the Purification of Sewage by Biological Methods, the most modern processes are described, such as Dibdin's or the Sutton System, the Septic Tank System, the Thermal Aerobic Sewage Filter of Whittaker and Bryant, the System of Open Septic Tank with Double Filtration in Bacterial Filter Beds, Ducat's Aerated Bacterial Self-acting Filter, and the Purification of Sewage by Intermittent Bacterial Treatment of Coke Beds as studied by Clowes and Houston for the London County Council, and to this portion of the manual there are other important additions.

In the chapter on the Infective Diseases there are some excellent new pages on immunity and protection; here artificial immunity, passive immunity, the origin and mode of action of antitoxins, anti-microbic serum and natural immunity are in turn considered, and a new section is devoted to the etiology and prevention of beri-beri. New paragraphs have also been introduced under the heading of Enteric Fever, describing preventive inoculation, as inaugurated by Professor A. E. Wright and Major D. Semple, R.A.M.C., of Netley, with a description of how the vaccine is at present prepared. It is also stated that the results obtained by Professor Wright's inoculations in India are distinctly encouraging. The Malarial Parasites and the prevention of malarial fevers are dealt with in some interesting pages, while the marked diminution in the fatality of scarlet fever at all age-periods is emphasised, and Dr. Newsholme's table is quoted. This chapter on Infective Diseases occupies 100 pages and is by no means the least interesting and valuable.

Much of the section on Disinfection has been re-written and here there are several new woodcuts to aid the student; the value of formaldehyde as a gaseous disinfectant is dwelt on, but it is pointed out that when Schering's method is employed as a rule too few tablets are used to insure thorough disinfection.

In the chapter on Vital Statistics there are some good tables gathered from Dr. Tatham's figures for the years 1890–92, and observations on the question of occupation in relation to mortality. The paragraphs in which the relation of the density of the population to mortality is discussed are also amplified.

Much of the chapter on Military Hygiene (Chapter XIX.) has also been re-written so as to bring it up to date and to make it inclusive of the most recent regulations. Under the heading of War Rations the daily ration for each officer and man in our recent expeditions is set forth. The chart given at page 1028 shows the difference in the admissions for primary venereal sores amongst British troops before, during, and after the Contagious Diseases Acts were in force at 14 protected and 14 unprotected stations in the United Kingdom.

Appendices XI. and XII. are new—the former deals with the Sterilisation of Apparatus and the Preparation of Culture Media and the latter with the Preparation of Ammonia-free Distilled Water. A new table (after Vieth) is also given for correcting the specific gravity of milk according to temperature.

The new parts of this work appear to us to be excellent and the whole book has been carefully edited. Many mistakes in the first edition have been corrected, and although the present edition cannot be said to be free from errors, most of these are evidently due to the printer and are so palpable that they will not long trouble the student. The letterpress is illustrated by many new explanatory woodcuts which are at once both simple and practical. The bibliography and references throughout the book are excellent, the authors having followed the useful plan of having a separate bibliography at the termination of each subject. We can strongly recommend the volume which will doubtless have as large a circulation as its excellence deserves. The book is a very worthy successor to the well-known work of the late Professor E. A. Parkes, which was subsequently enlarged and edited by the late Professor de Chaumont.

We are glad to see that Colonel Notter mentions Major R. H. Firth's name in the preface, as it appears to us that much of the information in the present volume is as that officer left it when he co-edited the first issue in 1896, and that a tribute is also paid to Major Horrocks for his help and assistance in bringing out the new edition. The omission of the names of Colonel Notter's colleagues from the cover of the work must of course be an oversight on the part of the publishers, but we would suggest that in future editions, which are sure to become necessary, the names of all the authors should be duly set forth.

Medical Electricity. By H. LEWIS JONES, M.A., M.D. Cantab., F.R.C.P. Lond. Third edition. London: H. K. Lewis. 1900. Pp. 532. Crown 8vo. Price 10s. 6d.

To write a practical text-book on medical electricity which would reach a second edition, at a time when quacks had made the subject distasteful to medical men and when it was regarded by the intelligent public with suspicion, was no mean accomplishment. In the first edition the author found it necessary to allot a considerable amount of space to technical detail in order to place the subject on a scientific basis, which, however, somewhat marred the book, as it rendered it difficult reading to those who were not experts in electricity; but the knowledge of the subject becoming more popular by the almost universal establishment of public electric light supplies, in the second edition it was found possible to omit much unnecessary detail and to give more space to treatment. In the present (third) edition the material has so much increased and the progress made has been so considerable that in order to keep the book within the reasonable compass expected in a text-book the author has found it convenient further to curtail the technical portions, to introduce two new chapters, and to add many illustrations, rendering it more complete and up-to-date. The book is so well known that it is only necessary to notice the additional matter introduced. A new chapter on Dynamo Electricity is clearly and succinctly written, and the use which may be made of the street mains are grouped together under the following heads—(1) the illumination of small lamps for special purposes; (2) the heating of a galvano cautery; (3) the driving of small motors; (4) the operating of small and large induction coils; (5) the charging of accumulators; and (6) the treatment of patients; and in an appendix a list is given of the towns having a public supply, together with details as to the current furnished. The chapter on Statical Electricity has been added to and revised. The Holtz and Wimshurst machines are described at sufficient length, the author being evidently much impressed with the work of Dr. Monell of Brooklyn, for he affirms that the effects which large statical machines can produce are almost startling to those who have been familiar only with the phenomena produced by small machines and that the therapeutic results of their use are obtained so promptly and so easily that it is a pleasure to use them.

An additional chapter is given on the Roentgen Rays which is intended as an outline of the methods and principles concerned, and as it is condensed into some 20 odd pages this must be admitted to be the case, but we wish that the author had found it practicable to allot more space to a subject which has become of such universal application. The chapter is illustrated by a coil and a bi-anodal focus tube. We were disappointed in finding no mention of the application of electric light in the treatment of disease. The book is to be thoroughly recommended; the details suffice for the requirements of a medical man who has not the time to study the subject of electricity exhaustively, and as in the former editions the book raises the position of medical electricity to its proper level and helps to remove the reproach that still clings to the profession for having allowed others almost to monopolise the practice. It may be considered as an admirable text-book for students and a handy book of reference for practitioners.

LIBRARY TABLE.

Nordrach at Home. By J. J. S. LUCAS, B.A., M.R.C.S. Eng., L.R.C.P. Lond. Bristol: J. W. Arrowsmith. 1900. Pp. 60. Price 1s.—Mr. Lucas has made an attempt in his "Nordrach at Home" to supply the necessary information for carrying out the "open air treatment" of pulmonary tuberculosis in the house of the patient without removing him to a special sanatorium or to some expensive health resort. The plan which he proposes is simple, practical, and inexpensive. There is nothing original in his suggestions, which are based on the ordinary principles of hygiene, but they are collated in a form which is likely to prove of use. Probably most medical men at the present day are already acquainted with the details of the treatment as far as they are suitable for domestic application. They may, however, be saved trouble if they refer their patients to this little work.

The Feeding of Infants. By W. LANGFORD SYMES, F.R.C.P. Irel. Dublin: Fannin and Co., Limited. 1899. Pp. 40. Price 1s.—This small work is divided into two sections, one dealing with the feeding of infants under one year old, and the other with that of children over that age. Much useful advice is contained in these few pages. The author insists on the use of modified milk when breast-feeding is impossible and condemns the use of patent or proprietary foods; but what he means by the following sentence, which appears on page 10, is most difficult to understand: "Starchy or '*carbohydrate food*' is most injurious to infants under one year of age; they have no means of digesting it." Considering that in the sentence which precedes it he advocates the use of sugar, apparently Mr. Symes does not include sugar among the carbohydrates. Many authorities, including Jacobi, do not subscribe to the universal condemnation of farinaceous foods, even for very young infants. All are, however, agreed that they should only be employed in very small quantities.

Design in Nature's Story. By WALTER KIDD, M.D. Lond., F.Z.S. London: James Nisbet and Co. 1900. Pp. 165. Price 3*s.* 6*d.*—This booklet will act as a reminder that there are arguments against, as well as for, the conception of natural selection as the main factor in organic evolution. And to the medical mind such a reminder is particularly valuable, for as a profession we are inclined to pronounced conservatism, and having once accepted a theory we are not easily shaken in our allegiance. Although the acceptance of the proposition that there is a design in nature does not necessarily exclude the doctrine of evolution it is clear that Dr. Kidd has a very limited faith in the ordinary forces generally admitted to be the chief factors in evolution—natural selection, for instance. Broadly speaking, his arguments in favour of the "unseen and guiding hand" turn on two pivots—(1) that organic nature is so marvellously and wonderfully made that the end must have been foreseen before the foundations were laid; (2) everything is reciprocally adapted in animate and inanimate nature and has been from the first beginning of life. In a retrospective examination of any completed chain of events in which the links are reciprocally dependent it is as legitimate to assume that the chain of events has followed on predestined lines as to assume that the ultimate result might have been different if one of the component links had given way or owing to accident (variation) had been differently constituted. In the marvellous adaptation to the requirements of the human body of such structures as the nasal and thoracic ducts Dr. Kidd finds evidence of design, and he regards the vermiform appendix not as a vestigial relict dangerous to man, but as a "little sentinel" which stands between the small and large intestine and acts as a "death-trap" for the microbe. Dr. Kidd is right in believing that he is raising a "thorny question" in taking this heretical view of the functions of this apparently ill-adapted organ. The author deserves credit for the bold exposition of his views although it is improbable that they will meet with any general acceptance.

Sanitation and Health. By Brigade-General R. C. HART, V.C., C.B., &c. Revised by Brigade-Surgeon-Lieutenant-Colonel T. H. HENDLEY, V.C., C.I.E., M.R.C.S.Eng., L.R.C.P. Lond., &c. Fourth edition. London: William Clowes and Sons. 1897. Pp 56. Price 1*s.* 6*d.*—This small pamphlet is a revised lecture delivered by Brigade-General Hart to the troops stationed in Rohilkland, a district of India. It offers sound advice on general hygienic and sanitary matters, and is written down to the level of understanding presumably possessed by "Tommy Atkins." The lecture is practically such as would be appropriate for a St. John Ambulance class, with the addition of the local and climatic conditions of India which are likely to influence the health of the soldier being taken into consideration. The fact that the pamphlet has reached a fourth edition and is authorised by the War Office for use in army schools is sufficient evidence of the practical nature of the advice therein contained.

Twice Captured: A Record of Adventure during the Boer War. By the Earl of ROSSLYN. Edinburgh and London: William Blackwood and Sons. 1900. Price 10*s.* 6*d.*—The author tells us that he acted as roving correspondent to the *Daily Mail* and the *Sphere* during the Boer War, and in this volume, which is well illustrated, he narrates his personal adventures and experiences in South Africa. Lord Rosslyn saw a good deal and has consequently a good deal to write about, some of which is interesting and well worth reading, but taken as a whole the book is somewhat discursive and contains, in its earlier pages more especially, too many details regarding occurrences which are more or less common to all travellers. In addition to his account of his captivities Lord Rosslyn adversely criticises the system of "censorship" pursued by the military authorities in regard to the treatment of press correspondents, and has much to say of the general conduct of the war. With the best intentions in the world an author, writing in a free and discursive way of what he heard and saw during a campaign, cannot be always sure of his data, and the conditions in which the writer was placed were not, we fancy, those most favourable for forming any full and impartial judgment in regard to current events and topics. We learn that the book has been withdrawn from circulation.

How We Escaped from Pretoria. By Captain AYLMER HALDANE, D.S.O., 2nd Battalion Gordon Highlanders. Edinburgh and London: William Blackwood and Sons. 1900. Price 1*s.*—We had the gratification of reading this spirited and interesting account of "How We Escaped from Pretoria" on its original appearance in *Blackwood's Magazine*. A renewal of our acquaintance with it now that it is published in separate form has tended to revive and to strengthen the very favourable impression which we derived from its first perusal. It is a graphic and well-told story narrated in a very natural, and therefore pleasant and interesting, way and carrying the stamp of truth with it throughout. Its author tells us that he has been enabled to make some additions to his original account owing to the fact that the near approach of a successful termination to the war enabled him to give a full record of the adventures of himself and his companions and of the material aid which they met with from their own countrymen. This he could not do before without the risk of compromising those who had helped him.

JOURNALS.

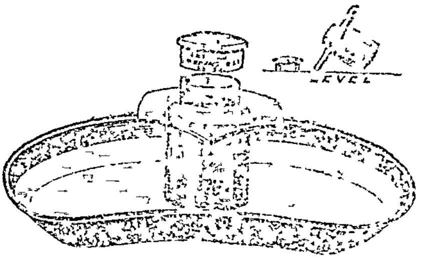
The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., W. F. R. WELDON, F.R.S., and SYDNEY J. HICKSON, F.R.S. Vol. xliv., Part 1. London: J. & A. Churchill. 1900. Price 10*s.*—This part contains: 1. A long and interesting article by Walter Heape, M.A. Cantab., of Trinity College, on the Sexual Season of Mammals and the Relation of the Procœstrum to Menstruation. Mr. Heape points out that in the male the sexual season, called the "rut," from the Latin "rugire," to bellow, and therefore properly limited to such animals as stags and boars and to the male sex only, presents varieties according to whether it is confined to a single period of the year or to certain seasons and should not be applied to those animals which are capable of inseminating the female at all seasons of the year. In the case of the female the activity of her generative organs may be observed when there is no access of the male or when coition does not result in conception and when reproduction does take place. In both cases the changes are complex. He distinguishes between the procœstrum or the period antecedent to heat, the œstrus or period of heat, and the anœstrum or period of rest, intercalating between the last two the metœstrum, which is the period when, conception not having taken place, the excitement of the generative organs gradually subsides. The females of some animals are monœstrous or have only one season of heat—as the bitch or bear—while other are polyœstrous or have many seasons in the course of the year, as the mare Mr. Heape does not consider that ovulation and the œstrus cycle are necessarily coincident. He suggests that there is present in the blood from time to time what may be called an œstrus toxin which stimulates the activity of the sexual organs, and brings about the actual production of those generative elements which nutrition has enabled the animal to elaborate. 2. Mr. Richard Evans, M.A., B Sc, gives a description of Ephydatia Olembingia, a fresh-water sponge. 3 Mr. R. O. Pannett, B.A., describes a collection of Nemerteans from Singapore, with four plates 4. Mr. Arthur Willey describes the Protostigmata of Molgula Manhattensis, a New England species of ascidian. This paper is accompanied by a plate.

The Journal of Anatomy and Physiology. Conducted by Sir WILLIAM TURNER, F R S., D J CUNNINGHAM, F R S, G. S. HUNTINGTON, M.D, A MACALISTER, F.R S., and J. G. M'KENDRICK, F.R S. October, 1900. Vol. xxxv., Part 1. With Plates and Figures in the Text. London Charles Griffin and Co., Limited. Price 6s —The contents of the present part are: 1. Atresia of the Aortic Orifice due to Anomalous Development of the Auricular Septum, by Joseph A. Blake, M D 2 Absence of the Inferior Cava below the Diaphragm, by Thomas Dwight, M D, with a plate. 3. The Sternum: its Early Development and Ossification in Man and Mammals, by Professor A M. Paterson of Liverpool, with two plates 4 Some Points in the Anatomy of the Digestive System, by A Birmingham, M D. The author of this paper strongly advocates the use of formalin injections for hardening the tissues and organs of the body and in retaining them in their position. The parts treated of are the salivary glands, the tongue, the palate, the pharynx, the œsophagus, the stomach and intestines, the levator ani, the liver, and the pancreas and the peritoneum 5. The Frequency of an Opening between the Right and Left Auricles at the Seat of the Foramen Ovale, by Professor E. Fawcett and Dr. J. V. Blachford. In 306 cases they found the frequency to be 31·37 per cent 6. Note on the Configuration of the Heart in Man and some other Mammalian Groups, by Dr. Charles J. Patten, with three plates. 7. The True Cæcal Apex of the Vermiform Appendix; its Minute and Comparative Anatomy, by Dr. Richard J. A Berry, with five plates 8 Of the Movement of the Lower End of the Radius in Pronation and Supination and on the Interosseous Membrane, by Dr. James F. Gemmill. 9. The Anatomy of the Ingestive Tract of the Salmon, by Dr G. Lovell Gulland. 10 Archæologica Anatomica: The Parotid, by "A.M." 11. Anatomical Notes and Queries. 12 Proceedings of the Anatomical Society of Great Britain and Ireland.

New Inventions.

AN ASEPTIC DREDGER.

IT has struck me that the whole procedure of an aseptic operation or an aseptic dressing of a wound breaks down when the surgeon who wishes to dust on some antiseptic powder takes hold of a septic bottle or tin for that purpose After the powder has been dusted on the surgeon has, with surgically unclean hands, perhaps to unravel a strip of gauze for packing or to cut a square of gauze to lay over the wound With this idea in view I have devised a dredger made of celluloid which is light, transparent, and can easily be rendered aseptic The dredger is so made as to stand with safety in a basin of antiseptic lotion from which it can be picked out by the surgeon or dresser The bottom of the dredger is weighted so as to keep it in a condition of stable equilibrium if standing in antiseptic lotion of shallow depth, also to keep in position its centre of buoyancy if floated in a deeper basin of lotion. The projecting rim is to prevent water from the surgeon's wet hand, or from the basin, damping the powder inside. The rim also keeps the head of the bottle above water should it get upset, and so again keeps the interior dry Over the perforated disc there is a closely-fitting cap which should always be *in situ* when the dredger is not in use. When the cap is on the whole dredger can be immersed in antiseptic lotion before the surgeon requires to use it I should suggest that the interior of the bottle be sterilised by a tablet of formalin before introducing the powder The instrument has been made for me by Messrs. Reynolds and Branson of Leeds



BERTRAM C. STEVENS, B S Durh., M R C S. Eng.

Leeds.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Nov. 8th, Sir WILLIAM MACCORMAC, Bart, K.C V O., the President, being in the chair.

The SECRETARY reported the death on Oct 27th of Mr. William Anderson, Member of the Court of Examiners. It was then resolved:

> That the Council hereby express their deep regret at the death of Mr William Anderson and their sincere sympathy with his widow and family in their bereavement That the Council do also record their appreciation of Mr Anderson's services to the College while a Member of the Court of Examiners and as Hunterian Professor, and deplore the loss to the College of a Fellow distinguished for his ability as a surgeon and for his refined and cultured attainments

The PRESIDENT stated that the vacancy on the Court of Examiners and the vacancy on the Board of Examiners in Dental Surgery, occasioned by the death of Mr Anderson, would be filled up at the next meeting of the Council in December.

The Council elected Mr W. J. Walsham a member of the Board of Examiners in Dental Surgery (Court of Examiners section).

A report was received from the Finance Committee on the administration of the Sir Gilbert Blane naval medals. The report stated *inter alia* that since the foundation of the fund in 1830 70 medals had been awarded to medical officers of the navy and that a balance of nine guineas remains. New dies for the medal have recently been made at the Royal Mint.

The Council directed that the attention of the General Medical Council should be called to the advertisements of a man at Bury St Edmunds and his illegal assumption of the description "*R D S, R C S Eng*," and they were *requested* to take the matter into consideration with a view to action being taken under Section 13 of the Dentists Act, 1878

The PRESIDENT stated that the Bradshaw Lecture would be delivered by Mr. John Langton on Wednesday, Dec. 12th, at 5 P M., and that the subject of the lecture would be the Association of Inguinal Hernia with the Descent of the Testis.

The Council resolved that the lecture hour for the course of lectures in February and March, 1901, should be 5 P.M.

A SUM of £2350 has been promised towards the Mary Kingsley Memorial Hospital which is being promoted by the Liverpool School of Tropical Medicine. The principal subscribers are local shipowners and merchants whose business connexions with West Africa have made them acquainted with the work of the deceased lady.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 17, 1900.

THE problems of disease are often much more complex than might be supposed, and if this is true of the etiology and pathology of a malady it is equally true of the treatment. In many diseases we are unable to say that our "remedies" have any influence at all on the course of the disease, and this is especially likely to be the case in those affections in which a large proportion of the cases recover even when no treatment is adopted. This is peculiarly true of tetanus. From the earliest times it has been recognised that a certain number of cases would recover and a certain number would die under any form of treatment that might be adopted, and though of late years several new therapeutic methods have been introduced it can hardly be said that we have advanced very far on the road to the successful treatment of this disease. For an accurate estimation of the therapeutic value of any remedy it is essential that the ordinary course of the disease for which it is administered should be well known, otherwise there is great risk of attributing to the treatment the improvement resulting from natural causes.

It is only within recent years that we have had a clear idea as to the etiology of tetanus. Tetanus was until quite lately attributed to those agencies which are invoked when knowledge is deficient. Cold nights after hot days, exposure, privation, were credited with the induction of the disease, yet now we know that though these agencies may predispose to tetanus by a lowering of the vital powers, they can have no real action in causing the disease. It was, however, seen that in nearly all of the cases a definite wound was present, and when the germ theory of many diseases was accepted the thoughts of pathologists naturally inclined towards the idea that tetanus also was due to a microbe. In 1885 NICOLAIER identified the bacillus tetani, and ROSENBACH'S researches in the following year confirmed the theory that it was the cause of tetanus. The next step in advance was the recognition of the fact that the bacillus does not in the vast majority of cases invade the blood stream, but is confined to the vicinity of the spot where it was inoculated. The deductions from this were that only the toxins produced by the bacillus were absorbed, and that these affected the motor centres of the brain and spinal cord. The cleansing or the removal of the local affected area might therefore be expected to lead to a cessation of the manufacture of toxin, and therefore to recovery. But there are two facts which diminish greatly the benefit which might be expected to result from the local treatment; in the first place there is a great risk of re-inoculation of the tissues which have been laid bare in excision or amputation, and in the second place the local removal of the focus of bacilli cannot affect the toxin which has already passed into the circulation. Yet in spite of these defects the local treatment remains one of the most valuable and important factors in the treatment of tetanus. Treatment of the symptoms has been employed for many years, but it cannot be said that much is to be expected from it. Yet sedatives are still rightly considered of value. The internal administration of carbolic acid has been credited with many successes and is well deserving of further trial, though we are ignorant of its mode of action. In 1891 the employment of an anti-tetanic serum was first suggested. It was proved that in a test-tube the serum of an immunised animal has a perfect power of neutralising the toxin from a virulent culture of the bacillus. A similar result was obtained when the toxin and the antitoxin were injected, one immediately after the other, into an animal and the value of serum seemed to be definitely proved. But when the serum was employed in the case of patients suffering from tetanus recovery by no means necessarily followed. In many cases no improvement occurred, though some of the patients recovered; and it was found that no definite reduction in the mortality was effected. Then it was discovered that the antitoxin could neutralise only so much of the toxin as was circulating in the blood stream, and that the toxin had the power of entering into a firm combination with the motor cells of the nerve centres, and that this combination was quite unaffected by the antitoxin. In 1898 it was suggested that as the toxin affected the cells of the brain and the spinal cord it was advisable to inject the serum into the brain or into the subdural space, and this method of administration has been adopted in a number of cases. In some cases recovery has followed. In others death has occurred. The fatal result does not seem to have been in any wise due to the antitoxin, as a rule but in one case the patient recovered from the tetanus and died eight weeks later from cerebral abscess, undoubtedly the effect of the injection. From our present knowledge we may say that the subdural method of administration seems to offer the fittest opportunity for the remedial action of the antitoxin to be manifested.

It seems in the present state of our knowledge that the best hope of the successful treatment of tetanus depends on an early and thorough cleansing of the wound with, if necessary, excision or even amputation, and on the early administration of the antitoxin before the motor cells are irremediably implicated. The very fact that spasms have occurred shows that the toxin has already affected the nervous centres, and the loss of a few hours may suffice to render the antitoxin useless. It may be that in the future a more powerful antitoxin may be prepared which will be able to destroy the toxin even in the central nervous system, but for the present a prompt recognition of the disease and early treatment are conditions essential to success.

* * *

ALL fatalities under anæsthesia are terrible, but there is no doubt that those which take place on occasions when the operation is in itself trifling and not *per se* dangerous to life are peculiarly sad. In this category fall deaths which occur during dental operations. It would not be fair to say that these deaths are preventable, but it may very well be urged that in many instances risks are inflicted upon patients which are out of proportion to the gravity of the operation. In the early days of anæsthesia chloroform was commonly given in dental cases, and SNOW, whose experience was extensive for his day, regarded the practice as safe and justifiable. He even omitted the precautions concerning special preparation, and allowed his patients the sitting posture during the administration and tooth extraction. SNOW never met with a death under chloroform among his dental cases. It would, however, be very misleading were we to argue from this that chloroform is a fitting anæsthetic for such patients and that we are justified in allowing the upright position for persons who are about to inhale the most potent of narcotic vapours. What SNOW could do with impunity the great majority of chloroformists may not do. In the days of SNOW chloroform was not in the hands of every medical man and its use was not of every-day occurrence; to-day there is a danger lest familiarity should breed contempt of dangers. It seems, therefore, well within our province to urge upon the profession the wisdom of adopting anæsthetics less dangerous to life in all cases in which they are available and effectual.

The preference for an anæsthetic which induces a very profound and persisting narcosis in operations upon oral, pharyngeal, laryngeal, and nasal structures is readily explicable. Undoubtedly, chloroform is the most easy of all anæsthetics to manipulate in such cases, and in the facility with which a death-like sleep can be obtained by its use lies its greatest peril. As SNOW employed this agent it was comparatively safe, for after his wonderfully exact experiments he was able to use it for light and transient anæsthesia, always stopping short of the depth of narcosis which is now so often striven for and obtained. In that way lay safety in this danger. Again, while practically everyone can "push" chloroform and obtain a profound anæsthesia few are able successfully to limit its action, and perhaps fewer still to obtain satisfactory results while employing *the anæsthetics of less* potency. It was the failure to obtain uniformly satisfactory results with nitrous oxide gas which led practitioners, especially in Germany, to employ pental and bromethyl. These members of the alcohol series of narcotics obtained a vogue because they possessed the paralysing powers of chloroform without, it was assumed, the lethal perils of that body. However, as WOOD and many others have demonstrated, they are and must be, when their chemical composition and physiological action are considered, as potent as chloroform is potent and safe only in so far as that potency is kept within the range of light anæsthesia. When the fourth degree of narcosis is reached the medullary centres must gradually pass under the influence of the drug employed, and its safety depends then upon whether or not its power to destroy nerve protoplasm is great or small. That of chloroform is great, as is that of bromethyl and of pental, while that of ether is slight, probably as slight as alcohol. That of nitrous oxide, however, is least of all. The use, then, of chloroform or its congeners for anæsthesia in dental operations, if permissible at all, should be restricted to the most narrow limits.

In regard to a case recently reported the following facts are sent to us by the courtesy of Dr. JAMES SAVEGE. The patient, a boy, aged nine years, went to a dentist in Hull to have 10 or 12 teeth removed. The dentist attempted to give nitrous oxide gas, but the boy was "unmanageable" and anæsthesia was not obtained. It was decided then to obtain a medical man's services and after an interval of half an hour chloroform was administered from a wire mask over which lint was stretched. The boy was placed in the semi-recumbent posture in a dental chair tilted back. He struggled slightly. The operation lasted from 15 to 20 minutes, chloroform being given four times at intervals during this time. Six and a half drachms in all were used, being dropped over the lint. The operation was performed after each chloroformisation when the ocular reflex had disappeared. Within a minute of the completion of the operation the boy's face grew ashy in colour and the pulse and heart's impulse were lost. Respiration, which had been steady and regular, failed after growing arrhythmic. The pupils were widely dilated. All measures to resuscitate the boy failed. No note is given as to whether inversion was tried. This clearly was the "first aid" indicated. The reason for using chloroform in this case was that the nitrous oxide had failed, and if we are justified in the assumption that the dentist attempted to administer it and to operate, being single-handed, it is not surprising that his efforts failed. It used to be a common but mistaken idea that nitrous oxide was the special anæsthetic of the dentist and that he could administer it single-handed and operate without detriment to his patient. Possibly a few men of exceptional quickness succeeded, but when it is remembered that the duration of anæsthesia is considerably less than one minute it is obvious that no man can hope to adopt the double rôle of anæsthetist and operator and to do justice to his own powers in either capacity. The reported failure—an actual failure of nitrous oxide never occurs—was no valid reason for the use of chloroform. It may be urged that extensive operations on teeth cannot be performed under nitrous oxide. This is not true. Repeated administrations of that gas, inadvisable as they are when the patient can attend repeatedly, can, in suitable cases, enable a mouth to be cleared at one sitting, especially if ether is employed as an adjuvant. We say in suitable cases, because we hold very strongly that, as the leading members of the dental profession now teach, wholesale extractions are to be avoided, especially when undertaken at one sitting. It must occur in the case of persons of small means that repeated fees are beyond their powers and it then becomes necessary to do the operation at one time. In these cases nitrous oxide can be given intermittently or continuously through a mouth-tube or nasal injector, or the simpler and cheaper method can be adopted of using gas first and producing full surgical anæsthesia with ether. This last method enables a surgeon to remove a jaw *en bloc*, so that if properly conducted it is at least competent for all dental exigencies.

LORD ROBERTS's splendid military services will be ever gratefully remembered by his country, and not least in connexion with the war in South Africa. He has also indirectly done another huge service to civilisation at home. It seems certain that his letter on "treating," published in our issue of Nov. 10th, is having a much wider application than the one which he intended. Lord ROBERTS is naturally jealous for the honour and character of the men whom he has led, of whom he is proud, who "bore themselves like heroes on the battlefield and like gentlemen on all other occasions," whom he "trusted implicitly" and did "not trust in vain." It was his right to speak a few plain words on anything that concerned their welfare to the people of this country whose emotions have been so deeply stirred by the events of the year and whose information on many points connected with the campaign has been as inexact as profuse. And he has cautioned the public as to a particular method of showing their gratitude to the brave troops returning from the seat of war—a method which is full of discredit and dishonour both to the men themselves and to their friends. Right well has Lord ROBERTS spoken. He does ample justice to the honourable bearing and gallantry of our sailors and soldiers and to the keen appreciation of these qualities in the civil population at home, while he implores the people not to show their appreciation by the degrading habit of offering drink. Lord ROBERTS'S recognition of the good sense of the people at home will make them more ready to respect his wishes. Those wishes should command universal attention and no self-respecting man or woman should venture to offer drink to the returning troops in the street or in the public-house Lord WOLSELEY, who, like Lord ROBERTS, has published his views on this matter, has long been telling us that the army is a great school of discipline. And we very much mistake if the many independent witnesses to the character and conduct of our army in South Africa will not confirm the testimony of the two distinguished commanders to the effect that the discipline has reacted splendidly. We know of good judges in the Volunteer force, who have shared the brunt of the war in South Africa with Her Majesty's regular soldiers, and who are resolved that henceforth no one shall speak slightingly in their presence of the virtues of the rank and file of the British army. Why, then, try to tempt them?

It has to be remembered that under short-service regulations a soldier is not only a soldier. Our wars are not his only occupation. He comes from and returns to civil duties after the expiration of his term of service. Such is the proper respect of employers for him that in most cases his civil place is kept open for him if his military duties take him away from civil employment. It is certain that more favour yet will be shown to men who crowd into their life service to the State and service to their employers—always provided that their moral character is not impaired. Here comes the responsibility of the leaders of the army. They wish to restore the men of whom they are so proud as soldiers to their homes and to their employers unimpaired and unbesmirched. He who would intercept the soldier fresh from the field where all his virtues have been splendidly displayed on his way back to civil life and duty, and lure him into an act of vice or drunkenness, may call himself the soldier's friend, but he is the soldier's enemy and should be recognised as such. We believe that the words of Lord ROBERTS and Lord WOLSELEY will conduce to good results. The whole subject of "treating" is one that merits deep consideration. The medical profession has long been teaching that casual drinking is bad. Most "treating" is of this nature. The drink so taken is taken without food; it is taken without needing to be taken; it is superfluous; it leads in a large number of instances to intemperance. From the pulpit no less than from the medical consulting-room these points have been urged without much effect. But now that the ruling spirits of our army have spoken in their support we look forward to reform. The word of our great soldiers will prove, particularly at this juncture, to be more powerful in the reform of our absurd drinking customs than the sermons of preachers or the opinions of men of science, and will counter-balance the harm done by the extreme dogmas of fanatics. What is true for the army is true for the whole population. And especially true for those who live by labour, who need to spend wisely what they make, and who can only rise in the social scale by strength of character and self-denial. Labouring families must suffer some degree of starvation if a third or a fourth of the wages which they earn goes into the coffers of the publican instead of into the coffers of the butcher, the dairyman, and the tailor. The practice of "treating" is wholly bad, because it leads to casual drinking, a habit which lays the foundations of disease. It lessens the sound nourishment of families. It promotes laziness. It degrades the sentiment of self-respect and takes the fine edge off many moral qualities. It powerfully antagonises the remedies of the physician and of the moralist alike.

For which reasons we welcome the formation of any association having as its aim, or one of its aims, the prevention of casual drinking. The Church of England Temperance Society has led the way in this direction. And now we learn that in Scotland a new society has been formed, with His Grace the Duke of SUTHERLAND as President, to be called the "Scottish Self-control Society," or briefly the "S.S.S." The members undertake three things:

1. Not to drink intoxicants before noon or at any time except at a regular meal.

2. Not to treat—i.e., not to offer or to accept alcoholic drinks except with a regular meal.

3. Not to give or to accept drink in return for services rendered.

That in a country like Scotland, famous for its religious, intellectual, and academic superiority, the people, without distinction of church or class, should consume alcohol, chiefly in the strong form of whisky, at all times and on all occasions has long been an inexplicable fact. We do not know whether the "Ten-tumbler Club" still survives, but it is not many years since it existed and included men of high character and celebrity. When elders and professors have been involved in the habit of drinking a poisonous quantity of alcohol daily how could a high standard of national sobriety be expected? The use of whisky by the Scotch has proved infectious, and it has extended to England on a scale which deserves, and is now receiving, the grave study of the medical profession whose authority is too often quoted in its support. We may hope that the time of the strange belief that it is a compliment—a friendly act—to a man to press him to drink is about to pass away. The fact that an important section of Scottish society recognises the baneful influence of casual drinking is of good omen. We are pleased to see in high office in the "S.S.S." a high theological authority like Professor CHARTERIS, D.D., and Sir WILLIAM MUIR, K.C.S.I., Principal of the University of Edinburgh. No class, by adhering to the Society, can do more good both to itself (we regret to say) and to the Society (we are proud to remember) than the medical schools of Scotland. For the medical students of Scotland have generous and hospitable traditions which lead them too often to compliance with the customs which it is the object of the Scottish Self-control Society to destroy. We wish the movement all success.

Annotations.

"Ne quid nimis."

A CORONER'S VIEWS OF MEDICAL EVIDENCE.

ACCORDING to a paragraph in the *Yorkshire Post* Mr. J. S. Walton, M.D. Erlang., L.S.A., one of the coroners of that county, holds opinions with regard to the scope and conduct of inquests to which we must beg to demur. He is stated to have said "that it was ridiculous to think that medical evidence was necessary at all inquests. To have a post-mortem examination on every occasion was a waste of public money to which he was strongly opposed. Some of the members of the county council evidently thought the coroner's court was a court of medical inquiry. It was nothing of the kind, and he thought that the members of a body like the county council ought to know what they were talking about." But were the members of the county council so ignorant that they did not know what they were talking about? and is a coroner's court not a court of medical inquiry or anything of the kind? We will pay the coroner and the county council alike the compliment of assuming that neither ever contemplated the holding of a post-mortem examination in every conceivable case where an inquest is necessary. For example, where a man has thrown himself in front of an express train and has been cut into fragments by the wheels a post-mortem examination in the ordinary acceptation of the term may not be indispensable. The cause of death is hardly obscure in such a case; but is medical evidence therefore not to be heard at the inquiry if it be obtainable? Evidence as to the state of the mind of the deceased would surely be desirable if it could be called. And in any case that does not involve an obvious cause of death, will it not be a source of danger to the community if the true cause is not established by the best possible evidence? It is the duty of the coroner to hold an inquest in all cases of a sudden death where the cause is unknown. Are the plausible suggestions, for example, of relatives to be taken as evidence of how the deceased met his end? Or is it to be borne in mind that inquests are held in order that there may be certainty and that that certainty can only be attained in one way—namely, by considering the evidence of skilled and independent witnesses, for the giving of whose testimony it may be necessary that a necropsy should take place? Of course, in many places where death is reported to the coroner he may not consider an inquest necessary. He may satisfy himself, if he chooses to take the responsibility, even without the opinion of a medical man, as to why the person in question died, and give his order for the burial of the body accordingly. We are not here discussing the wisdom of his taking this course except in very clear cases, but we can hardly see how if he has once decided that the case is one for inquiry he can at the same time expect the jurors to decide rightly without having medical testimony before them. We have pointed out that there may be reasonable exceptions to this, but we assume that these were intended by the county council, of which Dr. Walton appears to have spoken in terms which are the more to be regretted as Dr. Walton himself holds medical qualifications.

EXPECTED VISIT OF COLONIAL TROOPS AND THEIR MEDICAL CORPS.

THERE is a prospect that within a short time London will be honoured with the presence of representatives of the Colonial troops who have done such splendid service in the war in South Africa, including representatives of the Colonial Medical Corps. We trust that the opportunity of showing hospitality to them will not be lost. The medical profession will doubtless devise some way of doing honour to their Colonial brethren, whose services have been so valuable, and we sincerely trust that the way selected will be one in which all ranks and sections of the profession may unite. Probably, after the hardships of war and the discomforts of the sea, our Colonial brethren would much appreciate the private hospitality of their metropolitan brethren and a short experience of the quiet home-life of London.

THE EASTBOURNE GUARDIANS AND VACCINATION.

THE position of a defendant to a plaint in the county court against whom judgment is given for a paltry sum of £2 11*s.* 6*d.* is not at any time one of dignity, still less is it so when a judge of well-nigh 30 years' experience accompanies his decision with the stinging criticism that he has never known a more contemptible or dishonest defence than that which he had just heard raised. It was in this ignominious position that the guardians of the poor at Eastbourne deliberately placed themselves and the district of which they are the representatives by refusing to pay the justice's clerk's fees incurred by their vaccination officer in taking out summonses against various persons for not having had their children vaccinated according to law. The justice's clerk sued the vaccination officer who clearly was primarily responsible, the question remaining whether the guardians were liable to recoup their vaccination officer, and in order that this might be ascertained, by the learned judge's direction the guardians had been added as third parties. The guardians endeavoured to set up the statutory defence that the debt claimed against them should have been paid, if at all, during the half-year in which it became due, or three months after, but they were not permitted to rely upon this as, possibly to show their contempt for the technicalities of the law, they had omitted to give the prescribed notice of their intention to do so. In any case, however, it would not have availed them, as His Honour found that the time ran from the date when they first resolved not to pay, which was some time after the debt was incurred. Their contention that a vaccination officer has no authority to take proceedings without general or specific instructions from the guardians equally failed to convince Judge Martineau; that it should have been seriously raised considering the decisions that have been given upon the subject by the High Court seems strange; and it is not surprising that in the end judgment went against the guardians, accompanied by the remarks quoted above and by a refusal of leave to appeal. The question as to who pays the costs incurred by the unsuccessful defendants in such legal proceedings as these remains. Do guardians in such cases defray them out of their own pockets? They can hardly be justified in taking them out of the pockets of other people unless before they decide upon resistance in a court of law they are advised by counsel of recognised position that resistance is their duty and that it is likely to meet with success.

THE PREVENTION OF TUBERCULOSIS.

A REPORT presented to the vestry of Clerkenwell by Dr. George Newman, medical officer of health of that parish, will be found to contain a useful summary of what is at present known on the subject of the prevention of tuberculous disease. In the latter portion of the report, which has been published in pamphlet form, Dr. Newman gives full details of the precautions which ought to be attended to by the patients and their friends; he also recommends voluntary notification of cases of phthisis, and describes the methods of disinfection which may be undertaken by the sanitary authorities after the death of a patient.

THE INFLUENCE OF CLIMATE UPON MENSTRUATION.

IN THE LANCET of Nov. 10th (p. 1347) Mr. W. J. H. Hepworth recorded a most interesting case of amenorrhœa, in which the patient had found that a visit to the country was sufficient to bring on her periods. With such certainty did this occur that she formed the habit of going out of town for a couple of days in each month when she at once became unwell, although if she remained in London the period invariably failed to appear. Such a marked instance as this of the influence of climate upon menstruation is seldom met with. It is a common enough matter for young women to suffer from amenorrhœa when they first come to London from the country, but so immediate and certain an effect as is apparent in the case recorded is of very rare occurrence. A considerable amount of study has been devoted to the influence of climate upon menstruation. There can be little doubt but that it plays an important part in determining the age at which puberty occurs, but is only one—perhaps, however, the most important—of many factors influencing the result. Marc d'Espine, who made some special investigations upon the subject, came to the conclusion that the onset of puberty varies directly with the latitudes, the tendency being for the first menstruation to occur at an earlier age the nearer the equator is approached. The climate of a country plays, however, a more important part than its latitude, and the variations observed in the age of puberty in different countries bear a close relationship to the average temperature of the air in those countries. Krieger has drawn up an elaborate table showing the exact age at which puberty occurs in different latitudes, and from this it can be seen that while the average age in Swedish Lapland is 18 years, in London it is 14 years and nine months, and in Sierra Leone 10 years. The matter has been almost entirely considered from the point of view of the time of the occurrence of the first menstruation, but the influence of a climate in producing an early or late puberty may well be regarded as indicating its probable effect upon the occurrence or non-occurrence of menstruation after puberty has been established. That climate plays any part at all in the matter has, however, been denied by many authors, who hold that the question is rather one of race and nationality. In support of this they bring forward the fact that women of different nationalities inhabiting the same country under similar climatic conditions do not begin to menstruate at the same age. In Hungary, for instance, Joachim has shown that the average age at which puberty occurs amongst the Magyars is from 15 to 16 years, amongst the Jews from 14 to 15 years, and amongst the Slavs from 16 to 17 years. This fact does not, however, show that the influence of climate is of no importance. To affirm this it would be necessary to prove that women of different nationalities inhabiting the same country under similar climatic conditions for very long periods of years had continued throughout to menstruate for the first time at the same average age. In discussing the onset of puberty many other conditions remain to be considered, such as race, nationality, mode of life, station in life, the early excitation of the sexual feelings, and the question of nutrition and clothing. Mr. Hepworth's case, however, proves that change of climate alone may have a marked effect upon menstruation. Nor is this surprising when we consider that the whole question is largely one of nutrition. Heat and sunlight are amongst the most important factors of nutrition, and the early onset of menstruation amongst the inhabitants of the countries near the equator is no doubt in part due to the great heat and the large amount of sunlight to which they are exposed.

THE QUALIFIED QUACK.

WE record in another page the fact that the Royal College of Physicians of Edinburgh has purged its Register of a name that has for some time brought it discredit with impunity. One of the scandalous advertisements of "Dr. Harman Tarrant" lies before us culled from the trade columns of the *Australasian*, a newspaper which the advertisement requests those responding to mention. The advertiser gives an address at Sydney, and invites those who consult him, if they prefer to do so, to address him at a box rented in the Sydney Post Office. He also informs those who may desire his advice personally or by letter that during his recent world-wide travels he has "discovered a new method of healing,' which, apparently combined with "knowledge of special complaints gained by careful study and observation in the principal hospitals of the world," enables him to cure persons suffering from such "dangerous symptoms" as, for example, indigestion, weak eyes, or a sallow skin; while another paragraph equally skilfully worded in order to bring into his net those who may really need medical or surgical assistance, promises treatment, in return for a fee of £1, for a miscellaneous list of complaints that comprises fistula, piles, constipation, hip disease, Bright's disease, dropsy, and worms. The whole is, in fact, an elaborate and aggravated example of the ordinary quack's advertisement, including the usual promise of a free consultation, but the feature which renders it especially dangerous, a feature to which we have made previous reference, is that the advertiser appends to his name (and until the present action taken by the Royal College of Physicians of Edinburgh had the right to do so) the letters F.R.C.S.E., L.R.C.P.E., L.M.R.C.P.E., L.R.C.S.I. It is obviously unfair both to the general public and to members of the medical profession at work in a distant colony that conduct of this kind should be permitted by universities and corporations in the mother country. Every step should be taken by the authorities as promptly as may be to enable those in the colony to protect themselves. The Royal College of Physicians of Edinburgh has deprived Tarrant of two of his advertised qualifications; it now remains for the Royal College of Surgeons of Edinburgh and the Royal College of Surgeons in Ireland to deal with the other two.

STREET NUISANCES.

IT will be remembered that some time ago the London County Council and representatives of the Corporation of London, the vestries, and the district boards held a conference to consider regulations about the streets and street traffic. A committee was appointed and on Nov. 7th the report of this committee was presented to, and received by, the conference. Several excellent regulations were proposed for the removal of refuse, the chief among them being "that in the opinion of the conference it is highly desirable that in all streets notified by the police as being those where house refuse must be placed on the footway the hour for the removal of the refuse shall be 9 o'clock and not 10 o'clock as at present' Another recommendation was that with regard to the clearing away of snow the old rule which entailed that duty on the householder should be reverted to This recommendation was rejected Nothing further was recommended as regards street cries, and as regards street music the committee reported that they considered it undesirable that street musicians should be required to take out a police licence. They recommended, however, "that wherever two thirds of the householders in any road, street, terrace, or collection of houses sign a notice to the Chief Commissioner of Police that they desire to be unmolested by itinerant musicians the police should be instructed to order such street musicians to move from such locality" The recommendation was adopted Other recommendations dealt with the placing of the names of streets so that they can be seen—a sorely needed reform—and the attention of the police was "invited to the delivery of barrels' We consider that the attention of the police might be profitably called to the delivery of a great many other things besides barrels—biscuits, soap, hampers, flour, and the like, to say nothing of barrows laden with ladders, spikes, and coils of wire with which the National Telephone Company block the footway The Mayor of Westminster might also draw the attention of his brother of Holborn to the filth and mess caused by Covent Garden Market But until that market becomes as great a nuisance as Smithfield we suppose it will linger on The Augean stable of London needs a very Hercules to cleanse it, but we are glad to see that at least the existence of nuisances is recognised We are sorry to see no reference made to the perfectly avoidable mess made by waste paper such as news posters and omnibus and tramway tickets

ON THE CEREBRAL CONDITIONS ASSOCIATED WITH SACCHARINE DIABETES

DR LOUIS DESBONNETS (*Thèse de Paris*, 1900) gives a long account of the above subject, based on the study of 29 cases whose clinical history and symptoms are recorded at some length But little attention has been paid in text books to the cerebral troubles associated with diabetes, Bouchard having stated in 1885 that "the nervous symptoms of diabetes though frequent are but little known" Among the more frequent symptoms recorded by Dr Desbonnets are general muscular feebleness and proneness to fatigue, temporary and transient (sometimes permanent) attacks of hemiplegia and monoplegia which are of an atypical character, neuralgias (Buzzard) affecting by preference certain nerves, such as the sciatic, crural, trigeminal, inter costal, and occipito cervical, and probably indicating commencing peripheral neuritis Visual disturbances, diplopia from weakness and incoordination of the ocular muscles, and temporary attacks of amblyopia are not uncommon. The general cerebral state is one of apathy and loss of all individuality and initiative in conduct Later, ideas of ruin, hypochondriacal melancholia, and delusions of persecution may appear, the particular form of mental disturbance taking its special colouring from any neurotic tendency which may be present (Westphal) Vertigo, headache, insomnia (Pierre Marie), and nightmare are frequent in diabetics The tendency to apathy and torpor may at times deepen into narcolepsy and this may occur periodically The following is one of the surgical cases recorded in the *Thèse* A young shoemaker, of stout build (a tendency which he inherited), had since 1896 suffered from polyuria, especially during the night One morning on waking he was surprised to find that his left leg was paralysed and insensible and could not be moved The following day the arm became similarly affected, and finally the left side of the body grew hemiplegic and hemianæsthetic He was unable to close the left eye and could not see objects in the left half of the visual field (hemianopsia) The eyelid recovered soon after but the general hemiplegia persisted The urine was found to contain 3 3 per cent of sugar and to have a specific gravity of 1035 Polydipsia and dryness of the mouth were present in a marked degree Power returned partially to the left arm and leg The knee jerks were absent Ophthalmoscopic examination showed a normal fundus in each eye Both smell and taste were diminished on the left side and hearing was impaired in the left ear The diagnosis was doubtful, but the symptoms pointed to a partial damage of nerve fibres in the posterior part of the internal capsule of the right cerebral hemisphere Fursterer has found minute capillary embolisms (supposed to be produced by granules of glycogen) in the brains of patients dying from diabetes with symptoms of temporary paresis or paralysis, the more grave cases of persistent hemiplegia showing distinct cerebral foci of softening, and Dr Desbonnets inclines to the same belief

TUBERCULOSIS IN THE FRENCH ARMY

IN a short article published in the *Archives de Médecine et de Pharmacie Militaires* for October Inspector General Kelsch recapitulates his views regarding the incidence of tuberculous diseases in the French army. The admirable labours of Villemin, of Koch, and of their followers have, he says, reduced the etiology of tuberculosis to an expression as simple as it is luminous Monopolised by experimentation, which has constituted its pathogeny upon the image of the disease as observed in animals, forsaken in a great measure by clinical observation, which has been compelled to efface itself before the brilliant notions of the laboratory, tuberculosis in man has become a disease of inhalation and ingestion This being so, the director of Val-de Grâce is convinced that the situation is fraught with danger To begin with, in spite of the incessant anti-microbic warfare during the last 10 years, tuberculosis is still progressing All the artifices of statistics cannot conceal this painful fact The disease causes more damage than ever among young soldiers of less than a year's service, whereas amongst veterans it is stationary or even decreasing Why should there be this discrepancy? Are not all ages equally liable to microbic attack? Moreover, young soldiers suffer chiefly during their first six months which are also the most inclement of the year If tuberculosis were communicable solely by contact from man to man all ages should suffer alike, and no season should be exempt more than another Inspector General Kelsch is firmly of opinion that it is the conscript who infects himself Many conscripts when they reach barracks are the hosts of latent tuberculosis, fibro caseous nodules, solitary or multiple, scattered amongst the mediastinal or the mesenteric ganglia, in the lungs or in some other organ—a condition of things that is perfectly compatible with a vigorous constitution and flourishing health, and one that is not to be detected by ordinary examination In fully a third of the necropsies which he has conducted on subjects who died from other causes than tuberculosis Inspector General Kelsch has met with these hidden lesions and they were likewise present in 51 out of 120 unselected conscripts whom he inspected on joining, by means of the radioscope He believes that the deposits may take place in utero and that most certainly they are of very frequent occurrence during childhood Although latent they are by no means defunct, but, on the contrary, retain the elements of vitality, spores ready at any moment to evolve, veritable sparks which brood beneath the ashes[1] and constitute a perpetual menace for the individual. Inspector-General Kelsch failed in his attempts to implant tuberculosis in 80 guinea-pigs which in the course of one and a half years he inoculated from the sweepings of barrack-rooms at Lyons, but he is nevertheless far from disregarding the dangerous nature of floor dust and fully appreciates the importance of the sputum as a vehicle of contagion. We should not, however, refuse to acknowledge the possibility of auto-infection or fail to adopt measures for the alleviation of so great an evil. The virus of rabies or of anthrax once implanted is strong enough to triumph over all resistance of its own accord, being equal to the task of conquering human vitality unaided; but in the case of phthisis pulmonalis the bacillary enemy is feeble enough to require an ally in the citadel itself, it cannot subdue the garrison unless there is complicity amongst the defenders. Before the bacillus of Koch can effect a serious lodgment in the human organism it must have the assistance of a traitor, and unfortunately the disaffected are numerous, chief among the number being insufficiency of proper food, *surmenage*, defective cleanliness of body and habitation, impure air, dark rooms, and, above all, alcoholism. The only solid prophylactic basis whereon to build in the case of tuberculosis consists in the development of the soldier's physical vigour together with the amelioration of his hygienic and social surroundings.

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[1] E'en in our ashes live their wonted fires —Gray.

THE HOWARD ASSOCIATION AND STREET RUFFIANISM.

THAT excellent society the Howard Association has issued its annual report dated October, 1900. In dealing with the work of the year the report treats of many subjects, such as reparation to the injured as well as punishment for the injurer, the International Prison Congress recently held at Brussels, admonition and punishment, the housing of the poor, and the rural exodus. In addition to these the questions of juvenile roughs and truants, the Juvenile Offenders Bill, and the temperance question are discussed. With regard to the first of these the association speaks in terms of praise of the children's courts existing in Australia, in which school attendance cases and children's offences in general are dealt with. Such courts would, we think, do good work here, provided, of course, that they were quite independent of the School Board. With regard to the Juvenile Offenders Bill, which was dropped owing to the weakness of the Government in giving way to the cries of faddists, the association considers that if the birching clauses were not to apply to children under 10 years of age the Bill would be a good one. Even Mr. J. A. Picton prefers the birch to the gaol. We can only hope that the Bill will be carried through by the present Parliament and that a pistol clause will be embodied in it. With regard to Hooliganism the report says:—

> "Whilst whipping is a useful check to the worst forms of 'Hooliganism,' the prevention of the evil at its *sources* is of far greater importance Idleness, parental neglect, and want of occupation and of healthful physical exercises are amongst these causes, together with frequent magisterial laxity in failing to support the police."

With this we certainly agree. Magisterial laxity is responsible for much of the excess of violence which has of late been evident in the streets. For instance, at Southwark Police court on Oct. 24th two young roughs, aged respectively eighteen years, were brought before Mr. Kennedy on a charge of "using insulting behaviour." Evidence was given that prisoners belonged to a gang who austled foot passengers and menaced shopkeepers. Mr. Kennedy is reported as saying that "such ruffianism must be put down." And what followed? A fine of five shillings or five days' imprisonment. We can almost hear Mr. Kennedy saying, "D'you know, I shall really have to give you a good hard knock." Such trivial punishment will never check crime. By all means let us use every means of prevention, but the full-blown Hooligan, as we have said over and over again, must be severely dealt with.

THE CARDIFF INFIRMARY.

WE have upon several occasions drawn attention to the unsatisfactory financial position of the Cardiff Infirmary and have expressed astonishment that so excellent and well-administered an institution should meet with such inadequate support from the inhabitants of the district as to leave an ever-increasing burden of debt upon the managers. There is perhaps at the present time no more prosperous town in the country than this South Wales port, and as all classes are participating in the good times there should be little or no difficulty in liquidating the debt of £10,000, the amount which the adverse balance of the past few years has now reached. The erection of the new seamen's accident hospital has no doubt adversely affected the revenues of the infirmary, but now that the establishment of the former institution is assured by the munificence of the late Marquis of Bute the claims of the infirmary may deservedly be considered. The newly-elected mayor of Cardiff, Councillor Thomas Andrews, has already evinced a desire to raise during his term of office a sufficient sum to enable the infirmary to be placed upon a firm financial footing, and at the mayoral banquet held on Nov. 9th last he obtained subscriptions for this purpose amounting to several hundred pounds. We congratulate the mayor upon his benevolent resolve and trust that long before next November we may be able to felicitate him upon the success of his enterprise.

CACODYLIC MEDICATION.

WE have previously referred to this mode of administering arsenic, which has been recently introduced by M. Armand Gautier.[1] A lecture on the subject which was delivered at the Medical Graduates' College and Polyclinic by Dr. William Ewart and which is published in the September and October numbers of the journal of that institution well describes the present knowledge on the subject. Cacodyl is a dimethyl arsenide obtained from AsH_3 by substituting methyl for hydrogen. It is a highly poisonous fluid with an unpleasant odour. In oxide of cacodyl these objectionable features are still present. By further oxidation the metal passes from the triad into the pentad stage forming cacodylic acid. In sodium cacodylate it loses virulence and smell. This organic compound contains 46 per cent. of arsenic and has the great advantage over ordinary preparations of relative freedom from irritating and poisonous properties. In it arsenic can be administered in quantities previously unheard of without misgivings or risks. Dilute solutions are well tolerated by the stomach. Cacodylate of sodium is a highly soluble deliquescent solid free from smell and taste. In consequence of its deliquescence pills cannot be prepared in the ordinary way. Cacodylate of sodium may be given by the mouth or rectum or subcutaneously. The two latter methods have been advocated in preference to the former because they are less liable to lead to the formation of reduction compounds. By the mouth half-grain pills may be given three or four times daily or the equivalent in solution either at or between meals. By the rectum an initial dose of half a grain may be given to adults and a third of a grain to children suffering from chorea. From one to four drachms of water may be used as a vehicle. Hypodermically one-third of a grain in 10 minims of water is an initial dose and may be increased to one grain or more. Moderate doses of the drug may be given for long periods, but the patient should be watched. Cacodylate of sodium may be given with an efficacy greater than that of ordinary arsenical preparations. In all cases in which arsenic is indicated—pernicious anæmia, chorea, malaria, and Graves's disease—even in cancer, particularly of the stomach, it has been declared to be valuable. According to reports from abroad, in phthisis it is the best medicinal remedy that has been used. Dr. Ewart finds that the tendency to hectic fever is checked, cough and expectoration are diminished, and the general condition rapidly improves. He has also found it useful as a nerve tonic in many states of depressed health. This new method of administering arsenic appears to have great possibilities and to be a distinct advance in therapeutics. But, like all new methods, its claims should be regarded with reserve The question of the maximum dose has still to be solved. We observe that Dr. Ewart describes the freedom from poisonous properties as relative. Cannot something more definite be said? However free from irritating properties cacodylate of sodium may be it seems to us that the dangers from remote toxic effects—e.g., neuritis and eruptions—would be just as great from its use as in the ordinary method of administration. Such a powerful remedy as arsenic should not be given in any form in large quantities without great care

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[1] THE LANCET, Nov. 18th, 1899, p. 1408, and March 10th, 1900, p. 736.

A CURIOUS INSTANCE OF LEAD POISONING.

IT was reported in the newspapers this week that one of the officers of the Metropolitan Fire Brigade was seriously ill from the effects of lead poisoning, the illness having been caused by the officer, when he was on duty during a fire at a tea warehouse, inhaling the fumes from some of the burning tea-boxes which were lined with lead. The theory of the inhalation of lead fumes is probably not correct. Of course, lead melts very easily at a temperature of 327° C. and eventually boils and volatilises at a white heat It would clearly be impossible for a person to inhale these fumes. If the case is correctly described as one of lead-poisoning arising from contact somehow or other with lead cases in a fire it is more probable that the intense heat converted the lead in part into oxide. It is conceivable then that the smoke and fine ashes scattered broadcast by the draught might contain fine particles of oxide of lead Such a draught would prove undoubtedly poisonous, part of the lead being inhaled and part absorbed through the skin. In that case it is difficult to see why the other firemen in attendance were not also affected; they may have been, but it is not so stated. If the report be true the occurrence is certainly a remarkable one, and as far as we know it is the first time that lead poisoning arising in such a way has been recorded.

BOARDS OF GUARDIANS AND VACCINATION.

AT a recent meeting of the Wigan Board of Guardians a circular letter was read from the Derby Union embodying resolutions passed respecting the Vaccination Acts and including one that it was no longer necessary to retain on the Statute Book a law making the vaccination of infants compulsory. It was moved and seconded that the resolutions should be endorsed and that a communication should be sent to the Local Government Board to that effect. Dr. Benson moved an amendment believing that it would ill become him to allow such a resolution to pass without comment. He submitted that vaccination was not compulsory, inasmuch as the late Government in its wisdom had thought it fit and proper to give everybody a chance of avoiding vaccination by a conscience clause He failed, therefore, to see how vaccination could be said to be compulsory when everyone could claim exemption. But since the new Act was passed and the people were allowed to take advantage of the conscience clause more vaccinations had taken place throughout the country than before. According to a Parliamentary return they found that from Jan. 1st to June 30th, 1898, the number of vaccinations from different unions in England and Wales was 277,839, whereas in the corresponding six months of the next year there were 355,000, which were practically 70,000 more. There was an increase in the second six months. From July to December, 1898, they had 222,475, and in the second six months of 1899 313,797. Another paragraph stated that medical testimony could not be used as an argument in favour of vaccination. Now he disputed that altogether. If they would take a census of the medical profession they would find the profession generally in favour of vaccination It had been shown over and over again that when small-pox appeared in any place those who had been vaccinated successfully, and still more those who had been revaccinated, were not only less liable to take small-pox, but if they did take it the percentage of deaths was very much smaller than in those who had not been vaccinated at all The mortality among those who had been vaccinated varied from 1½ to 4 per cent, whereas the mortality of those who had not been vaccinated was at least 37 per cent If they undid what had been done in the last century, in time to come they would probably find small pox in the land as bad as before. As a matter of principle he proposed that the circular should lie on the table; there was no seconder, however, and the motion was passed. Resolutions of this kind have neither any influence on the Local Government Board nor on the general public. A proportion of guardians are disappointed with the number of persons who are sensible enough to protect their children against the scourge of small pox and also with regard to the cost. The cost, however, of an epidemic of small-pox is much greater.

"ABSENCE OF MIND" IN RAILWAY OFFICIALS

THE serious character of the recent railway accident at Slough, combined with the fact that the driver of the express train took upon himself the whole responsibility for the accident, has aroused an unusual degree of public interest in the catastrophe. This has been recently stimulated afresh by the report of Lieutenant-Colonel Yorke, one of the Board of Trade Inspectors. Such a report, seeing that it was admitted that the express train had run past two sets of signals which were against it, naturally discusses the cause of the failure on the part of the driver of the express to recognise that the signals were against him, as well as any remedies that may be available against such an accident in future The alternative explanations offered are that the driver was unconsciously drowsy, or that he suffered from the temporary inactivity of the faculties which we know as "absence of mind." The facts that he was 59 years of age and had been up since 5 A.M. are adduced in support of either view. And yet it is probably no unusual experience for a driver of an express train within two hours after mid-day to have been out of bed since five in the morning, and the age of 59 years is not one at which we expect to meet with a condition of senility. In reference to remedies available against the repetition of such accidents, the suggestion is made by Lieutenant-Colonel Yorke that all drivers, or at least those employed on express trains, should be examined by a medical man at the age of 55 years and in each succeeding year. We quite fail to see how such an examination is to be any protection. We venture to think that had Woolmar, the driver of the express on this occasion, been medically examined the day before the accident nothing much amiss could have been found in him, and even the most careful examination in similar cases may fail to reveal anything to justify the medical examiner in suspending the driver from work. It is a somewhat uncomfortable thought, but it is by no means unlikely, that an occasional driver or even a signalman may be subject to a temporary "absence of mind" which may be sufficient to imperil many lives and yet may be of such a character as to be undiscoverable by any kind of medical examination.

DRAINAGE BY-LAWS FOR LONDON.

AT the meeting of the council of the Sanitary Assurance Association, held at the offices, 5, Argyll-place, Regent-street, W., on Nov. 12th, Mr. Andrew Stirling in the chair, the new drainage by-laws, as drafted by the London County Council, were under consideration, and on the motion of Mr. William S. Hulsey, seconded by Dr. Edward H. Willoughby, the following resolution was passed:—

> That, in the opinion of the Council of the Sanitary Assurance Association the drainage by-laws proposed by the London County Council ought to be submitted to the new Metropolitan Borough Councils before they receive the force of law, and that the President of the Local Government Board be requested to submit the proposed by-laws to the said Councils before deciding as to their confirmation.

We have also received from Mr. Mark H. Judge a copy of a letter to be signed by metropolitan ratepayers and residents and to be presented to the Local Government Board. The letter refers to the well-known case which came up at Marlborough-street Police-court in April, 1899, in which a firm of contractors were summoned for having disregarded the by-laws of the London County Council. The contractors were fined £2 and costs, but neither the Council nor the vestry did anything more to enforce the law. The letter is signed by Mr. Judge and various co-signatories comprising prominent medical men and others interested in sanitation.

RUPTURE OF SPLENIC ANEURYSM DURING LABOUR.

ANEURYSM of the splenic artery is very rare. A remarkable case, reported by Mr. J. D. S. Nodes and Dr. F. Hinds of Worthing, was read by Dr. Spencer at the last meeting of the Obstetrical Society of London. The patient was 33 years old. Her fourth labour was perfectly normal and it lasted six hours; the placenta speedily followed the fœtus. Ten minutes later the nurse noticed that the patient's face became dark and a kind of convulsion set in with violent excitement. At length the patient turned pale, and she died in about a quarter of an hour. The coroner ordered a post-mortem examination to be held The peritoneal cavity was full of blood, chiefly fluid, and an aneurysm of the size of a grape was detected on the splenic artery; it had ruptured. The specimen, which was exhibited, is preserved in the museum of University College, London.

THE DISSOLUTION OF BONES BY BACTERIA.

IT is pretty certain that bacteria play an important part in the dissolution of bones, and if rapid dissolution is desired it follows that the bacteria should be afforded every opportunity of doing their work. This may have some bearing on our methods of the disposal of the dead. The action of bacteria is not likely to be facilitated by burying bodies at a comparatively considerable depth beneath the surface of the earth. Recent experiments have shown that when sifted bone-meal was inoculated with various bacteria and kept wet a remarkable resolution of the constituents of the bone, including the inorganic as well as the organic matters, took place. The organic matters resolved, as might be expected, into simpler compounds of the type of ammonia, but the most remarkable result consisted in the fact that the insoluble phosphate of lime was converted into soluble phosphoric acid. The experiments were confirmed in a practical way by manuring oats grown in large pots with bone meal and inoculating with different bacteria. The yield of oats was far greater when the bone meal was inoculated in this way. Several species of bacteria were employed with widely varying results. As a rule the organic substances which act as poisons in the human body are of a very complex nature, and as they are resolved into simpler ones their toxicity diminishes and finally disappears. In the putrefactive process the organisms concerned are rapidly breaking down complex toxic substances into simpler innocuous products. Bacteria, however, as in certain diseases, may elaborate poisons of a highly complex constitution, and thus we have two great classes of organisms from the point of view of the healthy human subject, the benevolent and the malevolent.

THE LATE PROFESSOR A. W. HUGHES.

THE Council of the University College, Cardiff, has resolved to establish an Alfred Hughes Memorial in connexion with the Medical School of the College. An influential committee is being formed and a meeting will be held on Nov. 24th, when it is hoped that all will attend who are interested in the establishment of a permanent record of Professor Hughes's great services to the College as its first professor of anatomy. The form which the memorial will take is to be decided upon at this meeting. Friends desirous of joining in the movement, if unable to attend the meeting, should communicate with Mr. J. Lynn Thomas, Mr. D. W. Evans, or the Dean of the Faculty of Medicine.

HISTORICAL SKETCH OF THE PLAGUE.

A MOST interesting historical survey of the plague has been published by Dr. P. Hauser under the title "La Peste dans les Temps Anciens et Modernes et son Avenir en Europe." It forms an extract from *La Médecine Moderne.* To those of our readers who are particularly interested in the history of the plague we can recommend a perusal of this volume, for they will find in it many instructive facts which are not to be found in the ordinary treatises on this subject. The little book consists of 114 pages divided into six chapters. The first consists of a general survey of the plague as it has been reported from early times. We learn that the first appearance of bubonic plague in Europe was in 543, and this outbreak is generally known under the name of "Peste Justinenne." The disease had been raging earlier than this in Lower Egypt and had even spread to Syria and Asia Minor, when it appeared at Constantinople at the date above mentioned. A pandemic form then rapidly obtained and with the highest mortality ever reported, for not only were large numbers of individuals attacked but 90 per cent. of those affected died. The plague disappeared from Europe in 1720 and no further outbreak was recorded until the second half of this century. In Chapter II. an account is given of the disease as it has appeared in Canton, Hong-Kong, and India in more modern times, and the results are added of the various scientific commissions which were appointed to study the extensive outbreak which occurred in Bombay. Chapter III. contains an account of the International Congress in Venice, the important results of which Dr. Hauser duly sums up. In Chapters IV. and V. the outbreaks at Alexandria and Oporto are described, especial stress being laid on the latter epidemic. The proceedings of the International Commission which met at Oporto to investigate the value of inoculation against plague are duly commented on and the conclusions arrived at by the Commissioners are recorded. The Commission recommended that the use of the vaccine should be encouraged as actively as possible, and its employment was particularly insisted on in the cases of those persons who were leaving an infected zone, and also in the cases of those who had frequently been in contact with victims of the malady The last chapter is occupied with a consideration of theoretical questions which have arisen from the re introduction of plague at Oporto in 1899, including certain points with regard to the bacteriology and epidemiology of the disease

DEATH IN THE VAT

DEATHS in the vat are by no means uncommon judging from the cases reported recently and within a comparatively short time In some instances, of course, a disaster arises through the deliberate negligence of the vat man, for instance, he may lean over the edge of the vat in endeavouring to control the contents, as with a stirrer, and over balancing himself may tumble into the liquid, and if he is not drowned or scalded he may be asphyxiated by carbonic acid or other gas, or the vat may contain poisonous fumes derived from a cleansing fluid or scavenging process which may overcome the workmen who may be lowered into its interior Occasionally a big explosion occurs in a vat as by the ignition of the vapour of alcohol in a whisky vat More recently it is reported that a man and a boy were employed to clean out a vinegar vat of 30 000 gallons capacity As it proved, they were simply lowered into a lethal chamber and were overcome by the fumes and killed When attempts at rescue were made one man very nearly lost his life and had to be immediately taken out It would appear, as we have said, from the accounts of occurrences of this sort which have come to our knowledge through the press that carelessness is particularly in evidence where vats are concerned And yet, on reflection, the most simple minded person must know that a vat is likely to contain dangerous vapours or gases The vat is commonly a receptacle in which a chemical process on a large scale, as, for example, fermentation, is going on, and consequently unbreathable if not toxic gaseous products are being evolved We have pointed out more than once in these columns that vats and all similar large receptacles should be thoroughly ventilated before an attempt to repair or to cleanse or to descend into them is made We should like to direct the attention of the Board of Trade to this matter and to ask them to consider whether the industrial processes connected with the use of vats should not be placed under some special regulations

THE medical profession in Newcastle has sustained a great loss by the death of Dr Dennis Embleton, in his ninety first year

THE autumn dinner of the Irish Medical Schools and Graduates' Association will take place at the Hotel Cecil on Wednesday, Nov 28th, at 7 15 o'clock, when the chair will be occupied by the President, Inspector General W. H Lloyd, M D St And, R N The guests of the evening will be General Sir William Olpherts V C, G C B, and Mr Alfred Percival Graves, the genial author of "Father O'Flynn" and other Irish songs

THE next general meeting of the Medico-Psychological Association of Great Britain and Ireland will be held on Nov 21st at 11, Chandos street W, commencing at 4 P M Papers will be read by Sir Dyce Duckworth, Dr G H Savage, and Dr Lewis Jones The last paper will be illustrated by electric apparatus and appliances, Members will dine together afterwards at the Café Royal at 8 P M

A LECTURE on 'Plague will be delivered in the Anatomical Theatre at the London Hospital Medical College on Thursday, Nov 22nd at four o clock, by Dr J Mitford Atkinson, principal civil medical officer at Hong Kong Members of the medical profession will be admitted on the presentation of their address cards

AT a meeting of the trustees of the Hunterian Collection held at the Royal College of Surgeons of England on Nov 9th, Sir Joseph Fayrer, Bart, K C S I, &c, was unanimously elected a trustee of the Collection to fill the vacancy occasioned by the decease of His Grace the Duke of Argyll, K G, K T

THE annual general meeting of the Anatomical Society of Great Britain and Ireland will be held at St Thomas's Hospital Medical School to day (Friday) at 4 30 P M A meeting of the Council will be held at the close of the general meeting

THE annual dinner of the Harveian Society of London will take place at the Café Monico on Thursday, Nov 29th at 7 P M Members intending to dine should communicate with the honorary secretary at 11, Wimpole street, W

THE death is announced of Mr R B Anderson, F R C S Eng, late of Tobago

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Nov 6th, Dr. J ANDREW (President) being in the chair

Robert Miller Ronaldson, M D, M R C P Edin, was admitted by ballot to the Fellowship of the College

On a ballot the following candidates were admitted to the Membership of the College after examination William Wood, M B, C M Edin, George Pratt Yule, M D, C M Edin, South African Field Force; and Stuart McDonald, M B, C M Edin

The REGISTRAR reported that since the last quarterly meeting 41 persons had obtained the Licence of the College by examination

The SECRETARY reported that the arrangements with the magistrates and town council for the bacteriological examination of suspected products in respect of tuberculosis, diphtheria, and typhoid fever had now been completed

With regard to a letter from the Local Government Board for Scotland requesting the College to undertake the investigation of suspected plague products at the College laboratory it was resolved that the request be acceded to

By vote of the College the two following Licentiates were expelled from the College and deprived of their Licence—Frederick William Kirkham and Harman John Tarrant

PRESENTATIONS TO MEDICAL MEN —Mr Richard G Dick, M B, C M Glasg on the occasion of his leaving Burghead, Elgin, was recently presented by a few friends in that town and district with a purse of sovereigns sovereign case and matchbox combined, silver cigarette case watch appendages, and an illuminated address, in recognition of valuable services rendered by him during the severe epidemic among the children in 1887, as also of the work done by him since 1892 At the same time Mrs Dick was the recipient of a silver mounted oak tray —At the Great Western Railway Station Bath, on Nov 11th, the members of the ambulance class presented Mr A L Fuller, L R C P Lond M R C S Eng of that city with a traveller's writing desk as a token of appreciation of his gratuitous instructions to the class on first aid The deputy chairman of the railway company and other officials were present —At a recent meeting of the Willesden District Council the chairman, Mr J S Crone, L R C P Irel J P, was presented by his colleagues and officials with a handsomely designed solid silver cradle to commemorate the birth of a son during his term of office receiving his preliminary education in his native town he came to London and entered King's College. Here he gained many distinctions and prizes. Subsequently he was elected an Associate of the College. In 1866 he married a daughter of the late Lieutenant-Colonel W. Simonds and settled in practice at Blackheath. In 1893 he was as a Mason a Senior Grand Deacon of England. Dr. Gooding was until recently the senior member for Greenwich on the London County Council (1895 to 1898) and was vice-chairman of the Public Control Committee. He was the only coöpted poor-law guardian in the Greenwich district; was a late trustee of Roan's Charity; and was parish warden of Greenwich (1893 and 1894) and chairman of the Board of Governors and Directors of Poor (1893 and 1894). He was also a late commissioner of public baths and wash-houses (1893 to 1894), a commissioner of taxes for Blackheath division, and a member of the Greenwich Vestry and the Greenwich District Board of Works (1892 to 1894) and consulting surgeon to the Railway Passengers' Assurance Company.

Barnsley.—Mr. J. Fletcher Horne, M.D. St. And., F.R.C.S. Edin., F.R.S.E., is a justice of the peace for the Borough of Barnsley. Born at Barnsley, he was educated at the Leeds Grammar School, and later entered as a student at the Leeds School of Medicine, and qualified in 1874. He afterwards held the post of assistant medical officer at the Leeds General Infirmary. He commenced practice at Barnsley in 1876. He is senior surgeon to the Beckett Hospital and medical referee under the Workmen's Compensation Act for the district. In 1888 he won a seat on the school board, and in 1891 successfully competed for a seat on the town council which he still holds, and which has not been contested since. He was elected mayor on Nov. 9th by a unanimous vote. Dr. Horne has found time to dabble in literature. He has written a book on "Trephining in its Ancient and Modern Aspects (1894), whilst "The Mirage of Two Buried Cities," a beautiful and fascinating book dealing with the artistic and other remains of Herculaneum and Pompeii, was favourably reviewed in THE LANCET of March 17th of this year.

Dewsbury.—Mr. Robert Beattie (re-elected), M.D., M.Ch. R.U.I., after qualifying in 1876 went to Northleach, Gloucestershire, for a couple of years to assist Dr. Webb and was also assistant medical officer to the workhouse there. He was then at the Loughborough Infirmary and Dispensary as house surgeon for over two years. After this he entered on private practice in Canterbury, but only remained there a year or two. Over 15 years ago he went to Dewsbury. The sanitation and water-supply of that town have engaged his attention for many years and four years ago he entered the town council. Five years ago he was appointed medical officer of health to the Soothill Upper District Council and about the same time he was appointed honorary surgeon to the Dewsbury and District Infirmary. Quite recently he has been elected alderman and chairman of the Watch Committee.

Harrogate.—Mr. J. A. Myrtle (re-elected), M.D. Edin., J.P., late consulting physician to the Harrogate Bath Hospital, joined the town council three years ago, since which time he has advocated the purchase of the spa grounds at Harlow Moore and identified himself with other progressive municipal movements such as the extension of the electric lighting works.

Launceston.—Mr. W. Andrew, M.B., C.M. Edin., has been in practice since 1873 and has been a member of the town council for 22 years. He was elected mayor in 1885-86 and has been alderman for the borough and justice of the peace for 12 years.

Lostwithiel.—Mr. Robert Barclay-Allardice (re-elected) was born at Hamilton, Canada, and lived in the United States from 1850 to 1869. He the holds American degrees of M.A. and M.D. In 1898 he was elected a town councillor without opposition.

Ruthin.—Mr. J. Medwyn Hughes, M.B., C.M. Edin., has been appointed Mayor of Ruthin for the fifth time. He is an alderman and has been on the council for 12 years. He graduated M.B., C.M. Edin. in 1886, and has been in practice for 14 years. He was medical officer of health for Ruthin District for seven years, and he now fills the offices of union medical officer and public vaccinator. He has always taken an active interest in educational matters, both local and county.

Winchelsea.—Mr. John R. Skinner, M.B., C.M. Aberd., who has been in practice in the town for some nine years, was elected mayor of the Unreformed Borough on last Easter Monday.

CELEBRATION OF THE FOURTH ANNIVERSARY OF THE "LOCOMOTIVES ON HIGHWAYS" ACT.

UNDER the auspices of the Automobile Club of Great Britain and Ireland and in commemoration of the inauguration of the above Act (1896) a very successful tour was made on Nov. 10th in magnificent weather from London to Southsea, a distance of about 80 miles. The start was arranged to take place from the Horse Guards-avenue, Whitehall, at 9.30 A.M., and the motor-cars were timed to arrive at Portsmouth about five o'clock. Allowing for an interval for lunch at Godalming of three-quarters of an hour the time allowed for the whole distance of 80 miles was thus six hours, and three-quarters. This gives an average speed of 12 miles an hour. Of course, the actual speed attained sometimes exceeded this and sometimes it fell short of it. The ascent of the Hindhead was a feature of the tour, and there were some remarkable accomplishments up this famous "rise." The arrangements throughout were admirable and upwards of 100 motor-cars reached their destination without any serious breakdown and in less than the time allotted. The complete success of the "meet" was due in a large measure to the excellent injunctions drawn up by the committee and to the observance of them by the drivers in regard to certain precautions to be taken on the road. According to the rules of the club the speed of the motors was carefully to be moderated to eight miles an hour in passing through all the towns and villages, and within the villages passing on the off side at a speed exceeding eight miles an hour was prohibited. The drivers were also requested to observe every caution in turning corners and in passing through towns and villages, and "to show every consideration for other users of the road, especially those in charge of restive horses. . . . . The tour is in no sense a race, and as it is desired by its means to popularise motor vehicles drivers are besought to avoid driving at unlawful speeds." Again, it was enjoined that if any motors were used on Sunday drivers should sound motor horns as little as possible when passing places of worship during hours of service. We repeat that the strict observance of these excellent injunctions accounted for the complete success of the tour. It is the contravention of rules of this desirable kind that has brought motor-cars into a certain discredit, a discredit which need never have been incurred. Some amount of prejudice is bound to remain, but even this is giving way and on the occasion of this tour it was interesting and satisfactory to notice that here and there timid horses were brought out by coachmen and grooms to face the procession in order to accustom them to the horseless vehicles.

The greater number of the cars participating in the Southsea tour derived their motive power from petroleum spirit; a few were driven by electricity and a fair number by steam. Some improvement is undoubtedly being made in the direction of diminishing the noise and vibration of motor vehicles. Although most of the petroleum-driven motor cars are still noisy, yet earnest attempts have evidently been made to remove this reproach as well as the objectionable smell arising from the escape of unburnt oil. To some extent progress has been made in these important respects, but the steam-driven car must be given the palm, we think, in regard both to noise and smell. The steam motor car is as noiseless as a self-propelled vehicle can well be, while it is free from objectionable oily fumes. There is, however, a small escape of exhaust steam which doubtless with care could be avoided. The reduction in the number of cogs and chains in favour of cranks and rods would appear to give the steam motor car an advantage in respect of noise. Our impression, however, was that the oil-driven car required the least attention in the way of repairs or adjustment. It is a remarkable fact that three or four gallons of petroleum spirit are sufficient to take four persons in a six-horse power car a distance of 80 miles. Reckoning the cost of petroleum spirit at 10*d.* a gallon this would come out at about 9*d.* a head for the trip, or less than one-eighth of a penny per head per mile.

Public interest in the motor car does not subside, and it is probably only the great initial expense connected with it which militates against its becoming rapidly a universal means of travel The arrival of the cars at Portsmouth was heralded by a great and enthusiastic crowd of people The vehicles filed in single order past the Town-hall at a slow speed to enable the Mayor and his colleagues, who stood in a group at the foot of the steps, to inspect the vehicles A prize was awarded for that car which was deemed to be in the best condition after the run So called "non stop" diplomas were also awarded to those who completed the journey without a break, excepting, of course, the interval for luncheon These awards should be instructive in demonstrating the liabilities of a motor car to irregularities, break-downs, or detention from other causes incidental to a long run

THE WAR IN SOUTH AFRICA

IMPERIAL YEOMANRY HOSPITALS

A GENERAL meeting of the committee of the Imperial Yeomanry Hospitals Fund was held at 20, Curzon street, on Nov 8th, with the object of considering the question of prolonging the period during which the Yeomanry hospitals would remain in South Africa The Countess Howe presided and reported having received a letter from Lord Lansdowne, the Secretary of State for War, in which his lordship mentioned that Lord Roberts had expressed a strong desire that these hospitals should continue their valuable services until the return of the Yeomanry to England The report of the treasurer on the question of finance having been considered the committee assented to this request Friends and relatives of the members of the hospital staffs cannot, under these circumstances, hope to see them home at present It has, however, been found possible, in consequence of the diminution of serious surgical cases at Deelfontein, to dispense with the services of a few of the members of that staff, some of whom have already returned and others are *en route*, whilst a small percentage of the staffs of each of the branch *hospitals have* been invalided home

Lady Howe subsequently read a letter which she had received from Lady Roberts speaking in the highest possible terms of the work which is being done by the Yeomanry hospitals Amongst other things, Lady Roberts wrote ,—

> It has been a grand piece of work and you, the committee and the generous subscribers to the Yeomanry Hospital Fund, have earned the deep gratitude of all who have the welfare of soldiers at heart, be they Yeomen or regulars The Imperial Yeomanry Hospital at Deelfontein has done splendid work Since the Imperial Yeomenry Branch Hospital has been established here [Pretoria] all Yeomen who have been wounded or fallen sick near Pretoria or who have been brought in by train, have been taken straight there though there are still a few in other hospitals who had been taken to them before their own hospital was opened, and to whom it would have been a danger, or caused suffering to be moved I think you and the subscribers may rest assured that as far as circumstances and the well being of the patients would admit, the Imperial Yeomanry hospitals have been devoted to the service of the Yeomen

Lady Howe also read to the committee a communication which she had received from Colonel A T Sloggett, R A M C, enclosing a letter written to him by the resident magistrate at Richmond, S A This letter gave much satisfaction to the committee, as it proved that besides the good work which the hospital had been able to accomplish from a medical point of view the effect on the farmers in the surrounding district had been beneficial politically, and had produced a better feeling in the locality The letter ran as *follows* —

> SIR,—As there appears to be every probability of the Imperial Yeomanry Hospital at Deelfontein being shortly sent back to England, I take this opportunity, as civil commissioner and resident magistrate of the district of Richmond in which Deelfontein is situated, to express to you that in my opinion the establishment of the Imperial Yeomanry Hospital in this district has had a most beneficial effect upon the inhabitants in the neighbourhood All the farmers resident about Deelfontein are Dutch, and for some little time after the hospital was opened they kept aloof but I did all in my power to persuade them to visit the hospital and I am very glad to say that a very large number have done so and one and all have nothing but praise and good words to say about their visit They have always been received by you and your officers with every possible courtesy and have been entertained and shown round the hospital in a most friendly spirit and many of the Dutch farmers who for a long time held aloof regret not having sooner paid you a visit. The courtesy and friendly manner in which they have all been received has had a most excellent effect upon the farmers and I am of opinion if more opportunities could be found for our Dutch farmers to meet Englishmen in the same friendly spirit that they have been received at Deelfontein, it would materially assist in establishing a better feeling between the Dutch and English in South Africa than exists at present —I have the honour to be Sir, your obedient servant,
>
> GEORGE J BOYES Resident Magistrate.

It will be interesting to subscribers to know that up to the middle of October, the date of the last weekly reports received from the different principal medical officers, about 7000 sick and wounded had been successfully treated in these hospitals

THE IMPERIAL YEOMANRY FIELD HOSPITAL AND BEARER COMPANY

BY CHARLES STONHAM, F R C S ENG ,

CHIEF SURGEON AND OFFICER COMMANDING THE IMPERIAL YEOMANRY FIELD HOSPITAL, SENIOR SURGEON, WESTMINSTER HOSPITAL ETC

In my letter from Barberton[1] I *gave you a short outline* of our marches and work up to the time of our return to Pretoria from Springs on July 17th In this letter I propose to take you with us in our march to Balmoral back to Pretoria, and thence westwards to Rustenburg to the relief of General Baden Powell, and to bring you back to Pretoria again, and my next letter will carry you over the mountains to Barberton and, I hope, back with us to Pretoria

On July 17th, early in the morning, we entered Pretoria, sending our convoy to our old camping ground at Arcadia, and Major G E Hale, D S O, R A M C, and I went to report to the principal medical officer and to obtain further orders It was decided that we should leave a detachment of the field hospital and bearer company with some of our transport animals and wagons at Pretoria, while the main body marched to rejoin General Mahon's brigade We accordingly left Mr Openshaw and Dr Purves Stewart with 50 men, five wagons, and the necessary equipment and stores for the formation of a rest camp hospital, and the next morning we marched with the remainder to find General Mahon We came up with him in the afternoon at Kameelsdrift There had been two days' fighting here and we did not leave the ridge until the 20th, on which day we passed Pretorius's farm, and spent nearly all day in crossing the Pienaars river The drift was very steep and hence the wagons, and especially the heavy guns, required many teams to drag them over

These drifts are passages of the usually rocky beds of rivers, with comparatively little water at this season of the year During the rains there may be as much as 40 or 50 feet of water at the drifts, which are then consequently impassable Many drifts have very steep banks and abominable approaches, which, when a few wagons have passed over, are often a foot deep in mud and slush, in which carts sometimes stick and it becomes necessary to employ double, or even treble, spans of mules or oxen to pull them out I need hardly say that the passage of such drifts by ambulance wagons causes very considerable suffering to sick and wounded men, and delay to the whole convoy which *may extend for many miles On some days we have had to* pass as many as half a dozen drifts, our march being consequently slow and most arduous, not to mention the wear and tear to transport animals Drifts are a very severe test of the strength and durability of a wagon and in this respect we certainly have much reason to thank the builder of our wagons They are most excellent and they have stood the wear and tear admirably, and I think I may say that they are the best in the country Our ambulance wagons are built differently to those in use in the army, which only carry two patients lying down, whereas ours will take four and are much lighter

The following day at 8 30 A M —it is time after this digression to get on with our march—heavy firing was heard about 10 miles ahead of us, and it continued at intervals all day until we reached our camp where we found that the Boers had been shelling Colonel Hickman's force near a spruit Colonel Hickman with 800 men was camped here and on the next day he transferred our sick to his field hospital, which was going back to Pretoria On the 22nd, General Mahon's brigade joined General Ian Hamilton's division at Rustfontein where we remained the next day to give General Pole Carew and General Clery time to march up on our right flank Just before reaching camp at dusk I regret to say that one of our wagons came to grief in a hole, the native driver being killed and the wagon orderly receiving two very severe scalp-wounds

On the 24th we camped at *Bronkhorst Spruit, the enemy* sniping our rear during the march. Here we found a large force (about 20,000), Lord Roberts and Lord Kitchener having come up in the morning. The next day General Hamilton's division, of which our brigade was now a part, marched for Balmoral, 17 miles distant, but we were not destined to reach there without mishap. The weather had been very threatening all day and rain began about 2 P.M. About three miles on the wrong side of Balmoral our convoy was brought to a halt at a drift in which a Cape cart and a 4·7 gun had stuck; the former, however, was the offender so far as our further progress was concerned. By this time it was pitch dark, the rain was coming down in a pitiless torrent, and the wind was icy cold. To proceed was impossible and we had to stay there the night. Three miles of convoy in our rear was in the same plight—no food and no shelter. Major Hale with characteristic energy walked on to Balmoral to report, and on coming back wet through he and I made the best of it in a Cape cart which I had fortunately commandeered at Rustfontein. To describe this night is beyond my powers, but when I say that we alone lost 12 mules and that I counted 195 dead animals within quite a short distance some idea may be formed as to its severity. Early in the morning we made ready to proceed, when we heard that an officer of the Argyll and Sutherland Highlanders had died in the night from exposure. We sent back a stretcher party and carried the body in with us to be buried by the regiment. We reached Balmoral at 10.30 A.M. and looked forward to a day's rest, but we were doomed to disappointment, as orders came at 11 o'clock for us to march at 12.30 back to Pretoria. Many guesses were made as to the reason for the division's return, and we thought that we were being done out of the final advance to Komati Poort and neighbouring district, but events proved that this was yet far distant, important work having to be done in the Rustenberg district before the final advance could be undertaken. Our return march was uneventful. We reached Pretoria on July 30th, and the division marched past Lord Roberts and a large crowd of people at 12 o'clock on its way to Daspoort, two miles to the west of the town. We sent all our sick, who were suffering chiefly from fever and intestinal trouble, to the detachment, and the next morning I went down and found that the detachment had been installed by the principal medical officer in a house which they were energetically preparing as a military hospital. This was taken over by the Royal Army Medical Corps, our officers and men being lent for the use of the hospital until we should require their services in the field. Unfortunately, our mules had been handed back to the transport, and hence we could not obtain fresh animals. This day was a very busy one in Pretoria as we were under orders to march the next morning.

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[1] THE LANCET Nov 10th, 1900 p 1372.

On August 1st, General Mahon's brigade marched through Wonderboom Pass and then westwards on the Rustenburg road. Pilcher was on our right and the rest of General Hamilton's division were on the left, separated from us by the range of hills. At 8 A.M. fighting began and continued all day, our guns dislodging the Boers from a kop at Middlewater where we camped for the night. Two of our ambulances went out after the fighting and brought back five wounded men, all suffering from flesh wounds of the thighs and buttocks inflicted as they were lying down. We finished dressing these cases by 10 P.M. and sent one of our ambulance wagons with the wounded back to Pretoria on the next morning. The next day we marched forward, heavy firing proceeding all day from Hamilton's direction, but General Mahon's brigade did not come into action. In the evening we camped at Zilikatz Nek (or Nitrals Nek), where the Lincolns had been attacked some time before. The fighting to-day had been with a commando holding this pass and Hamilton had about 40 casualties which were dealt with by his own field hospitals.

The country we were now in was very pretty; certainly it might be called the garden of the Transvaal. The valley is bounded by considerable hills on either side and is very fertile and studded by prosperous farms which in many cases are well stocked. Oranges, lemons, and similar fruits grow
and proved most acceptable, for the want of
s and fruit is very severely felt after a time
s are eagerly taken when a chance offers.
r march was a very short one, as we
the Crocodile river by a bad drift.
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ng of the enemy, although 20 prisoners

in a 14 ye
within District f
union medical off
taken an active in
and county.
Winchelsea.—Mr.
who has been in prac
was elected mayor o.
Easter Monday.

were brought in from neighbouring farms. The next day we marched to Sterkstroom, and a runner came in from General Baden-Powell who was hemmed in at Rustenburg. The messenger brought a map made by the general indicating the various positions occupied by the Boers and their numbers. When we advanced on the 5th, however, the enemy were not to be found and we reached Rustenburg unopposed. The country on this side of Pretoria is naturally fortified, and if the Boers do not defend it it argues most strongly that they will not again stand. On the 6th Major Hale and I marched out with part of our ambulances to proceed towards Magata Pass, where the enemy were said to be in force, but we returned at night without having seen anything of them, although heavy gun firing was heard all day some miles distant, and it was feared that the Boers had captured one of our convoys coming up from Mafeking. The next day we marched back, as we thought, for Pretoria, having relieved Rustenburg, and General Baden-Powell marched with us. We carried in our wagons all the sick and wounded who were fit to leave the Rustenburg Hospital and we supplied the medical officer in charge of those who could not be moved with medical comforts from our own stores. On the 9th we passed over Commando Pass and camped at Groot Platz, from which place we sent a sick convoy to Pretoria. On the 11th we again proceeded westwards, passing through Heckpoort the next day and camping at Thorndale. On the 13th Major Hale and Dr. Green, with two ambulance wagons, went on with a flying column under General Mahon, the rest of us following with the remainder of the division. We came in touch with Lord Kitchener and Lord Methuen on August 15th. These generals were pursuing a commando under Christian de Wet who was making for Rustenburg to join Delarey. Mahon's column came back to our camp to-day.

On the 17th, having camped the night before five miles to the westward, we moved on to Olifant's Nek, half a battery and some infantry going on ahead with four of our ambulances under Major Hale. After some shelling the Boers were driven from the Nek and we proceeded on to Rustenburg. From this action we had only two wounded. The next morning we again left Rustenburg and marched towards the Crocodile river, near which, at Zwartkopjes (or Roodekopjes), General Mahon's brigade had a two days' action on August 19th and 20th with De Wet's commando. On the first day one of our wagons, together with an Australian ambulance, was taken by the Boers, but Major Hale rode back and represented the facts to the general who at once sent a medical officer from one of the Boer ambulances which was in our lines and which we had helped with drugs and medical comforts to interview the Boer commandant, with the result that the ambulance came in later in the afternoon and brought in some wounded. On the night of the 20th the Boers vacated their position and we went in pursuit as far as Warm Baths but failed to come up with them. This was on August 24th. On August 26th we left for Pretoria where we arrived on the 28th, to leave again, however, after one day's rest for our march to Barberton.

The Devil's Kantoor, Oct. 6th.

PROFESSOR CALMETTE ON ANTI-PLAGUE SERUM-THERAPY.

IN the course of the second Harben Lecture, delivered at the Examination Hall of the Royal Colleges of Physicians of London and Surgeons of England on Nov. 14th, Professor A. CALMETTE, Director of the Pasteur Institute at Lille, said that certain epidemics of plague had been remarkable for the fact that all the cases presented a primitive pneumonic form, the mode of entry having been, therefore, exclusively through the nose or mouth, while in others the infection had been produced by the skin, either following slight excoriations or bites of fleas, bugs, and other parasitical insects. During the epidemic in Portugal last year he observed with Salimbeni a case in which the infection was through a bug-bite. Hankin and Simond, in India, had cited several examples of individuals who had contracted plague from touching diseased or dead rats.

It was probable that the transmission of the plague to the man was by fleas living on the rats. Experiment in the laboratory had shown how quickly a healthy rat would contract the plague if caged with a diseased rat which was infested with fleas, while a healthy rat remained healthy when shut up with one which was diseased but was free from fleas. Whatever the mode of entry of the virus, multiplication of the plague bacillus resulted first in the lymphatic channels and then in the blood. By experiments on animals in the laboratory it had been proved that even at a few hours after the infection plague bacilli were to be found in the blood and that in consequence these bacilli existed in immense quantities in all the organs. The effect of an injection of the serum should be to provoke rapid destruction of all the plague bacilli by phagocytosis. The slow absorption of the serum injected by the subcutaneous method hardly attained this end, particularly if the quantity of serum injected was not considerable. The result of this was that, the organism not being at once impregnated with the active substance, some of the bacilli escaped from the phagocytic action and those which escaped were submitted feebly to the action of the serum, became accustomed to it, and finally resisted its influence entirely. After a time of reaction more or less long, the duration of which depended on the quantity of microbes destroyed by the phagocytes which had undergone the action of the serum, the infection took its course and the serum was powerless to check it. These results were quite different if the serum instead of being introduced beneath the skin were injected as soon after the commencement of the disease as possible straight into the veins. When the plague bacillus was discovered in 1894, and the first cultures were received from Yersin in Europe, Professor Calmette and Professor Borrel tried by vaccinating animals to obtain a plague toxin and a serum as an antidote. Their first attempts to isolate the cultures in bouillon not being satisfactory they succeeded with great difficulty in obtaining toxins free from living microbes which would kill mice by a strong dose of 1·50 to the cubic centimetre. They vaccinated small animals in the laboratory—rabbits and guinea-pigs—by means of virulent cultures killed by exposure for one hour to 70° C. It being possible to strengthen the artificial immunity of animals by vaccinating them by means of repeated inoculations with virulent plague bacilli, experience showed that a serum could be obtained capable of anticipating the plague or arresting the infection and that mice showing extreme sensibility to the plague bacillus could easily be preserved by inoculating them 15 or 16 hours after the virus with a sufficient dose of serum from a vaccinated animal. These experiments showed that it was possible in this manner to arrest the plague in advanced stages in monkeys and rabbits. Almost immediately upon the introduction of the serum into the general circulation an intense phagocytosis of the plague bacilli was produced; in a few hours they were swallowed up in the leucocytic cells, and it was not long before they disappeared completely and the animal was cured. In the human being the healing process after the intravenous injection of serum was absolutely identical with this. The temperature dropped four or five hours after the injection; it rose again for eight or 12 hours after, and then finally dropped. This temporary rise following the injection corresponded with the period during which the plague bacilli disappeared from the circulation and were swallowed up by the leucocytes. It must be laid down that a medical man confronted with a case of plague must therefore immediately inject 20 cubic centimetres of anti-plague serum into a superficial vein. If the fever had not subsided completely after 24 hours, and if the diagnosis had been confirmed bacteriologically, the injection must be renewed. No one need be afraid of performing these intravenous injections if care were taken to inject gently and to introduce into the blood neither air-bubbles nor solid matter. For this reason no serum should be used except anti-plague serum preserved without the addition of any antiseptic substance and kept simply from deterioration by being heated for an hour three times a day at 58° C. If the serum contained suspended solid matter it must be carefully filtered through a piece of fine linen which had been previously boiled. The most convenient veins to choose for these intravenous injections were the superficial veins of the dorsal surface of the hand or the palmar surface of the wrist. The preventive injection should be made under the skin of the abdomen in a dose of 10 cubic centimetre. Incidental symptoms common to all horse serums were very transitory and not at all serious and were indeed exceptional with serums heated to 58° C.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6485 births and 3755 deaths were registered during the week ending Nov. 10th. The annual rate of mortality in these towns, which had been 17·3 and 17·6 per 1000 in the two preceding weeks, declined again to 16·9 last week. In London the death-rate was 17·0 per 1000, while it averaged 16·8 in the 32 provincial towns. The lowest death-rates in these towns were 11·1 in Birkenhead, 11·8 in Norwich, 11·9 in Leicester, and 12·1 in Cardiff; the highest rates were 20·4 in Liverpool, 21·6 in Sunderland, 22·5 in Manchester, and 26·0 in Salford. The 3755 deaths in these towns included 356 which were referred to the principal zymotic diseases, against 485 and 425 in the two preceding weeks; of these, 88 resulted from diphtheria, 75 from diarrhœa, 70 from "fever" (principally enteric), 50 from measles, 43 from whooping-cough, and 30 from scarlet fever. No fatal cases of any of these diseases occurred last week in Huddersfield; in the other towns they caused the lowest death-rates in Croydon, Brighton, Cardiff, Oldham, and Halifax, and the highest rates in Wolverhampton, Blackburn, Sheffield, and Sunderland. The greatest mortality from measles occurred in Swansea; from whooping cough in Derby; from "fever" in Portsmouth, Wolverhampton, and Derby; and from diarrhœa in Blackburn, Sunderland, and Gateshead. The mortality from scarlet fever showed no marked excess in any of the 33 towns. The 88 deaths from diphtheria included 35 in London, seven in West Ham, seven in Sheffield, five in Bristol, five in Leicester, and five in Liverpool. No fatal case of small-pox was registered last week in any of the 33 towns; and no small-pox patients were under treatment in the Metropolitan Asylums hospitals on Saturday last, Nov. 10th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2702, against numbers increasing from 1703 to 2619 on the 10 preceding Saturdays; 289 new cases were admitted during the week, against 327, 320, and 336 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had risen from 164 to 268 in the five preceding weeks, further rose last week to 307, but were 85 below the corrected average. The causes of 57, or 1·5 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Cardiff, Oldham, Newcastle, and eight other smaller towns; the largest proportions of uncertified deaths were registered in Bristol, Liverpool, Preston, Sheffield, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·6 per 1000 in each of the two preceding weeks, declined to 19·2 per 1000 in the week ending Nov. 10th, but was 2·3 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 14·0 in Aberdeen and 16·6 in Paisley to 20·3 in Glasgow and 24·2 in Dundee. The 594 deaths in these towns included 22 which were referred to whooping cough, 17 to diarrhœa, seven to diphtheria, seven to "fever," five to measles, and four to scarlet fever. In all, 62 deaths resulted from these principal zymotic diseases, against 67 and 77 in the two preceding weeks. These 62 deaths were equal to an annual rate of 2·0 per 1000, which was 0·4 per 1000 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping cough, which had increased from 13 to 18 in the four preceding weeks, further rose last week to 22, of which 16 occurred in Glasgow and four in Dundee. The deaths from diarrhœa, which had decreased from 53 to 24 in the five preceding weeks, further declined to 17 last week, and included nine in Glasgow and six in Dundee. The fatal cases of diphtheria, which had been six and seven in the two preceding weeks, were again seven last week, of which three were registered in Glasgow, two in Edinburgh, and two in Leith. The deaths referred to different forms of "fever," which had been four and 12 in the two preceding weeks, declined again to seven last week and included four in Glasgow. The fatal cases of measles, which had been two, four, and eight in the three preceding weeks, declined again last week to five, of which three were recorded in Edinburgh and two in Aberdeen. The deaths from scarlet fever, which had been eight in each of the two preceding weeks, declined to four last week, and included three in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had increased from 98 to 148 in the five preceding weeks, further rose last week to 150, and showed an excess of 32 over the number in the corresponding period of last year. The causes of 24, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·0 and 21·9 per 1000 in the two preceding weeks, further rose to 22·5 per 1000 during the week ending Nov. 10th. During the past four weeks the death-rate in the city has averaged 22·3 per 1000, the rate during the same period being 16·4 in London and 15·9 in Edinburgh. The 151 deaths belonging to Dublin registered during the week under notice were 4 in excess of the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 12 and 13 in the two preceding weeks; of these, six resulted from diarrhœa, four from "fever," and one from whooping-cough. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 1·5 in London and 1·4 in Edinburgh. The fatal cases of diarrhœa, which had been nine, six, and five in the three preceding weeks, rose again to six last week. The deaths referred to different forms of "fever," which had been five, four, and three in the three preceding weeks, rose again last week to four. The mortality from whooping-cough showed a decline from that recorded in recent weeks. The 151 deaths in Dublin last week included 31 of infants under one year of age and 37 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons slightly exceeded the numbers in the preceding week. Six inquest cases and six deaths from violence were registered, and 49, or nearly one-third, of the deaths occurred in public institutions. The causes of 12, or nearly 8 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1900.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the 43 sanitary areas of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 10·7 per 1000 of the population, estimated at 4,589,129 persons in the middle of the year. In the three preceding months the rates had been 7·0, 6·0, and 8·7 per 1000 respectively. The rates were considerably below the average in St George Hanover-square, Westminster, St. Martin-in-the-Fields, St. Luke, St. Olave Southwark, and Wandsworth; while they showed the largest excess in Fulham, Stoke Newington, Strand, Limehouse, Poplar, and St. George Southwark sanitary areas. One case of small-pox was notified last month in Islington, but not one in any other sanitary area; there were no new cases admitted into the Metropolitan Asylums hospitals last month, and only one small-pox patient remained under treatment on Saturday, Nov. 3rd. The prevalence of scarlet fever showed a large increase over that recorded in the preceding month; among the various sanitary areas this disease was proportionally most prevalent in Hammersmith, Fulham, Strand, City of London, St. George Southwark, and Lewisham (excluding Penge). The Metropolitan Asylums hospitals contained 2569 scarlet fever patients at the end of October, against 1804, 1657, and 1899 at the end of the three preceding months; the weekly admissions averaged 314, against 210, 152, and 255 in the three preceding months. The prevalence of diphtheria showed a considerable increase over that recorded in the preceding month; the greatest proportional prevalence of this disease occurred in Fulham, Hampstead, Stoke Newington, Poplar, Bermondsey, and Camberwell sanitary areas There were 1458 diphtheria patients in the Metropolitan Asylums hospitals at the end of October, against 1256, 1171, and 1231 at the end of the three preceding months; the weekly admissions averaged 206, against 183, 142, and 185 in the three preceding months. The prevalence of enteric fever was slightly in excess of that recorded in the preceding month; among the various sanitary areas this disease was proportionally most prevalent in St. Martin-in-the-Fields, Limehouse, Poplar, St. Saviour Southwark, St. George Southwark, and Bermondsey. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 129, 170, and 329 at the end of the three preceding months, had further risen to 444 at the end of October; the weekly admissions averaged 61, against 20, 32, and 69 in the three preceding months. Erysipelas was proportionally most prevalent in Holborn, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, and Mile End Old Town sanitary areas. The 33 cases of puerperal fever included five in Islington, four in Mile End Old Town, three in Hackney, and three in Wandsworth sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the public institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Nov. 3rd the deaths of 6749 persons belonging to London were registered, equal to an annual rate of 15·3 per 1000, against 15·7, 19·4, and 16·5 per 1000 in the three preceding months. The lowest death-rates last month in the various sanitary areas were 8 8 in Stoke Newington, 9 6 in Hampstead, 11·6 in St. George Hanover-square, 11·7 in Paddington, 11·8 in Wandsworth, and 12·3 in Hammersmith and in St. Martin-in-the-Fields; the highest rates were 21·7 in St. George Southwark, 21·8 in Holborn, 22·1 in St. Luke, 22·3 in Limehouse, 23·2 in St. Saviour Southwark, and 24·3 in St. George-in-the-East. During the five weeks of October 763 deaths were referred to the principal zymotic diseases; of these, 53 resulted from measles, 47 from scarlet fever, 170 from diphtheria, 96 from whooping-cough, 95 from enteric fever, and 302 from diarrhœa. The lowest death-rates from these diseases last month occurred in Paddington, St. George Hanover-square, Westminster, St. James Westminster, St. Martin-in-the-Fields, Whitechapel, St. Olave Southwark, and Woolwich; and the highest rates in Fulham, Limehouse, Poplar, St. Saviour Southwark, St. George Southwark, Newington, and Bermondsey. The 53 deaths from measles showed a decline of 94 from the corrected average; this disease was proportionally most fatal in Clerkenwell, Shoreditch, Limehouse, St. Saviour Southwark, St. George Southwark, and Bermondsey sanitary areas. The 47 fatal cases of scarlet fever showed a decline of 55 from the average number in the corresponding periods of the 10 preceding years; the greatest proportional mortality from this disease occurred in St. Giles, Holborn, City of London, Limehouse, St. George Southwark, and Rotherhithe. The 170 deaths from diphtheria were 99 below the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Fulham, Hampstead, Mile End Old Town, Poplar, Bermondsey, and Lee. The 96 fatal cases of whooping-cough were equal to the corrected average in the corresponding periods of the 10 preceding years; this disease showed the highest proportional fatality in Marylebone, St. Pancras, St. Giles, St. George-in-the-East, Limehouse, and Newington. The 95 deaths referred to enteric fever showed a decline of seven from the corrected average; among the various sanitary areas the death-rate from this disease was highest in Hammersmith, St. George Hanover-square, Hackney, Mile End Old Town, St. George Southwark, and Newington sanitary areas. The 302 fatal cases of diarrhœa were 84 above the average number in the corresponding periods of the 10 preceding years; this disease was proportionally most fatal in Bethnal Green, Limehouse, Poplar, St. Saviour Southwark, St. George Southwark, and Rotherhithe. In conclusion, it may be stated that the aggregate mortality from these principal zymotic diseases in London during October was nearly 18 per cent. below the average.

Infant mortality in London last month, measured by the proportion of deaths of children under one year of age to registered births, was equal to 148 per 1000. The lowest rates of infant mortality were recorded in Paddington, Hammersmith, Marylebone, Stoke Newington, St. Olave Southwark, and Plumstead; and the highest rates in Strand, Bethnal Green, St. George-in-the-East, Limehouse, St. Saviour Southwark, and Lee sanitary areas.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING OCTOBER, 1900.

(Specially compiled for THE LANCET.*)*

SANITARY AREAS.	Estimated population in the middle of 1900.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small pox.	Measles.	Scarlet fever.	Diphtheria.‡	Whooping cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,589,129	1	1983	1426	1	661	12	33	582	—	4599	10·7	—	53	47	170	96	—	95	—	302	763	1·7	6749	15·3	148
West Districts.																										
Paddington	130,104	—	44	24	—	6	—	—	10	—	84	6·7	—	—	—	—	2	—	3	—	2	7	0·6	146	11·7	107
Kensington	173,603	—	41	39	—	15	1	2	14	—	112	6·7	—	—	—	4	3	—	3	—	13	23	1·4	224	13·5	166
Hammersmith	110,203	—	67	35	—	21	—	—	10	—	133	12·6	—	—	1	5	—	—	6	—	7	19	1·8	130	12·3	93
Fulham	136,383	—	92	141	—	5	—	1	19	—	258	19·9	—	1	3	15	4	—	—	—	11	34	2·6	210	16·2	147
Chelsea	96,715	—	28	18	—	14	1	2	6	—	69	7·4	—	1	1	—	1	—	3	—	9	15	1·6	140	15·1	147
St. George Hanover square	81,133	—	15	7	—	8	—	—	8	—	38	4·9	—	—	—	2	—	—	3	—	3	8	1·0	90	11·6	121
Westminster	51,657	—	11	11	—	4	—	—	5	—	31	6·3	—	—	—	—	—	—	—	—	4	4	0·8	74	14·9	136
St. James Westminster	21,457	—	6	3	—	4	—	—	2	—	15	7·3	—	—	—	—	—	—	1	—	—	1	0·5	28	13·6	176
North Districts.																										
Marylebone	139,777	—	62	26	—	11	—	—	22	—	121	9·0	—	—	—	5	10	—	4	—	3	22	1·6	196	14·8	94
Hampstead	81,768	—	36	37	—	11	—	—	7	—	91	11·6	—	—	—	7	1	—	1	—	3	12	1·5	75	9·6	120
St. Pancras	245,551	—	117	74	—	44	—	1	30	—	266	11·3	—	4	2	3	10	—	6	—	19	44	1·9	374	15·9	157
Islington	351,541	1	165	84	—	37	1	5	42	—	335	9·9	—	—	2	14	12	—	3	—	20	51	1·5	451	13·4	134
Stoke Newington	35,718	—	13	31	—	2	—	—	3	—	49	14·3	—	—	—	3	1	—	—	—	1	5	1·5	30	8·8	98
Hackney	225,619	—	109	90	1	38	2	3	24	—	267	12·3	—	2	1	7	2	—	8	—	10	30	1·4	307	14·2	164
Central Districts.																										
St. Giles	38,870	—	21	10	—	7	—	1	4	—	43	12·2	—	1	3	—	2	—	—	—	2	8	2·3	61	17·3	129
St. Martin in the Fields	11,855	—	3	1	—	3	—	—	—	—	7	6·2	—	—	—	—	—	—	—	—	1	1	0·9	14	12·3	143
Strand	22,748	—	28	6	—	1	—	—	2	—	37	17·0	—	—	—	—	—	—	1	—	2	3	1·4	32	14·7	184
Holborn	29,188	—	16	6	—	2	—	—	6	—	30	10·7	—	—	1	—	1	—	1	—	2	5	1·8	61	21·8	162
Clerkenwell	66,007	—	22	14	—	14	—	—	12	—	62	9·8	—	2	1	—	1	—	—	—	4	8	1·3	101	16·0	151
St. Luke	40,655	—	10	8	—	1	—	—	5	—	24	6·2	—	—	—	1	1	—	1	—	3	6	1·5	86	22·1	109
City of London	26,922	—	18	8	—	2	—	—	3	—	31	12·0	—	—	1	1	—	—	—	—	1	3	1·2	51	19·8	158
East Districts.																										
Shoreditch	120,641	—	36	31	—	21	—	1	18	—	107	9·2	—	4	1	6	—	—	3	—	9	23	2·0	209	18·1	159
Bethnal Green	129,631	—	46	41	—	23	—	2	28	—	140	11·3	—	2	—	7	—	—	1	—	15	25	2·0	223	18·1	185
Whitechapel	82,220	—	33	24	—	12	—	2	16	—	87	11·0	—	—	1	2	—	—	—	—	5	8	1·0	135	17·1	160
St. George-in-the-East	49,875	—	17	12	—	6	—	—	10	—	45	9·6	—	—	1	—	4	—	1	—	2	8	1·7	114	24·3	197
Limehouse	58,944	—	34	16	—	17	1†	—	19	—	87	15·4	—	5	2	3	3	—	1	—	9	23	4·1	126	22·3	199
Mile End Old Town	113,781	—	44	46	—	17	—	4	23	—	134	12·3	—	1	1	9	1	—	5	—	7	24	2·2	188	17·2	155
Poplar	170,968	—	89	98	—	39	—	—	23	—	249	15·2	—	2	3	13	4	—	4	—	16	42	2·6	347	21·2	174
South Districts.																										
St. Saviour Southwark	23,954	—	8	1	—	6	—	1	3	—	19	8·3	—	2	—	—	—	—	1	—	6	9	3·9	53	23·2	212
St. George Southwark	60,597	—	44	14	—	58	—	—	9	—	125	21·5	—	8	3	—	3	—	7	—	11	32	5·5	126	21·7	158
Newington	125,128	—	52	45	—	14	—	—	18	—	129	10·8	—	3	2	6	9	—	5	—	11	36	3·0	248	20·7	184
St. Olave Southwark	10,909	—	3	2	—	—	—	—	—	—	5	4·8	—	—	—	—	1	—	—	—	—	1	1·0	19	18·2	69
Bermondsey	85,770	—	32	40	—	23	—	1	5	—	101	12·3	—	4	—	7	2	—	1	—	8	22	2·7	171	20·8	162
Rotherhithe	41,248	—	10	9	—	9	—	1	8	—	37	9·4	—	—	1	—	—	—	1	—	5	7	1·8	57	14·4	183
Lambeth	312,152	—	112	54	—	49	1	1	35	—	252	8·4	—	1	3	4	5	—	8	—	16	37	1·2	457	16·3	151
Battersea	173,100	—	73	36	—	21	—	—	22	—	152	8·9	—	1	2	6	4	—	3	—	7	23	1·3	228	13·4	135
Wandsworth	217,004	—	60	37	—	11	1	3	23	—	134	6·4	—	1	4	5	1	—	1	—	13	25	1·2	248	11·8	131
Camberwell	263,457	—	144	110	—	37	3	—	27	—	321	12·5	—	1	3	20	8	—	4	—	14	48	1·9	331	12·9	127
Greenwich	184,552	—	84	69	—	24	—	2	27	—	206	11·6	—	3	3	6	1	—	1	—	13	27	1·5	272	15·4	164
Lewisham (excluding Penge)	93,548	—	71	24	—	8	—	—	9	—	112	12·5	—	2	—	4	—	—	2	—	7	15	1·7	121	13·5	119
Woolwich	41,600	—	15	12	—	8	—	—	6	—	41	10·3	—	1	—	—	—	—	—	—	3	4	1·0	55	13·8	146
Lee	40,722	—	15	17	—	—	—	—	4	—	36	9·2	—	1	—	4	1	—	—	—	2	8	2·0	56	14·3	218
Plumstead	65,668	—	33	23	—	5	1	—	8	—	70	11·1	—	—	1	1	—	—	2	—	3	7	1·1	86	13·7	77
Port of London	—	—	1	2	—	3	—	—	1	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 14 cases of membranous croup.

† Bubonic disease.

‡ Including deaths from membranous croup.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Surgeon R. L. Price to the *Vivid*. Civil Practitioner W. H. C. Davey to be Surgeon and Agent at Liverpool.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel H. J. Robbins, A.M.S. (retired), has handed over the medical charge of Station Hospital, &c., Golden Hill Fort to Civil Surgeon A. R. Walters, and assumed charge of the troops and Station Hospital at Parkhurst. Captain F. Dove has been granted an extension of leave to Feb. 2nd, 1901, for the recovery of his health.

VOLUNTEER CORPS.

Royal Engineers: 1st Devonshire and Somersetshire: The undermentioned officer resigns his commission:—Surgeon-Lieutenant H. P. V. Wiggin.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: Walter Whitehead to be Honorary Surgeon-Colonel on appointment as Honorary Commandant.

TRANSVAAL WAR NOTES.

Mr. Charles Baehler, general manager of the Ghézireh Palace and Shepheard's Hotels in Cairo, has placed gratuitously at the disposal of the Duke of Abercorn's Sick and Wounded Officers' Committee accommodation in these hotels for two married officers and their wives and for four single officers.

Major J. G. Black, R.A.M.C., reported to be dangerously ill at Newcastle from enteric fever, is improving. Lieutenant E. B. Knox, R.A.M.C., is dangerously ill at Pretoria.

The *Times* states that Surgeon-General Stephenson, R.A.M.C. Colonel T. J. Gallwey, R.A.M.C., and Major W. Babtie, R.A.M.C., V.C., are on their way home to England in the *Tantallon Castle.*

CAMP SANITATION IN SOUTH AFRICA.

The *Times* of Nov 13th contains a very good
sensible letter from a regimental officer on "Camp Sa
tion," which, if it contains nothing particularly
has much that is practical and true, hitting of
points that are apt to be overlooked or insu
attended to in camps. The great difficulty
of war does not, however, always arise so m
ignorance of the elementary principles of ar
on the part of those concerned as from th
and occasionally the impossibility, of
with sufficient promptitude to be
goes without saying that a position
and occupied before any sanitary
undertaken in regard to it, whereas
would often have to be taken in ad
benefit. The incoming troops hav
as the enemy left it and to make
Moreover, the application of sanita
and labour, however promptly they
a forced march, ending perhaps wit
of necessity be some confusion an
and strain on all concerned—to sa
or non-arrival of transport. When
the case is altogether different,
simply criminal to neglect the wor

BOER EYES

There will be nothing strange
in General Sir Redvers Buller's
sight of the Boers. He says:

> Many of our men are city born, a
> country. We went out to a region wh
> enemies were born in a very open coun
> is not untrue to say that practically t
> our enemy was two miles at least furth
> English who were fighting against th
> fact. An ordinary Dutchman or Africa
> him two miles before the man approa

If we recollect aright Lord Wo
when he was in South Africa he
same fact, and we have heard it re
are not so much better shots as bet
than our own soldiers. It is well known,
accounted for, that savage or less civilised
open air do not suffer from the imperfect visio
from defective accommodation of the eye which o
obtains among more highly civilised and
whose vision has been accustomed and adap
more limited ranges.

LORD LANSDOWNE'S LEAVE TAKING OF TH

The Secretary of State for War at the bes
difficult post, and in time of war has a ver
This has been especially the case with
Lansdowne whose labours at the War Offic
remitting and who has accomplished a gr
in sending out and supplying our large
Africa. He expressed his thanks in
terms to the officials of his department in t
He said that for the last 12 months the
to bear the burden of a great war whic
efforts and preparations unprecedented i
country, and he added that these effo
largely successful and highly credita
is, he believed, accorded by all
reviewed the events of the past

THE WELS

The following telegra
Nov. 6th, to the Directo
Service, London, has bee
to the Secretary of the
to the committee of
and Surgeon-General
Hughes, and ex
loss.—ROBERT

A letter h
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the of 6749
ed, equal to
t 15·7, 19 4,
months. The
various sanitary
in Hampstead,
17 in Paddington,
in Hammersmith and
highest rates were 21·7
in Holborn, 22·1 in St. Luke,
in St. Saviour Southwark,
ge-East. During the five weeks of
referred to the principal zymotic
resulted from measles, 47 from scarlet
eria, 96 from whooping-cough, 95 from
02 from diarrhœa. The lowest death-
iseases last month occurred in Padding-
Hanover-square, Westminster, St. James
St. Martin-in-the-Fields, Whitechapel, St.
ark, and Woolwich; and the highest rates
Limehouse, Poplar, St. Saviour Southwark,
Southwark, Newington, and Bermondsey.
eaths from measles showed a decline of 94
corrected average; this disease was proportion-
t fatal in Clerkenwell, Shoreditch, Lime-
. Saviour Southwark, St. George Southwark, and
sey sanitary areas. The 47 fatal cases of scarlet
showed a decline of 55 from the average number
e corresponding periods of the 10 preceding years;
greatest proportional mortality from this disease
urred in St. Giles, Holborn, City of London, Lime-
ouse, St. George Southwark, and Rotherhithe. The 170 deaths from diphtheria were 99 below the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Fulham, Hampstead, Mile End Old Town, Poplar, Bermondsey, and Lee. The 96 fatal cases of whooping-cough were equal to the corrected average in the corresponding periods of the 10 preceding years; this disease showed the highest proportional fatality in Marylebone, St. Pancras, St. Giles, St. George-in-the-East, Limehouse, and Newington. The 95 deaths referred to enteric fever showed a decline of seven from the corrected average; among the various sanitary areas the death-rate from this disease was highest in Hammersmith, St. George Hanover-square, Hackney, Mile End Old Town, St George Southwark, and Newington sanitary areas. The 302 fatal cases of diarrhœa were 84 above the average number in the corresponding periods of the 10 preceding years; this disease was proportionally most fatal in Bethnal Green, Limehouse, Poplar, St. Saviour Southwark, St. George Southwark, and Rotherhithe. In conclusion, it may be stated that the aggregate mortality from these principal zymotic diseases in London during October was nearly 18 per cent. below the average.

Infant mortality in London last month, measured by the proportion of deaths of children under one year of age to registered births, was equal to 148 per 1000. The lowest rates of infant mortality were recorded in Paddington, Hammersmith, Marylebone, Stoke Newington, St. Olave Southwark, and Plumstead; and the highest rates in Strand,
al Green, St. George-in-the-East, Limehouse, St.
wark, and Lee sanitary areas.

Correspondence.

"Audi alteram partem."

OUR WIDOWS AND ORPHANS.

To the Editors of THE LANCET.

SIRS,—May I, as president of the Society for Relief of Widows and Orphans of Medical Men, venture to appeal to the younger members of our profession to avail themselves more largely than at present of the benefits of this society. We all hope t unfortunately we do not all succeed, to
provi
or those dependent on us, and if cut off
ften happen that a medical man leaves
in very straitened circumstances if
Anyone who reads the touching
n pensions and scholarships will
is society, who has no certain
he *yearly value of £80*, is
ding £50 per annum, and
under 16 years of age;
ber for three years im-
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within 20 miles of
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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING OCTOBER, 1900.

(*Specially compiled for* THE LANCET.)

NOTIFIED CASES OF INFECTIOUS DISEASE.

SANITARY AREAS.	Estimated population in the middle of 1900.	Small pox.	Scarlet fever.	Diphtheria *	Typhus fever.	Enteric fever.	Other continued fevers	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.
LONDON	4,589,129	1	1983	1426	1	661	13	33	582	—	4699	10·7
West Districts												
Paddington	130,104	—	44	24	—	6	—	—	10	—	84	6·7
Kensington	173,603	—	41	39	—	15	1	2	14	—	112	6·7
Hammersmith	110,203	—	67	35	—	21	—	—	10	—	133	12·6
Fulham	136,383	—	92	141	—	5	—	1	19	—	258	19·9
Chelsea	96,715	—	28	18	—	14	1	2	6	—	69	7·4
St. George Hanover square	81,133	—	15	7	—	8	—	—	8	—	38	4·9
Westminster	51,657	—	11	11	—	4	—	—	5	—	31	6·3
St. James Westminster	21,457	—	6	3	—	4	—	—	2	—	15	7·3
North Districts.												
Marylebone	139,777	—	62	26	—	11	—	—	22	—	126	9·0
Hampstead	81,766	—	36	37	—	11	—	—	7	—	91	11·6
St. Pancras	245,551	—	117	74	—	44	—	1	30	—	266	11·3
Islington	351,541	1	165	84	—	37	1	5	42	—	335	9·9
Stoke Newington	35,718	—	13	31	—	2	—	—	3	—	49	14·3
Hackney	225,519	—	109	90	1	38	2	3	24	—	267	12·3
Central Districts.												
t. Giles	36 870	—	21	10	—	7	—	1	4	—	43	12·2
t. Martin in the-Fields	11,855	—	3	1	—	3	—	—	—	—	7	
and	22,748	—	28	6	—	1	—	—	2	—	37	
born	29,183	—	16	6	—	2	—	—	6	—		
kenwell	66,007	—	22	14	—	14	—	—	12	—		
Luke	40,655	—	10	8	—	1	—	—	5	—		
of London	26,922	—	18	8	—	2	—	—		—		
East Districts.												
itch	120,041	—	36	31	—	21	—					
l Green	123,631	—	46	41	—	23						
hapel	82,220	—	33	24	—	12						
e-in the-East	48,875	—	17	12	—	6						
	58,944	—	34	16	—	17						
Town	113,781	—	38	46	—	1						
	170,963	—	89	93	—							

DEATHS FROM PRINCIPAL INFECTIOUS DISEA

SANITARY AREAS.	Small pox.	Measles.	Scarlet fever	Diphtheria †	Whooping cough	Typhus fever.	Enteric fever.	Other continued fevers.
LONDON	—	53	47	170	96	—	9	

desquamated freely on the fourteenth day. On Nov. 21st (18 days after the solitary case of scarlet fever had been isolated) I saw the first two boys who complained of headache, sore-throat, and general malaise. The boys looked and felt ill, and I had them removed to our sanatorium for observation. These two cases were followed by the remaining cases within the next three days. I will select the case of the most typical as the features were common to all. This boy sickened on Nov. 23rd complaining of malaise and sore-throat. The patient looked ill and pale and on taking his temperature it was found to be 100°F. The throat was injected, especially the faucial arch, and the tonsils were swollen; the tongue was red and moist; his conjunctivæ were not injected, there was no coryza, and his pulse was quiet at 84. Deeming the case suspicious I had him removed to the sanatorium where I saw him next day. He was then about the same but had vomited during the night. On Nov. 26th he was worse, the throat was more painful, and the tonsils had follicular patches on them. There was a well-marked rash on the soft palate. The temperature was 101·4°. On his arms and chest was a small darkish-red punctiform rash exactly resembling that of scarlet fever. *The lymphatic glands were not enlarged,* and more especially I noted that the post-auricular glands were not enlarged as they usually are in rose rash. The following day he was better and the rash was fading, and the temperature was 100°. From that day he rapidly got well, and all his symptoms diappeared until he became convalescent on Nov. 27th. I quite expected him to peel, but although I kept him under close observation for another 14 days no sign of desquamation was visible and he returned to school on Dec 11th. These cases appear to be exactly what Dr. Clement Dukes has described as "the fourth disease," and which he admits he diagnosed (as I did) as the scarlatinal variety of rose rash, the chief discrepancies between the two diseases being, so far as my cases are concerned, *(a) the different colour of the rash, and (b) the fact* that there was neither coryza nor any enlargement of the post-auricular glands—this latter symptom I have noted in
per cent of the rose rash cases which I have treated.
e most striking difference between my cases and a
al scarlet fever was the fact that there was no
amation at all. So far as I can tell the infection
asted for a shortish period, certainly under 21 days,
boys returned to school on the eighteenth day and
further cases. The chief interest in this series of
in the fact that here we had to deal with an
f some disease which was neither rose rash nor
, and the only rational explanation is that there
"fourth disease."

I am, Sirs, yours faithfully,

R. LESLIE ROMER

Editors of THE LANCET.

me to state what I know of two of
ed at Rugby last March of the so-
Of the series reported by Dr.
my own sons, and I saw them at
sixth days respectively of their
only at the fading eruptions and
mmencing (on the sixth day) in
uch disposed to regard them as
r. Against this view were the
t ill at that date, that no pyrexia
gues were not at all characteristic
eir posterior cervical glands were
evidently been intense, and one
freely for six or seven weeks,
pen ever to have seen in a
ithin a week of their first
of bed and shortly after this
had had true rubella—one a
years before. Carefully review-
fortnight was over I could come
n that Dr. Dukes had very skil-
tangled this group of cases from
t and rubella on the other. The
ith this view, for the boys mixed
ion, with others after three weeks,
ith their young brother, aged three
en of others was known to take place.
, unless very extensive, may not prove
is single experience, itself in keeping with

others of this series, suggests as likely one of the following alternatives: on the one hand, that these were cases of this mild "fourth disease"; and on the other, that they were cases of mild scarlet fever, but that on the latter supposition the duration of the infectiousness of scarlet fever is much shorter than is usually held to be the case. This is a view which seems to have struck a good many observers of scarlet fever.

May I add a few observations upon the infectiousness of rubella? We are told of this curious complaint, with its five or six names and its period of incubation varying from five to 21 days, that it is highly infectious. In regard to this point one may fairly ask how it can ever be proved that a complaint with such a range of incubation is infectious at all and is not rather connected with some seasonal change operating upon a group of persons similarly circumstanced. With all the evidence from large outbreaks this is obviously going too far, but I would submit that the limitations of the infectiousness of rubella are greater and more numerous than those of any known infectious disease. As a fact, until a small outbreak of rubella took place this year in this neighbourhood, I could only remember one case of this complaint which *appeared* to spread from one person to another in a family, and that is during some 20 years of general practice. This, again, is only negative evidence and not extensive, but such experiences demand some attention. I would suggest the following propositions as to the infectiousness of rubella. First, that the infectiousness is less than that of any known infectious disease. Secondly, that it is limited very much to young adults and schools, avoiding children and grown-up persons. Thirdly, that its infectiousness is limited by season. I am, Sirs, yours faithfully,

Blackheath, Nov. 14th, 1900. WALTER KIDD, M.D. Lond.

THE DIAZO-REACTION IN TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—In an address delivered by Dr. James Barr on the Treatment of Typhoid Fever reported in THE LANCET of Sept 29th, 1900 (p. 919), there occurs the following sentence: "As a very early test I prefer Ehrlich's diazo-reaction of the urine which, although present in some other febrile affections, is never so pronounced as in typhoid fever" If Dr. Barr will refer to the *Indian Medical Gazette* for June, 1893, he will find recorded some experiments which show that there are other diseases in which the "diazo" reaction is quite as well marked as in any case of typhoid fever. I am sorry I have not a spare copy of the paper to send you. I am, Sirs, yours faithfully,

J. H TULL WALSH, Major I.M.S.

Berhampur, Bengal, Oct. 21st, 1900.

"THE SMOKE NUISANCE."

To the Editors of THE LANCET.

SIRS,—Once more I feel that I must trespass upon your valuable space on account of the statement made by the honorary treasurer of the Coal Smoke Abatement Society in your columns[1] that—

> The principal difficulty in the society instituting proceedings is that the society would have to prove in court a nuisance by the smoke, a not always easy thing to prove to the satisfaction of a magistrate, whereas if the vestry prosecutes it only has to prove that black smoke was emitted, which under Section 23 and 24 constitutes a nuisance.

I must again point out that under Section 23 the non-consumption of smoke is a specific offence and legal proceedings for penalties can only be instituted by the sanitary authority. The actual question of a nuisance does not arise under Section 23, but under Section 24 "...... sending forth black smoke in such quantity as to be a nuisance; shall be nuisances liable to be dealt with summarily under this Act"; therefore I fail to understand why the honorary treasurer of the Coal Smoke Abatement Society writes that a sanitary authority under Section 24 has not to prove that which a private individual has to prove when proceedings are taken by him under Section 12 I must also point out that where a chimney, not belonging to a private house, sends forth black smoke so as to be a nuisance, it is not necessary in proceedings to abate it to prove that the smoke is injurious to health (Gaskell *v.* Bayley 80 L.T. (N S) 516). Might I suggest to any person aggrieved through the emission of black smoke that snap-shots be taken of the offending shaft to be produced in a court of summary jurisdiction? I am, Sirs, yours faithfully,

FREDERICK WILLIAM ALEXANDER,
Medical Officer of Health, Poplar and Bromley.

Bow-road, Bow, E, Oct. 24th, 1900.

SNOW BLINDNESS.

To the Editors of THE LANCET.

SIRS,—A friend of mine who spent his holiday this summer in Switzerland suffered whilst there from an attack of snow blindness. The first symptom which he noticed was the presence of a rainbow surrounding the candle in his bedroom. I shall be glad to know if this is a common or known symptom; and, further, I shall be obliged if any of your readers can inform me what is the optical explanation of similar rainbows in glaucoma.

I am, Sirs, yours faithfully,

Llandudno, Nov. 10th, 1900. EDWARD GOODDY.

*** The rainbow surrounding the flame of a candle in the case referred to by Mr. Gooddy was probably due to some disturbance of the epithelium of the cornea consequent upon exposure to cold and glare. These conditions are acknowledged by all travellers in the Arctic Regions to set up severe conjunctivitis. The Esquimaux use protectors made with narrow slits to minimise the effects of such exposure. The haloes observed as a subjective phenomenon in glaucoma are the results of similar conjunctival trouble proceeding from increased tension of the globe. A halo of the same kind is seen on looking at a flame through a glass that has been breathed upon or that is frosted on one side.—ED. L.

THE TEACHING OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—Having been on the staff of a provincial hospital for nearly 20 years I have had many opportunities of observing the knowledge possessed by such recently qualified men as seek for hospital appointments. I have no hesitation in saying that the majority of them are imperfectly trained and some are lamentably ignorant in that important branch of their profession, the administration of anæsthetics. If the candidates for hospital appointments, who are generally above the average and as a rule only secure their appointments after severe competition, are deficient, the rank-and-file must be deplorably incompetent. I freely admit that I have met with notable exceptions, but I maintain that if the education was more thorough they would all be efficient, or at any rate they would not be so grossly ignorant as I have found them. For instance, I have seen men apply the facepiece of Clover's inhaler upside down. Others have commenced with the ether full on and others have admitted that they never saw the inhaler before. I have waited three-quarters of an hour while a man was endeavouring to place a patient under the influence of chloroform, and in the administration of gas I have generally had to act as instructor. Most of the men indulge in unlimited poking of their fingers into the poor patients' eyes and are generally fussy, nervous, and frightened. In a paper which I recently read before the Kidderminster Medical Society I drew attention to fright as a not unimportant element in producing a fatal termination, and I insisted upon the importance of re-assuring and obtaining the confidence of the patient at the outset. May I now add that the factor of fright on the part of the administrator is a two-fold danger, because in addition to rendering him inefficient it must react upon his patient?

I notice in your excellent article[1] that you attribute this lack of knowledge to a certain extent to the fact that the examining bodies do not demand any special training in this important subject. Your estimate is no doubt correct and the time has now arrived when the General Medical Council ought to take cognisance of the matter and insist upon a different state of affairs. To-day, almost every practitioner is called upon to give anæsthetics on frequent occasions, and his want of knowledge is not only a detriment to himself but extremely irritating to the surgeons employed and a source of much discomfort and grave danger to the patient As a former anæsthetist at one of the largest London hospitals I have no hesitation in saying that there is ample material to give a thorough practical training to every individual student Take the number of a year's students at St Bartholomew's at 150, and the number of anæsthetics administered at 5000 it would certainly be a very easy matter for each student to administer 10 anæsthetics (I should prefer 20) My proposition is that the General Medical Council should insist that every practitioner should before receiving his diploma produce evidence that he has administered anæsthetics at least 20 times, including ether gas, and chloroform, under proper supervision There is a somewhat similar regulation with regard to confinements so why omit the anæsthetics? There can be no question of increasing the burdens of the student If he wishes to undertake the responsibility of administering anæsthetics surely he cannot complain if he is compelled to prove the possession of the necessary ability to do so I hope, Sirs, the General Medical Council will give their early attention to the matter

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[1] THE LANCET, Oct. 20th, 1900, p 1164.

1215.

I am, Sirs, yours faithfully,
J LIONEL STRETTON
Senior Surgeon Kidderminster Infirmary and Children's Hospital formerly Assistant Anæsthetist St Bartholomew's Hospital.

THE ASSOCIATION OF PHYSICIANS AND SURGEONS (SOCIETY OF APOTHECARIES)

To the Editors of THE LANCET

SIRS —In answer to the further resolution of the Court of Assistants of the Society of Apothecaries the Association of Physicians and Surgeons (Society of Apothecaries) have replied thanking the Society for the authorisation to their Licentiates of adding to their titles of "L S A Lond" the words, "Physician and Surgeon and the Association hope that in the near future a further alteration will be made in a still rather unsatisfactory title Licentiates may now, on the authority of the resolution of Oct 8th, 1900, style themselves "Licentiate Physician of the Society of Apothecaries and Licentiate Surgeon of the Society of Apothecaries, London" ("L P S A and L S S A Lond")

I am, Sirs, yours faithfully,
GERALD DALTON,
Honorary Secretary of the Association of Physicians and Surgeons (Society of Apothecaries)
453 Strand W C Nov 12th 1900

HERNIA "SPECIALISTS"

To the Editors of THE LANCET

SIRS —I shall be obliged if any of your readers can furnish me with details of cases recently treated by Mr S J Sherman hernia specialist I think it likely that he attended patients in Cardiff about June of this year, and in Preston about the beginning of September All particulars which will assist in judging of the success or failure of Mr Sherman's treatment will be valued

I am, Sirs yours faithfully,
HUGH WOODS
Westbury Hornsey lane London, N., Nov 12th, 1900

PUBLIC VACCINATORS —At a meeting of the Council of the Association of Public Vaccinators held on Nov 9th it was decided to take immediate steps to press in the new Government the claims of public vaccinators to be considered as officers and to be eligible for superannuation and if necessary to proceed by the introduction of a private Bill in the ensuing Parliament As considerable expense will probably attend such an undertaking it was decided to make a special appeal to members of the association and to public vaccinators generally, so as to guarantee that the matter should not suffer for lack of funds A letter was read from the National Poor Law Officers' Association promising its help in any such enterprise

THE UNIVERSAL EXHIBITION OF PARIS

(FROM OUR SPECIAL CORRESPONDENT)

CONCLUDING NOTICE

CLOSURE AND SUCCESS OF THE EXHIBITION

AFTER the final illuminations unprecedented in brilliancy, expanse, and grandeur, the great Universal Exhibition of 1900 has closed its doors The best of things must end and this has certainly been the best and the most successful of Exhibitions Where in the world's history has it ever been recorded that more than 600,000 persons came in the course of a day to contemplate an Exhibition, however large and attractive? There has been some talk of failure, originating among those who, for political reasons, were anxious to damage the Government actually in office, and there have been failures, but not of the Exhibition The public, more especially the French public, has shown its good sense and its good taste by not patronising extensively certain side shows, but these do not constitute the Exhibition On the other hand, such side shows as the History of Costume, the Palace of Light with its scientific exhibits, the Trans Siberian railway, the Mareorama with its life like illusion of a Mediterranean cruise, and other panoramic displays were worthy of the Exhibition and were widely admired and patronised Others of a lower order failed and deserved to fail But these small side issues are inseparable from great exhibitions, for money must be raised in some way or another It is true that the Exhibition bonds bearing 65 000 000 admission tickets were readily sold for as many francs, but this, even when supplemented by subventions from the State and from the Paris municipality, did not suffice for such a vast undertaking Therefore, concessions were sold to various speculators Similar concessions were granted too cheaply for the Exhibition of 1889, and it is said that in the present case the charges made were too high In any case there has been over speculation, but the Exhibition cannot be held responsible for the miscalculations of individuals who wanted to run restaurants, side shows or stalls for the sale of trinkets Such establishments do not constitute an Exhibition they are rather the parasites that hang on to a great national enterprise Nor is it the fault of the management of the Exhibition if the restaurant keepers made such exorbitant charges and gave such poor food that a great number of visitors preferred to bring sandwiches with them or to take their meals at restaurants outside But those wiser caterers, such as the owners of the Swiss Châlet near the Eiffel Tower, who gave simple wholesome food and plenty of it at moderate charges must have made large fortunes, for the crowds of customers that patronised their establishments must have exceeded the wildest hopes that it was possible to entertain So that it may be said that where success was merited it was achieved and if some of the side shows failed this in a measure, may be attributed to the fact that there was so much to be seen in what constituted the Exhibition proper that but little time remained to visit anything else

Then, after all in judging an Exhibition it is first of all necessary to consider what is its main purpose Evidently this consists of gathering from all parts of the world exhibits that will illustrate the progress achieved in the domains of science art, and industry to which in this Exhibition have been added philanthropy and sociology Now under all these headings there have never been before so many and such remarkable exhibits The Palace of Social Economy and of the Congresses was a new and a remarkable feature Here on the ground floor was shown what the leading nations of the world have done to raise the poorer sections of the community by organising self help institutions, while on the upper floor vast assembly rooms were at the disposal of the 127 official International Congresses that were held Thus was stimulated a righteous rivalry and emulation in the performing of good works These endeavours cannot be ignored and will not be forgotten, they all contribute to the grateful memory that will long outlive the ephemeral life of the Exhibition itself In the course of a few months weighty volumes will be distributed throughout the world recording what was said and done at these congresses The report of the International Medical Congress will constitute a small residence, Banbridge, co. Down, on Nov. 6th, from exhaustion following carbuncle, after a short illness of two weeks. Born in Banbridge 65 years ago, his early education was obtained at the well-known school of Mr. Andrew Mullan. He afterwards studied at Queen's College, Belfast, where he was a hard-working student and obtained several prizes. In 1857 he became a Licentiate of the Royal College of Surgeons of Edinburgh, and in 1861 he graduated M.D. of the old Queen's University. Starting practice in his native town, Banbridge, his success was rapid, and in 1872 he was appointed medical officer of the Banbridge Union Infirmary and Fever Hospital. He was also a certifying factory surgeon and a justice of the peace for County Down. A man of sound professional knowledge, Dr. Hawthorne enjoyed the complete confidence of his patients. Taking an active part in the affairs of his native town and being a man of shrewd business habits his death is greatly deplored. He was buried on Nov. 9th, his funeral being attended by a large number of personal friends and former patients.

JOHN QUILLER COUCH, M R C S., L M. ENG., L S A. LOND,

CONSULTING SURGEON, PENZANCE INFIRMARY.

MR. J. QUILLER COUCH died at his residence, Chapel-street, Penzance, on Nov. 6th, in his seventieth year. Mr Couch, who belonged to an old Cornish family, was the son of the late Mr. Jonathan Couch, M R C.S, of Polperro. He received his medical education at Guy's Hospital and qualified M.R C.S., L M. Eng., and L.S A. in 1862. Mr. Couch had practised for many years in Penzance, having succeeded to the practice of his brother, Mr. R. Q. Couch The deceased held several appointments, being medical officer of health for the Madron and Ludgvan Urban Districts, medical officer and public vaccinator for the No. 5 District, Penzance Union, and surgeon to the Great Western Railway Company. He was also consulting surgeon to the Penzance Public Infirmary and Dispensary. Mr. Couch will be much missed in Penzance, where he was very popular. He had been in failing health for some time past, although he continued his professional duties up to the last month.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The The deaths of the following eminent foreign medical men are announced:—Dr. W. Browning, Professor of Anatomy, Long Island Hospital, Brooklyn, U.S.A.—Dr. Teijeiro, Professor of Clinical Surgery in the University of Santiago, Spain.—Dr G. Bulau of Hamburg.—Dr. Turnbull of Philadelphia, a voluminous author of books and papers on Diseases of the Eye.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At a stated meeting of the College held on Nov. 9th the following successful candidates were admitted to their respective Licences:—

Licentiate in Medicine.—E J. M. Watson, M D.
Licentiates in Midwifery.—Miss Agnes Benjamin, L R.C.P. & S. Edin, and Miss Honorine Forbes, L.R.C P. & S. Edin

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Julius Lazarus of the Jewish Hospital has been granted the title of Professor.—*Bonn:* Dr Grouven has been recognised as *privat-docent* of Dermatology.—*Breslau:* Dr Thilenius of Strasburg has been appointed Extraordinary Professor of Anatomy. He has been a great traveller, having visited North America, Australia, and the Polynesian Islands in search of scientific information.—*Chicago (Rush Medical College):* Dr. Edwin Klebs, Professor of Pathological Anatomy, has resigned, and is returning to Europe.—*Christiania:* Dr. F. G. Herbitz has been appointed Professor of Pathological Anatomy.—*Gratz:* Dr Otto Barnik has been appointed *docent* of Otology.—*Kiel:* Dr Deetjen has been recognised as *privat-docent* of Physiology.

DR R T. MEADOWS has been elected an alderman by the Saltash Town Council.

APOTHECARIES' HALL OF IRELAND.—The following candidates have passed (October, 1900) the final examinations in medicine, surgery, and midwifery: D'Arcy Irvine Hamilton, John Thompson, and Stafford Adye Curran.

UNIVERSITY COLLEGE OF WALES.—The annual meeting of the University College of Wales was held at Aberystwyth on Oct. 26th. The annual report was favourable. The Bishop of Hereford delivered the inaugural address.

SUPERANNUATION ALLOWANCE.—Mr. Richard Ellery, L.R.C.P. Edin., M.R.C S. Eng., who has for 31 years been district medical officer of the Plympton (Devon) Board of Guardians, has been granted a superannuation allowance of £50 per annum.

BRISTOL MEDICAL SCHOOL.—The annual dinner of the Bristol Medical School will be held at the Royal Hotel, Clifton, on Nov. 22nd. Dr. Shingleton Smith will preside and Sir William Broadbent, Bart., will be the guest of the evening.

SALARIES OF MEDICAL OFFICERS OF HEALTH.—At the meeting of the Axminster Rural District Council held on Nov. 8th a letter was read from the Local Government Board refusing to sanction the reappointment of the medical officer of health. In a former communication the Board had intimated that they would take this step unless a larger salary was granted.

DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students will be held on Saturday, Nov. 24th, at the Whitehall Rooms, Hôtel Métropole, under the presidency of Mr. F. A. Bevan, a trustee and vice-president of the hospital. Gentlemen either now or formerly connected with the hospital or medical school who may through inadvertence not have received special notice and who desire to be present are requested to communicate with the Dean at the Dental Hospital, 40, Leicester-square, London.

LITERARY INTELLIGENCE.—Mr. George Henry Makins, F.R.C.S Eng., surgeon to St Thomas's Hospital and late consulting surgeon to the South African Field Force, has in active preparation a work which he entitles "Surgical Experiences in South Africa, 1899–1900: being mainly a Clinical Study of the Effects of Injuries produced by Bullets of Small Calibre." The volume will be published by Messrs. Smith, Elder, and Co.—The increasing interest taken in the study of astronomy has induced the proprietors of *Knowledge* to issue an annual for students and workers in that science specially devoted to their requirements. It is entitled "Knowledge Diary and Scientific Handbook, 1901," and will contain amongst other things useful tables, original articles, a calendar of scientific events, and a blank diary portion. The price is 3*s.* net, and the diary is published at 326, High Holborn, London, W.C.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The annual breakfast meeting given by the British Medical Temperance Association to medical students was held at the Cannon-street Hotel, London, on Nov. 9th. There was a large attendance, including students from the London Hospital, Guy's Hospital, St. Thomas's Hospital, King's College Hospital, St Mary's Hospital, Middlesex Hospital, and the London School of Medicine for Women. Professor Sims Woodhead presided and the meeting was addressed by Mr. A. Pearce Gould, Mrs. Scharlieb, Dr. J. Dixon, Mr. W. McAdam Eccles, and Dr. J. J. Ridge.—Mr. Pearce Gould said that they were not asked to join a waning but a growing cause. The alteration in the medical and surgical use of alcohol in the last 30 years had been immense; so also had been the estimate formed by business men of the value of total abstainers, whose lives were formerly considered uninsurable at ordinary rates, whereas now every life insurance office was only too glad to get them. Total abstinence would enable them to make the best use of their powers and was helpful physically, mentally, and morally. Alcohol never gave self-control or added to a man's power of work. The responsibility was great in view of the terrible havoc caused by drink, not only by the coarser forms of drunkenness but in its more insidious forms, and he hoped that they would not become hard and callous to all this. He could not help those who were given to drink so well if he were not an abstainer himself, and there were many needing help whose moral faculties had been weakened. He would also remind them that though there was a large pathology of alcohol there was absolutely none of total abstinence.—Mrs. Scharlieb also urged them to join the association. Her experience in India was that the abstaining natives were most excellent patients, and in severe illness such as enteric fever and in operation cases did well in a way she had never seen others do. She rarely used alcohol even in the most severe operations. There had, no doubt, been great improvement in some of the drinking customs, but if England used the millions spent on alcohol in other ways it would be a blessing to the world. She believed that if they abstained they would be stronger in body, soul, and spirit.—Votes of thanks were passed to the speakers and to Professor Sims Woodhead. 19 students afterwards joined the association.

BOOKS, ETC., RECEIVED.

ALT, JOHANNES, Frankfurt.
Die Entstehung und Ursache der Taubstummheit. Von Dr. Fritz Danziger. 1900.

ARNOLD, EDWARD, Bedford-street, Strand, London.
Food and the Principles of Dietetics. By Robert Hutchison, M.D. Edin., M.R.C.P. With Plans and Diagrams. 1900. 16s. net.

BAILLIÈRE, J. B., ET FILS, Paris.
Chirurgie des Voies Biliaires. Par Dr. Victor Pauchet. 1900.

BALE, J., SONS, AND DANIELSSON, Great Titchfield-street, London.
Life in an Open-air Sanatorium. By Dr. C. Reinhardt. Illustrated. 1900. Price 1s.

BLACK, A. AND C., Soho-square, London.
On Sanitary and Other Matters. By Geo. S. Keith, M.D., LL.D., F.R.C.P.E. 1900.

BLACKWOOD, W., AND SONS, London and Edinburgh.
French Cookery for English Homes. 1900. Price 2s. 6d.

BRUCK, L., Sydney, Australia; and BAILLIÈRE, TINDALL, AND COX, London.
The Australian Medical Directory and Handbook for 1900. Fifth edition.

CASSELL AND COMPANY, London.
The Tale of a Field Hospital. By Frederick Treves. Illustrated. 1900. Price 6s.

CHATTO AND WINDUS, London.
The Prolongation of Life. By R. E. Dudgeon, M.D. 1900. Price 3s. 6d.

CHURCHILL, J. & A., London.
Vasectomy, relative to Prostatic Disorders and Catheter Life. By R. Harrison, F.R.C.S. Eng. 1900. Price 3s. 6d.

DEUTICKE, F., Leipzig und Wien.
Beiträge zur Dermatologie und Syphilis. Von Dr. J. Neumann. 1900.
Die Syphilis und die venerischen Krankheiten. Von Dr. E. Finger. 5. Auflage. 1901.

GOVERNMENT PRINTING OFFICE, Washington.
Public Health Reports, issued by the Supervising Surgeon-General, Marine Hospital Service. Vol. xiv., Nos. 1 to 52. 1900.

GREVEL, H. AND CO., King-street, Covent Garden, London.
An Introduction to Modern Scientific Chemistry. By Dr. Lassar-Cohn. Translated from the second German edition. By M. M. Pattison Muir, M.A. Cantab. Illustrated. 1901. Price 6s.

HIRSCHWALD, AUGUST, Berlin.
Anleitung zur Mikroskopischen Untersuchung des Auges. Von Dr. R. Greeff. Zweite Auflage. 1901.

HOEPLI, ULRICO, Milano.
Terapia delle Malattie dell' Infanzia. Del Professor C. Cattaneo. 1901.

INTERNATIONAL MEDICAL MAGAZINE COMPANY, Philadelphia.
Acromegaly, Syringomyelia, Crossed Knee-jerk, Anterior Poliomyelitis. By G. Hinsdale, A.M., M.D. 1900.

JARROLD AND SONS, Warwick-lane, London.
The Norfolk and Norwich Hospital, 1770 to 1900. With Illustrations and plans. By Sir Peter Eade, M.D., Lond. 1900. Price 7s. 6d. net.

KARGER, S., Berlin.
Arzneiverordnungen in der Kinderpraxis. Von Dr. H. Guttmann. 1901.
Vademecum für Histopathologische Untersuchungen in der Gynäkologie. Von Dr. E. G. Orthmann. 1901.

LEHMANN, J. F., München.
Atlas und Grundriss der Chirurgischen Operationslehre. Von Dr. O. Zuckerkandl. 16. Band. 1901.
Atlas und Grundriss der Pathologischen Anatomie. Von Dr. O. Bollinger. 1. Band. 1901.
Grundzüge der Hygiene. Von Dr. W. Prausnitz. 1901.

LONGMANS, GREEN AND CO., Paternoster-row, London.
A Manual of Surgical Treatment. By W. W. Cheyne, M.B., F.R.C.S., and F. F. Burghard, M.D. and M.S. Lond., F.R.C.S. In six parts. Part 4. 1900. Price 14s.
Treatment of Simple Fractures of the Limbs. By Wm. H. Bennett, F.R.C.S. To which is appended a summary of the Opinions and Practice of about 300 surgeons. Reprint. 1900. Price 2s. 6d.
The Essentials of Practical Bacteriology. By H. J. Curtis, B.S., M.D. Lond., F.R.C.S. 1900. Price 9s.

MACMILLAN AND CO., London.
Life and Letters of Thomas Henry Huxley. By his Son, Leonard Huxley. In two volumes. Vols. I. and II. 1900. Price 30s. net.

MASSON ET CIE, Paris.
Étude Pratique sur le Mal de Pott. Par Dr. V. Ménard. 1900.

METHUEN AND CO., Essex-street, Strand, London.
The Science of Hygiene. By W. C. C. Pakes, D.P.H. Camb., F.C.S. Illustrated. 1900. Price 15s.

MURRAY, JOHN, Albemarle-street, London.
Bacteria, especially as they are Related to the Economy of Nature; to Industrial Processes, and to the Public Health. By George Newman, M.D., F.R.S. Edin., D.P.H. Camb. Illustrated. Second edition. 1900. Price 6s.

OLIVER AND BOYD, Edinburgh.
The Transactions of the Edinburgh Obstetrical Society. Vol. xxv. 1900.

PUTNAM'S, G. P., SONS, Bedford-street, Strand, London.
Medical and Surgical Nursing. Edited by H. J. O'Brien, M.D. 1900. Price 6s.

REBMAN AND COMPY., 129, Shaftesbury-avenue, London, W.C.
Practical Gynæcology. By E. E. Montgomery, M.D. Illustrated. 1900. Price 25s. net.

SCOTT, WALTER, Paternoster-square, London.
The Child: a Study in the Evolution of Man. By Alexander F. Chamberlain, M.A., Ph.D. Illustrated. 1900. Price 6s.

SWAN SONNENSCHEIN AND CO., London.
Text-book of the Embryology of Invertebrates. By Dr. E. Korschelt and Dr. K. Heider. Translated from the German, by M. Bernard and edited by M. F. Woodward. Vol. iv. 1900.

UNWIN, T. F., Paternoster-buildings, London.
First Aid to the Injured. With Special Reference to Accidents occurring in the Mountains. By Dr. Oscar Bernhard. Translated from the German by M. G. Foster, M.A., M.D. Cantab. 1900. Price 2s. 6d.

VIEWEG UND SOHN, Braunschweig.
Lehrbuch der Anorganischen Chemie. Von Prof. Dr. H. Erdmann, in Halle. Zweite Auflage. 1900.

VOGEL, F. C. W., Leipzig.
Pathologie und Therapie der Perityphlitis. Von Dr. E. Sonnenburg. 1900.

VOSS, L., Hamburg.
Kroll's Stereoskopische Bilder für Schielende. Von R. Perlia. 1900.

WILLIAMS AND NORGATE, Henrietta-street, Covent Garden, London.
Hand Atlas of Human Anatomy. By W. Spalteholz, with others. Vol. I., Bones, Joints, Ligaments. 1900.
Lehrbuch der Histologie und der Mikroskopischen Anatomie. Von Dr. L. Szymonowicz. Lieferung 5. 1900. Price 3s. net.

Wright's Improved Physicians', Surgeons', and Consultants' Visiting Lists, compiled by Robert Simpson, L.R.C.P., L.R.C.S. Form A., 1901, eighth edition; Form B., perpetual eighth edition, 1901; price 5s. 6d. each, net.

Magazines, &c., for November. Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Myra's Journal, Pall Mall Magazine, Windsor Magazine, English Illustrated Magazine, Knowledge, Humanitarian, Wide World Magazine, *New Century Review*, *North American Review*, Cornhill Magazine, Sandow's Magazine, New Monthly.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ADAMS, E. G. B., M.B. Lond., L.R.C.P., M.R.C.S., F.R.C.S. Eng., has been appointed District Medical Officer, Yeovil Union, vice J. D. Adams, resigned.

ALDERMAN, H. C., M.R.C.S., L.R.C.P., has been appointed House-Surgeon at the Ida Hospital (Leeds General Infirmary).

ANDERSON, E. W., M.B., Ch.B. Vict., has been appointed Resident Obstetric Officer at the Ida Hospital (Leeds General Infirmary).

BOND, FRANCIS THOMAS, M.D. Lond., M.R.C.S., F.R.S. Edin., has been re-appointed *Medical Officer of Health* by the Thornbury (Gloucestershire) Rural District Council.

COLLINSON, H., M.R.C.S., L.R.C.P., has been appointed to be Resident Medical Officer at the Ida Hospital (Leeds General Infirmary).

COLLS, P. C., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Cranbrook Union, vice W. R. Willis, resigned.

CREMEN, P. J., M.D. Irel., L.R.C.S. Irel., has been appointed Consulting Physician to the Cork South Ch. Infirmary and County Hospital.

Crossley, Leonard, M.B., C.M. Edin., has been appointed Second House Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, E.

Fenn, Arthur Cooper, L.R.C.P. Irel., L.M. R.C.P.I., L.S.A. Lond., has been appointed Medical Officer, *Dover Union Infirmary, vice Edwin Fenn, retired.* Also Surgeon and Agent for Dover, to date Jan. 1st, 1901, vice Edwin Fenn, retired.

Gough, W., M.R.C.S., L.R.C.P., has been appointed House Surgeon at the Ida Hospital (Leeds General Infirmary).

Gowdy, Annie C., M.B. Lond., has been appointed Assistant Medical Superintendent to the Hull City Asylum.

Grieve, Walter Duncan, M.B., C.M. Edin., has been appointed one of the Staff Surgeons to the Dumfries and Galloway Royal Infirmary.

Jacob, E. L., M.R.C.S., has been re-appointed Medical Officer of Health by the Reigate Rural District Council.

Judge, E. MacDonald, L.S.A., has been appointed Medical Officer to the Ancient Order of Foresters (Court Sympathy), vice F. Smith.

Livingstone, G. R., M.B., C.M. Edin., has been appointed Assistant Surgeon to the Dumfries and Galloway Royal Infirmary.

Lückhaff, J., M.B., C.M. Edin., has been appointed House Surgeon at the Ida Hospital (Leeds General Infirmary).

McFerran, J. R., L.R.C.P. L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer to the Infirmary, Leeds Union, vice J. Guy, resigned.

Millen, S. A., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Malmesbury Union, vice P. H. Nutting, resigned.

Manson, R. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Public Vaccinator and Medical Officer for the West and North-West District, Darlington Union, and Police Surgeon for the Darlington Division of the Durham County Constabulary, vice R. Taylor Manson, deceased.

Mason, Samuel Butler, M.R.C.P. Edin., L.F.P.S. Glasg., Surgeon-Major 4th V.B. South Wales Borderers, has been appointed Recruiting Medical Officer at Pontypool, vice Haslett, resigned.

O'Meara, J. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed District Medical Officer, Walsall Union, vice F. W. Sydenham, resigned.

Paling, Albert, M.B., B.S. Lond., F.R.C.S., has been appointed Surgeon to the Burton-on-Trent Infirmary.

Ross, Stephen John, M.B., Ch.B. Vict., has been appointed Honorary Assistant Surgeon to the Bedford County Hospital.

Stevenson, Roland A., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the Hospital for Consumption, Brompton, S.W.

Thomson, A., M.D. Glasg., L.F.P.S. Glasg., has been appointed Honorary Surgeon to the Dumfries and Galloway Royal Infirmary.

Townsend, N. J., L.R.C.P., L.R.C.S. Irel., has been appointed Intern Physician, South Infirmary, Cork.

Vincent, Swale, M.B. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Lecturer on Histology at the University College of South Wales and Monmouthshire.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Brentford Union.—Assistant Medical Officer for the new infirmary, unmarried. Salary £100 per annum, with furnished apartments, rations, washing, &c. Subject to statutory deductions. Apply to the Clerk to the Guardians, Union Offices, Isleworth, W.

Bridgnorth and South Shropshire Infirmary.—House Surgeon. Salary £80, with board and lodging in the Infirmary.

Brighton and Hove Lying-in Institution and Hospital for Women, 76, West-street, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance.

Brixton Dispensary, Water-lane, Brixton.—Resident Medical Officer for two years, unmarried. Salary £150, with furnished apartments, attendance, coal, and gas.

Cardiff Infirmary.—Assistant House Surgeon for six months. Salary at the rate of £75 per annum, with board, washing, and apartments.

Children's Hospital, Forest House, Nottingham.—House Surgeon for six months, unmarried. Females ineligible. Salary at the rate of £100 per annum, with board and residence.

Clayton Hospital and Wakefield General Dispensary, Wakefield.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

Coomassie Expedition.—Medical Officers for six months in the colony, with a salary at the rate of £30 a month, and a gratuity on returning to England of ten days' pay in respect of each complete calendar month served in the colony. Free passage to and from the colony and free rations will be provided. Applications to be addressed to the Assistant Private Secretary, Colonial Office, London.

Cornwall County Asylum, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £120, rising to £150 by £10 annually, with board, furnished apartments, &c.

Croydon General Hospital.—House Surgeon for one year, unmarried. Salary £105, with board, lodging, and washing at the hospital.

Derbyshire Royal Infirmary, Derby.—Honorary Physician and Honorary Surgeon.

East London Hospital for Children and Dispensary for Women, Glamis-road, Shadwell, E.—House Physician. Board, residence, &c., provided and an honorarium of £25 given conditionally.

Grimsby and District Hospital, Great Grimsby.—Resident House Surgeon. Salary £80 per annum, board, lodging, and washing.

Hartlepools Hospital.—House Surgeon. Salary £80 per annum, with board, and lodging in the institution.

Holloway Sanatorium Hospital for the Insane, Virginia Water, Surrey.—Junior Assistant Medical Officer for the male side. Salary £150 per annum, rising to £200, with board, lodging, washing, and attendance.

Hospital for Sick Children, Great Ormond-street, London.—Resident Medical Superintendent for one year. Salary 100 guineas, with board and residence in the Hospital.

Hull Royal Infirmary.—Honorary Surgeon.

Kent and Canterbury Hospital.—Assistant House Surgeon, unmarried. Salary £60 a year, with board and lodging.

Kidderminster Infirmary and Children's Hospital.—House Surgeon, unmarried. Salary £140 per annum, rising £10 per annum to £170, with rooms in the Infirmary and attendance (option of board at £40 per annum).

King's College, London.—Professor of Anatomy.

London Hospital, Whitechapel, E.—Medical Registrar. Salary £100 per annum.

Manchester Children's Hospital, Gartside-street, Manchester.—Assistant Surgeon. An honorarium of £50 per annum will be given.

Manchester Royal Infirmary.—Resident Medical Officer for the Convalescent Hospital at Cheadle, for twelve months, unmarried. Salary £150, with board and residence.

North-Eastern Hospital for Children, Hackney-road, London.—House Surgeon for six months. Salary at the rate of £80 per annum, with board, residence, and laundry allowances. Apply to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

North-West London Hospital, Kentish Town-road.—Assistant Surgeon. Also Resident Medical Officer and Assistant Resident Medical Officer for six months. Salary at the rate of £50 per annum, with board, residence, and washing.

North London Hospital for Consumption and Diseases of the Chest.—Junior Resident Medical Officer for twelve months. Honorarium £60. Also, Clinical Assistant for the Central Out-patients' Department for six months. Honorarium at the rate of £35 per annum. Apply to the Secretary, Offices, 41, Fitzroy-square, W.

Nottingham City Asylum.—Senior Assistant Medical Officer, unmarried. Salary £200 a year, with board, apartments, and washing.

Ramsgate and St. Lawrence Royal Dispensary and the General Hospital and Seamen's Infirmary.—Resident Medical Officer, unmarried. Salary £100 per annum, with furnished apartments, board, and attendance.

Royal Albert Hospital, Devonport.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board, lodging, and washing.

Royal College of Surgeons of England.—Examiner.

Royal Hospital for Children and Women, Waterloo-bridge-road, London.—Resident Medical Officer for twelve months. Salary £70, with board and laundry.

Royal Southern Hospital, Liverpool.—Junior House Surgeon (third). Salary 60 guineas per annum, with board, residence, and washing

St. Mary's Hospital for Sick Children, Plaistow, E.—Assistant Resident Medical Officer for six months. Salary £80 per annum, with board, residence, laundry, &c.

St. Mary's Hospital Medical School, Paddington.—Lectureship in Chemistry and Physics. Salary £150 per annum, with extra fees *for London University Classes.*

St. Thomas's Hospital, Westminster-bridge.—Surgeon. Also Resident Assistant Surgeon.

Sussex County Hospital, Brighton.—Resident Pathologist. Salary £70 per annum, with board and residence.

Wandsworth and Clapham Union.—Assistant Medical Officer for the Annexes *now being erected at the Home* for the Aged and Infirm, Church-lane, Tooting, unmarried. Salary £160 per annum, rising £5 annually to £120 per annum, with apartments, board, lodging, and washing. Apply to the Clerk, Union Offices, St. John's-hill, S.W.

Western General Dispensary, Marylebone-road, N.W.—Junior House Surgeon, unmarried. Salary £75 per annum, with board and residence.

York Dispensary.—Resident Medical Officer, unmarried. Salary £110 a year, with board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

Ensor.—On Nov. 2nd, at Tisbury House, Tisbury, Salisbury, the wife of Cecil Arthur Ensor, M.R.C.S., L.R.C.P.—a daughter, prematurely.

Griffith.—On Nov. 6th, at Tanyronen, Portmadoc, N. Wales, the wife of Harry R. Griffith, M.D., of a son.

MARRIAGES.

Scott—Peel.—On Nov. 8th, at the Brompton Oratory, William John Scott, L.K.Q.C.P.I., of Hurstpierpoint, Sussex, to Julia Rose Steers Peel, of Laregon, Gloucestershire.

Winter—Witherby.—On Nov. 7th, at All Saints' Church, Chilvers Coton, Nuneaton, John Newnham Winter, M.R.C.S. of Montpellier-road, Brighton, to Amy Florence, eldest daughter of Josiah Witherby, of King's-avenue, Ealing, Middlesex.

DEATHS.

Blackwell.—On the 8th Nov., at his residence, "Inverary," Westcliff-on-Sea, Frederick William Blackwell, L.R.C.P.E., L.R.C.S.E., aged 49 years.

Cordwent.—On Nov. 12th, at Milverton, Somerset, George Cordwent, M.D. St. And., F.R.C.S. Eng., aged 85 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"A MEMORIAL TO THE GENERAL MEDICAL COUNCIL FROM THE MIDDLESBROUGH AND DISTRICT MEDICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Nov. 10th (p. 1395) a letter from the honorary secretary of the Middlesbrough and District Medical Society in which he calls attention to a test case which is being presented to the General Medical Council on the question of the association of medical men with medical aid societies which canvass. The result of this memorial, as you remark, will be watched with interest by the medical profession. It is important in view of the extent to which touting in connexion with clubs and insurance societies prevails to have some authoritative expression of opinion from the General Medical Council and to know whether their resolution of last June is merely the record of a "pious opinion" or whether their declaration of conduct being unprofessional is likely to be followed by penal consequences where it is proved to exist. In the town in which I practise this system of canvassing is in full operation. One medical firm has a large private family club, the agents for which are the canvassers for one of the largest industrial insurance companies. This insurance company, I believe, has no knowledge of, or interest in, this part of the work of its agents as it does not supply medical aid and I daresay the medical firm in question would repudiate the idea that these agents canvass for them, but the fact remains that these agents, who canvass the whole town in the interests of the insurance company, are also the agents for the private club of this firm, and it is quite certain that they canvass and do their best for both their employers Their usual plan is to call upon a family to get them to insure and then to ask them if they will also join Dr. So-and-So's sick club at 1½d. per week. As they get a large percentage *on the receipts it is manifestly to their advantage to get all the* patients into their net which is possible. Thus it happens that the patients of other medical men are constantly being solicited and many complaints are heard. What is the remedy for this abuse? The mere statement that it is unprofessional by the General Medical Council can have no effect if it be merely a "pious opinion." If it be pronounced "infamous conduct in a professional respect" it will without doubt have the effect of remedying a great abuse and of raising the standard of medical practice generally. I call attention to the practice of employing collectors to canvass for members for private family clubs because it does not appear to me to be completely covered by the resolution of the General Medical Council of last June. It might be urged that a medical man has a right to have a private club and to employ a collector to go round once a week to collect the fees and that this does not constitute touting But where an agent is paid by results I do not see how canvassing can be avoided At any rate, the system is so liable to abuse that I am of opinion it ought to be dealt with. In the particular instance which I have mentioned the agency is more complete than that which any medical man himself could organise, as the town is divided into districts by the insurance company and the canvassing is necessarily most exhaustive The firm in question, however, might seek to evade the condemnatory resolution of the General Medical Council by saying that these insurance agents were merely their private collectors and that they had no knowledge of their canvassing I feel very strongly, *therefore, that if this question comes up for consideration by the* General Medical Council and any action is taken it should forbid the employment of collectors for private family clubs, and above all, the employment of the agents of an insurance company or of any other organisation for this purpose.—I am, Sirs, yours faithfully,

Nov. 12th, 1900. A SUFFERING PRACTITIONER.

THE CASE OF MR. JOSEPH HENDERSON MARTIN.

To the Editors of THE LANCET.

SIRS,—The following subscriptions have been received by Dr. W. M Renton and myself in response to the appeal for help for the family of Mr. J. H. Martin. M.R.C.S Eng., L.S.A., which appeared in THE LANCET of Nov. 10th. *I am, Sirs, yours faithfully,*

Chester-le-Street, Nov. 14th, 1900 H. LYON SMITH.

	£	s.	d.
"A Sympathiser," Northampton	0	10	0
Dr. John Robert Williams, Penmaenmawr	1	1	0
Mr. Charles Terry	2	2	0
Mrs. John Robert Williams, Penmaenmawr	1	1	0
Mr Philip Moysey Jones	0	10	6

VARIX

To the Editors of THE LANCET.

SIRS,—Could you or any of your readers oblige me by giving me the names of any recent book or writing on varix, especially varicose veins of the legs? I am, Sirs, yours faithfully,

Nov. 11th, 1900. LEX.

AN ETHICAL POINT.

To the Editors of THE LANCET.

SIRS,—I should be pleased if you could give me your opinion on the following case. Dr. X died in September, 1897, leaving a widow and no successor to the practice. Since his death up to the present time the widow has engaged six medical men, each of whom has worked the practice for various periods, the widow receiving a certain percentage of the receipts. During her husband's lifetime she was in the habit of occasionally vaccinating children, dispensing and dressing wounds in the surgery, and has done this more or less up to the present time. Dr. A now comes forward and offers to buy the practice, including the drugs, fixtures, &c., on condition that she absolutely refrains from doing any medical work whatever, her only position being that of housekeeper. All this is incorporated in a legal agreement. 1. Could Dr. A's conduct *be construed so as to constitute covering? 2. Is Dr. A behaving* professionally by keeping the widow as housekeeper?

I am, Sirs, yours faithfully,

Nov. 13th, 1900. QUANTUM SUFFICIT.

*** Dr. A places himself in a position which is liable to misconstruction, but if he does not act unprofessionally he has nothing to fear.—ED. L.

THE LATE DR. PATRICK QUINLIVAN.

WE gladly publish the following appeal which is being circulated on behalf of the family of the late Dr. Patrick Quinlivan of 254, Bethnal-green-road The committee, according to the printed appeal, consists of the following gentlemen: "H. Macnaughton Jones, M.D., F.R.C.S.I.,; Frederick J. Smith, M.D., F.R.C.P.; P. J. Freyer, M.D., M.Ch.; Dr. Rogers, Dr. O'Dwyer, Dr. Daly, Dr. Ambrose, Dr. O'Malley, Dr. Cahill, Dr. Sheehan, Mr. Winter. Honorary treasurer, Dr. R. Ambrose, M.P., The Mount, Whitechapel road, E." The appeal runs as follows.—

> DEAR SIR,—We beg to bring before your notice this appeal as being one well deserving of your sympathy. Dr. Quinlivan died at the age of 36 years—unexpectedly—from an attack of acute pneumonia, leaving a widow and a family of seven children—whose ages range from nine months to 13 years—unprovided for. The committee confidently appeal to you to aid them in purchasing a small business by which the widow may support herself and her family. Yours faithfully,
>
> 150, Bethnal-green-road, N.E R. MOYNAHAN, Hon. Sec.

Subscriptions to the amount of £41 16s. have already been received we shall publish the names of subscribers next week.

TOMATOES AND CANCER.

To the Editors of THE LANCET.

SIRS,—I have latterly been often asked by patients if I believed in the theory that tomatoes as a food were a fruitful source of cancer. They assert that eminent men have declared them to be so. I have never until recently heard of the theory. Would you be good enough to enlighten me? I am, Sirs, yours faithfully,

Nov. 13th, 1900. H. W.

*** There is no truth whatsoever in the idea.—ED. L.

MANURE AND MUNICIPALITIES.

WE have received a card bearing the following legend from a Brighton correspondent.—

Friday, 9th November, 1900.

The Poor of Aldrington respectfully invite

THE MAYOR AND CORPORATION OF HOVE

TO VISIT TO-DAY:

The overflowing Cesspool near the Portland-road Board School.

The Dust Heap opposite.

And the Outfall Sewer at low tide.

They will then understand why the death-rate of children in Aldrington is nearly three times that of Hove.

And why poor people think their sanitation should be attended to before rich people's circular drives.

We shall be interested to know whether his worship accepted the invitation. Possibly he and the corporation are of the same opinion as was the Corporation of London in the days when *Mr. Punch* drew the members of that august body sitting in Smithfield, exclaiming: "How delicious the drains smell this morning," while their children played with little pails and spades among the dung.

PRURITUS ANI.

To the Editors of THE LANCET.

SIRS,—"Perplexed's" patient would find great benefit and relief in pruritus ani and scroti, as well as in tinea sycosis, by the free rubbing in of Calvert's Carbolic Soft Soap every night, which should be allowed to remain on an hour and then washed off.

I am, Sirs, yours faithfully,

GEO. ARNISON, M.R.C.S. Eng.

Allendale Town, Northumberland, Nov. 10th, 1900.

"ADHESIVE PLASTER FOR PUNCTURED TYRES"

To the Editors of THE LANCET.

SIRS,—In reply to "Cyclist" in THE LANCET of Oct. 27th, p. 1249, I may say that I have tried the various "rubber adhesive plasters" in the market for repairing punctures, but they all proved unsatisfactory when applied to the air tube. Such plasters, however, are invaluable for temporary repairs of the tyre cover and can be applied inside or a strip long enough to be gripped by the rim on both sides may be applied externally over a gash or unusually large hole.

I am, Sirs, yours faithfully,

Oct. 27th, 1900. A. S. G.

ORCHITIC EXTRACT.

To the Editors of THE LANCET.

SIRS,—I should be glad of any information on the following points. 1. Are there any dangers to be apprehended in the administration of orchitic substance (didymin) by mouth and rectum? 2. Can you advise me of any literature on the subject of the therapeutics of the administration of orchitic substance?

I am, Sirs, yours faithfully,

Nov. 9th, 1900. PROSTATE.

*** 1. No dangerous symptoms have ever been described as resulting from the administration of this substance. 2. We know of no summary of the therapeutics of orchitic substance, but the following papers may be referred to: THE LANCET, vol. ii., 1889, p. 105; THE LANCET, vol. i., 1893, p. 1357; *London Medical Record*, 1890, p. 209; *London Medical Record*, 1891, p. 165; *British Medical Journal*, vol. i., 1893, p. 1212; THE LANCET, vol. i., 1891, p. 1291; *Medical Press and Circular*, vol. ii., 1892, p. 455.—ED. L.

"TOBACCO HEART."

To the Editors of THE LANCET.

SIRS,—Will you kindly direct me through the medium of your columns to any existing literature on the subject of "Tobacco Heart"?

I am, Sirs, yours faithfully,

Nov. 13th, 1900. B. B. G.

*** Our correspondent will find numerous references in Neale's Digest. —ED. L.

SMOKING IN EPILEPSY.

To the Editors of THE LANCET.

SIRS,—Can you tell me whether moderate smoking is supposed to be injurious in epilepsy as I cannot find it referred to in the text-books I have at my command? I am, Sirs, yours faithfully,

Nov. 13th, 1900. EPILEPSY.

*** We do not remember having heard this question raised before. Moderate smoking is a term difficult to define; it is, however, possible that the amount of tobacco which would do no injury to a person in perfect health might be inadvisable for one in the unstable nervous condition of an epileptic.—ED. L.

NERVE STRETCHING.

To the Editors of THE LANCET.

SIRS,—Will you kindly inform me where I can find details of the technique of stretching the sciatic nerve by extension and flexion of the limb? I thought I had seen an article upon the subject in a recent number of THE LANCET but have been unable to find it. Thanking you in anticipation, I am, Sirs, yours faithfully,

Nov. 10th, 1900. SPES.

*** The "bloodless" method of stretching the sciatic nerve is performed as follows: The patient lies on his back and the surgeon extends the knee joint and then flexes the hip forcibly. An anæsthetic is only needed if much force is used.—ED. L.

HOMES FOR EPILEPTICS.

To the Editors of THE LANCET.

SIRS,—I should be obliged if you or any of your readers could inform me of an institution that would take charge of a girl suffering from epilepsy. The parents could only afford to pay about 5s. or 6s. a week.

I am, Sirs, yours faithfully,

Nov. 13th, 1900. W. H. C.

*** Our correspondent might apply to the Meath Home of Comfort, Westbrook, Godalming, Surrey. There is also the epileptic colony at Chalfont St. Peter, the London offices of which are at 12, Buckingham-street, Strand, W.C.—ED. L.

THE PROPERTY IN A PRESCRIPTION.

To the Editors of THE LANCET.

SIRS,—Will you kindly let me know through the columns of THE LANCET who is the *legal* owner of medical prescriptions given to a patient on payment of a fee for consultation? Can you refer me to any recorded legal decision on the question?

I am, Sirs, yours faithfully,

Nov. 9th, 1900. L. K.

*** "L. K." is not sufficiently explicit for us to be able to give him an altogether satisfactory answer. The "legal owner of medical prescriptions given to a patient on payment of a fee for consultation" is presumably the patient so far as ownership of the piece of paper containing the prescription is concerned. Ownership of a piece of paper does not, however, necessarily imply an unqualified right in such owner to deal as he pleases with its written contents, as, for example, to multiply copies of them. We are not, however, aware of any decision limiting the rights of ownership in the contents of a written document and dealing directly with a prescription.—ED. L.

BOOKS ON SURGERY.

N. A. B.—The following works may be referred to:—"Manual of Surgery for Students," by W. Rose, F.R.C.S. Eng., and Albert Carless, F.R.C.S. Eng., pp. 1160 and 400 illustrations, price 21s. London: Baillière, Tindall, and Cox. "Student's Handbook on Surgical Operations," by F. Treves, F.R.C.S. Eng., 94 illustrations, price 7s. 6d. London: Cassell and Co. "The Operations of Surgery," by W. H. A. Jacobson, F.R.C.S. Eng., third edition, price 34s. London: J. and A. Churchill. "Surgical Handicraft, a Manual of Surgical Manipulations and Minor Surgery," by Walter Pye, F.R.C.S. Eng.; revised and edited by T. H. R. Crowle, F.R.C.S. Eng., third edition, 1891, with 235 engravings, price 10s. 6d. Bristol: John Wright and Co. "A Manual of Surgical Treatment," by W. Watson Cheyne, F.R.C.S. Eng., and F. F. Burghard, F.R.C.S. Eng., to be completed in six parts. London: Longmans, Green, and Co. Only the first three volumes have yet been published.

THE EXAMINATION FOR F.F.P.S. GLASGOW

G.P. would be glad to hear from someone who has recently been a competitor particulars regarding the examination for F.F.P.S. Glasgow—(1) if the examination is very stiff; (2) if any special text-books are recommended; and (3) as to the chance of a man in busy practice, who has not a great deal of time for reading and who is not in touch with any hospital, obtaining the qualification.

WE have had this week to vary the noms-de-plume of several of our correspondents who have used the same signature to their communications.

◆

Enquirer.—There is no difference in value between the qualifications, in that each combination entitles a man to be placed on the Register, showing that he has attained to the standard required by the General Council of Medical Education. A Licentiate of the Royal College of Surgeons of Edinburgh is not correct in placing the prefix "Dr." before his name.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 15th, 1900.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rain fall	Solar Radia in Vacuo	Maximum Temp. Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 a.m.
Nov. 9	29·67	S.W.	0·01	82	66	44	50	54	Cloudy
" 10	29·67	W.	...	76	50	40	39	41	Fine
" 11	29·74	N.W.	...	60	46	32	32	35	Hazy
" 12	29·85	S.S.W.	...	60	56	35	42	44	Raining
" 13	29·54	S.W.	0·16	63	67	44	56	56	Overcast
" 14	29·58	S.	0·11	64	53	45	46	47	Cloudy
" 15	29·48	S.	0·09	53	50	43	46	47	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.)

TUESDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (21st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

THURSDAY (22nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (24th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (20th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—Dr. S. H. Habershon and Dr. F. S. Hichens: A Case of Pseudo-Actinomycosis.—Mr. W. G. Spencer: (1) Fibroma of Tongue; (2) Spheroidal-celled Carcinoma commencing in Supernumerary Nipples.—Dr. W. Hunter: A Case of Acute Yellow Atrophy. Card Specimen: Mr. T. W. P. Lawrence: Hour-glass Contraction of Stomach.

CHELSEA CLINICAL SOCIETY (Holy Trinity Parish Hall, Pavilion-road, Sloane-square, S.W.).—8.30 P.M. Paper:—Mr. N. Smith: The Conservative Treatment of Tubercular Disease of Joints (with demonstration).

WEDNESDAY (21st).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—7.30 P.M. *Exhibition of Slides illustrating the Structure of Shells.*

SOCIETY OF ARTS.—8 P.M. Ordinary Meeting. Opening Address:—Sir John Evans.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND (11, Chandos-street, Cavendish-square, W.).—4 P.M. Papers:—Sir Dyce Duckworth: On Mental Disorders dependent on Toxæmia.—*Dr. G. H. Savage*: Travel, its Use and Abuse in the Treatment of Mental Diseases.—Dr. L. Jones: The Application of Electricity in certain forms of Mental Disease (illustrated with instruments and electrical appliances).

ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Gt. George-street, Westminster, S.W.).—7.30 P.M. Ordinary Meeting. Papers:—Mr. R. H. Curtis: An Improved Mounting *for the Lens* and Bowl of the Campbell-Stokes Sunshine Recorder.—Mr. W. H. Dines: Weekly Death-rate and Temperature Curves, 1890-1899.—Mr. H. Mellish: Seasonal Rainfall of the British Islands.

FRIDAY (23rd).—CLINICAL SOCIETY OF LONDON (20, *Hanover-square*, W.).—8.30 P.M. Papers:—Dr. S. Phillips: A Case of Thrombosis of the Inferior Vena Cava and of the Iliac and Femoral Veins of Acute Onset and Fatal Termination, with symptoms resembling those of Perforated Gastric Ulcer.—Mr. C. Williams: *A Case of late* Syphilitic Pyrexia.—Mr. Bland Sutton: On a Case in which Splenectomy was performed for a Wandering Spleen.—Dr. W. P. Herringham: A Case of Nephritis without Albuminuria; Death in Six Weeks; no Scarlet Fever; Necropsy.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, *Chenies-street*, W.C.).—4 P.M. Dr. J. F. Payne: Consultation. (Skin.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. S. Taylor: Surface Anatomy.

TUESDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. S. J. Sharkey: Consultation. (Medical.)

THE HOSPITAL FOR DISEASES OF THE SKIN (Stamford-street, Blackfriars).—5 P.M. Clinical Lecture:—Dr. P. S. Abraham: Psoriasis.

WEDNESDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—5 P.M. Clinical Lecture:—Mr. J. Cantlie: Plague.

LONDON THROAT HOSPITAL (204, Gt. Portland-street, W.).—5 P.M. Dr. F. Potter: Selected Cases. (Post-graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Latham: Phthisis in Early Childhood.

THURSDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—3 P.M. Dr. H. Low: Class. Practical Application of Roentgen Rays. 4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Wallace: Pathological Demonstration.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. Clinical Evening. Dr. P. Jakins: Demonstration of Cases of Diseases of the Throat and Nose.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. C. B. Keetley: General Treatment of Wounds and of Compound Fractures.

FRIDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. H. Spicer: Consultation. (Eye.)

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
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Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Office, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

During the week marked copies of the following newspapers have been received: *Swindon Times, Northampton Herald, Dewsbury Reporter, Gloucester Journal, Derbyshire Times, Newcastle Journal, Lynn Advertiser, Southern Times, Bradford Observer, Indian Daily Telegraph (Lucknow), Times of India, Pioneer Mail, Alliance News, Builder, Architect, Sheffield Daily Telegraph, Staffordshire Advertiser, Dundee Advertiser, Scotsman, Citizen, Manchester Guardian, Glasgow Herald, Oldbury Weekly News, Lancaster Post, Glasgow Herald, Leicester Mercury, Birmingham Gazette, Rushden Argus, Oxford Journal, Hyde Reporter, Liverpool Daily Post, Evesham News, Kendal Times, Wolverhampton News, Bristol Mercury, Cardiff Times, Shields News, Leeds Mercury, Halifax Courier, Yorkshire Post, Thames Valley Times, Mining Journal, Westminster Gazette, Reading Mercury, City Press, Hertfordshire Mercury, Sanitary Record, Church Weekly, Croydon Post, Vectis, South London Mail, Chemist and Druggist, Bristol Times and Mirror, Surrey Advertiser, Local Government Journal, Lincolnshire Echo, Lincolnshire Chronicle, Halstead Gazette, South Shields Free Press, Express, Sun, Bath Argus, Daily Mail, Reynolds's Newspaper, Free Lance, Leighton Buzzard Reporter, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Mr. F. Aston, Lond.; Miss A.; Messrs. Arnold and Sons, Lond.; Messrs. Allen and Hanburys, Lond.; Association of Physicians and Surgeons, Lond., Hon. Secretary of. Alpha, Sheffield; Dr. R. Ambrose, Lond.

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An Address

ON

MENTAL DISORDERS DEPENDENT ON TOXÆMIA.

Delivered before the Medico Psychological Society on Nov 21st, 1900,

BY SIR DYCE DUCKWORTH, M D,
LL D EDIN, F R C P LOND,
TREASURER AND CENSOR, ROYAL COLLEGE OF PHYSICIANS OF LONDON
PHYSICIAN AND LECTURER ON MEDICINE, ST BARTHOLOMEW'S
HOSPITAL HONORARY PHYSICIAN TO H R H THE
PRINCE OF WALES

GENTLEMEN,—In addressing a body of experts in a special department of medicine such as now forms my auditory I might claim some indulgence for one who has to teach the whole subject of medicine. I will confess, however, that when I accepted with some diffidence the invitation of your honorary general secretary to undertake this duty I did so in order that I might venture to address you from the standpoint of general medicine, as one unconnected with any special department of it, and who regards your particular work as an important branch of our great art. The title of your association indicates that you acknowledge the fact that the science of psychology has a medical side. It is, of course, possible to be a psychologist without being a physician, and large achievements have accrued to the science at the hands of those who do not pretend to any gifts of healing. You avail yourselves of these, but many of you materially add to the general knowledge of psychology from your studies and observations as alienists. The pure, or non medical, psychologist is largely indebted to you for your researches. He may contribute to the study of mental evolution, while you lay bare pregnant facts relating to cerebral dissolution, for these, alas, you have daily experience of. In setting myself to the task of this address my thoughts naturally reverted to the days when I had the privilege of attending Professor Laycock's lectures on Medical Psychology at Edinburgh. These prelections were much in advance of their time and were the utterances of one of the shrewdest and most far thinking men of his day. We were perhaps too young to appreciate them fully, but they were eminently suggestive and afforded a splendid groundwork on which, at all events, some of his pupils have since reared solid and enduring structures. At that time this instruction was by some derided as unfit to form part of a medical curriculum, but such was not the view of those who considered that an academic training constituted something better than an ordinary curriculum. With these lectures were combined regular visits to various asylums for the insane, and so the training was thorough and practical. At that time the brain as an organ was only beginning to be studied otherwise than as a mass of nervous matter with sundry prominent and depressed portions whose names were difficult and sesquipedalian. Broca was at work, and Fritsch and Hitzig, followed by Laycock's pupil Ferrier, were soon in the field and opening out for us the vistas which we readily see to day in contemplating cerebral centres and functions. In this new aspect it is profoundly interesting to find that the prescience of Laycock had predetermined not a little of that which exact and laborious research came to reveal eventually in respect of function and localisation.

"You know better than I how much more has since been accomplished in these directions by our own countrymen, such as Schäfer, Horsley and Beevor, Risien Russell, Mott and others, to say nothing of the achievements of foreign investigators. The unknown and unexplored cerebral dark continent has now been mapped out and closely surveyed, what was, as it were, an untracked and undefined ocean is now sounded and charted and the bearings of many headlands have been duly taken. All is not yet done, however, albeit the work grows more complete, many investigators are still engaged upon it, and we can feel without doubt that among the wonders of the twentieth century the survey will be achieved and the minute anatomy and precise physiology of the whole nervous mass of the body made known. Let us try to imagine what Harvey, Hunter, Willis, Abercrombie, Bernard, and Connolly, with many others, would have thought of this in their day.

Regarded from the purely anatomical and physiological side of its nature we may venture to ask ourselves whether we be possibly over engrossed just now with the studies which thus relate to the material structure and function of the brain, and somewhat apt to forget or to neglect some of those higher and mysterious problems which attach to it as an organ of mind and the dwelling place of the immortal spirit of man. Doubtless such considerations more occupied the thoughts of our predecessors at a time when a minute study of the brain such as is possible to day was undreamed of. As a body we of the medical art have often been regarded as given over to materialism. I have always felt that such a stigma was unjust, and attributed it to the narrowness and self sufficiency of ecclesiastics who quailed before the manifestations of God's laws as exposed by science, and who could not bring themselves to accept anything that controverted their inflexible dogmatism. Such problems as I refer to are not merely for the contemplation of the theologian or the psychologist, for they must enlist the interest of every rational man, and certainly cannot be disregarded by the alienist who studies and ministers to, the distempered mind. To the thoughtful physician the human brain is not, as the heart or the liver or the kidney, an organ whose mechanism is merely appropriate for specific animal functions. It is, indeed, as marvellously adapted for its work as any of these, but that work is more varied more subtle, and more commanding than that of any other in the body. We do not now seek to localise in it the seat of the soul, as did our predecessors. We are content with the belief that in some inscrutable way the organ of mind and intellect is possessed by an unseen and intangible power, a divine essence, we will term it which, implanted in it from the first stirrings of life,[1] and having capacity for infinite development brings it into relation with the worlds unseen and only retires from its intimate tissue as the vital force ebbs out to assume a fresh and, as we hope, a better environment.

Respecting the relation of the material and spiritual in the human body,[2] the Church, as Canon Gore kindly informs me, has fortunately never made any dogmatic pronouncement. I say fortunately, for if it had made such a pronouncement in ancient or mediæval times with their false physiology they would certainly have made it wrong. On the other hand early Christian psychology, as in Tertullian, is very interesting because it insists on the unity of the human personality and protests against the subdivision of man into separate faculties—intellect, emotions, &c.—as if they were so many separate entities. I mean, it is interesting to see that Christianity intensified the sense of the unity of the human person—body, soul, and spirit. Tertullian asserts, against some Greek thinkers, that the "anima"—the vital principle or personality—is, while manifested in its faculties, none the less one. It thinks in feeling and feels in thinking. It is the same that wills or loves or is indignant or thinks—"Eadem quae perinde per corpus corporalia sentiat, quaemadmodum per animum incorporalia intelligat, salvo eo, ut etiam sentiat dum intelligit. Non essim et sentire intelligere est, et intelligere sentire est? ...... Quis mihi exhibebit sensum non intelligentem quod sentit, aut intellectum non sentientem quod intelligit?" (De Anima. Cap. VIII.) "Atque secundum officium operis sui variis nuncupatur nominibus: anima est, dum vivificat; dum contemplatur, spiritus est; dum sentit, sensus est; dum sapit, animus est; dum intelligit, mens est; dum consentit, voluntas est; dum discernit, ratio est; dum recordatur, memoria est. Non tamen hæc ita dividuntur in substantia sicut in nominibus; quia haec omnia una est anima." (Alcuin, "De Ratione Animae," 149.) This, one may say, is consistently the Christian view—that the person is one, with many faculties. In other words, the soul is πολλῶν ὀνομάτων μορφὴ μία.

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[1] "Man became a living soul."—Gen. ii. 7.

"This is the instrument of God's masterpiece—the human soul. Over these nodes and fissures it floated, like the spirit of God over the face of the deep. Here as on a beautiful instrument the spirit touched the keys and thought, like music, came forth. And here were impressed indelibly ideas of the vast universe, without, of time, and eternity; yea, even of the Infinite and Transcendent—of God. Hushed in the silence of prayer here the soul brooded as a dove above its nest, and here in moments of temptation and repentance it argued, reasoned, prayed, implored the inferior powers that rebelled or recanted beneath. With what sublime majesty it ruled and swayed the subjects that owned its imperial dominion, and how it [illegible] heaven on the one hand for pity and earth on the other in power. And when the turbulent passions raged and stormed it soothed and quelled their rebellion, and then in recompense to itself [illegible] up towards the celestials and joined its emancipated sisters [illegible] the great white throne and drank in peace and the [illegible] of calm from the silence and worship of Heaven. Where is that soul now? Whither has it gone? Silent is the instrument but crumbling to inevitable decay. But where in the boundless [illegible] space is the deathless spirit that once ruled it in majesty [illegible] from [illegible] whose echoes roll through eternity? And I [illegible] science mapped and parcelled like a dead planet. Here is the 'island of Reil,' here the pons Varolii, here is the arbor vitæ, and there is the subarachnoid space, and here that wonderful contrivance of the great Designer that regulates the arterial supplies. [illegible] reverently and whisper 'Laudate!'"—"My New Curate" (A Story gathered from the Leaves of an Old Diary), by [illegible] P. A. Sheehan, Boston, 1900, P.P. [illegible] Doneraile, Co. Cork.

[2] "The physician sees in the body of man the material structure by which alone the known operations of the mind of man are possible in this world; the organs by which alone he can work his earthly work, whether it be the work which he shares in common with the beast of the field or the work through which he can enter into conscious relation to his unapproachable Creator; the frame by which, while bound down in an earthly charnel house, he lifts his eyes and strains his heart with yearning ineffable towards a higher nature and obeys the upward tending of impulses of affections strong unto death—affections so pure and so divine as to lose in the love of others even the consciousness of self."—Address on "The General Relations of Medicine to Modern Times," Sir Henry W. Acland, Oxford, 18[illegible].

A consideration of the characters and endowments of human cortical brain-cells and ganglia must ever excite our wonder and admiration. Amongst these we note their strange differentiation from their embryonic companions in the epiblast, the absence in them of secretive and reproductive functions, and the relative large size of their nuclei, those centres of nerve energy, invested with the power of storing, distributing, and regulating nerve force.[2] We know of no specialisation in function elsewhere in the body to compare with this, and beyond it we find the further endowments of psychical force and the capacity for the retention of memory.

For us, then, the cortical brain cells must take the first place of honour, and constitute the headstones of the temple of the body of man. Here, in the laminations of the grey matter, is the instrument of conscious mind, and in their intimate tissues lie the nerve and ganglion cells with their neurons whose structures afford the essential basis of all your special studies. We may regard other organs and viscera of the body from a more material side if we care to do so, but in the presence of a brain we are arrested by the thought that something immaterial had dwelt there which though independent of, yet had its interaction with, the vital energy which animated every individual cell and fibre of it. Human thought can project itself no further here and the scientific imagination may not penetrate this mystery. We can but regard this problem with the eye of faith and the assurance of a good hope, and re-trace our steps to contemplate the brain as the organ of mind and will. Our first consideration may surely be to recognise the fact that the majority of human beings are born into the world with well-formed and healthy brains. We may safely concede this in spite of the opinion that has been expressed to the effect that "most men are fools" and while recognising the varying degrees of brain power and mental capacity that exist even in members of civilised communities. This appears the more remarkable when we remember what serious defects result from minor flaws and limited morbid lesions in certain parts of the brain. It is astounding to realise that the histologist can in no way distinguish the physical characters pertaining respectively to the brain matter of a philosopher or a cow-herd, and yet how vastly different the endowments of each, both presumably sane and healthy. The brain, the organ of mind, is only healthy if its thinking parts work in harmonious and physiological order, and this relates essentially to a perfect nutrition and a normal cellular metabolism. There may be a sufficient supply of blood conveyed by healthy arteries, but that supply may be inadequate in quality or deficient in essentials for perfect nutrition. Again, it may be inappropriate by reason of something positively harmful contained in it. An altered metabolism occurs and the result is delirium or mental aberration. Were a necropsy possible in such a case there would almost certainly be nothing gross or macroscopical to reveal the nature of it. An ordinary examination of the brains of the insane has not seldom in the past been void of obvious lessons to the pathologist. Even now, when definite lesions are found, they are generally to be attributed to degenerations, which may be senile, even if prematurely so, or they are presumably dependent on chronic vascular congestion. An ordinary necropsy in cases of acute mania and of melancholia commonly reveals nothing abnormal. Grosser changes in the skull-cap and membranes, with hyperplasia of connective tissue, may be witnessed in cases of chronic insanity, and occasionally an acid reaction of the cerebro-spinal fluid. The most important lesions to be met with, however, are only detectable by a careful histological examination. Alterations in brain-cell function are found to be associated with what is now known as chromatolysis in which degeneration of the cell-plasm and finally of the nuclei occurs. This may be partial or very extensively diffused, and thus whole systems of neurons may become involved, their processes breaking off from the cell-body and degenerating. Mere naked-eye inspection does not reveal these intimate alterations, and till lately these minute alterations have been withheld from our observation. Hence it has hitherto often been difficult to realise what we now recognise as a fact that mental insanity is the result of brain disease. The probability is that we are now only gradually arriving at the *vera causa* of this and some other morbid states by the employment of new methods relating to the intimate metabolism of the tissues concerned, the chemical reactions which exist between the cell and its environment, and the environment and the cell. In this direction light may not improbably be shed on some of the problems which still puzzle the alienist. Our knowledge is now fairly complete respecting the grosser morbid changes affecting the brain and its investments, and we regard them as we do those of other organs, tracing the lesions to the elementary tissues in which they began; but we now require the services of the physiologist and chemist to carry on the studies respecting cellular dystrophies and the interactions of the intimate tissues of all parts of the body, for these studies, I may remark, are not strictly clinical.

Mental health must surely be dependent on the integrity of the brain-cells and neurons. Psychic endowment, no less than ordinary nerve energy, requires a normal condition of the machinery for its functions. The nuclei of the myriad cells[3] as physiological centres, their plasmic environment, the processes of the cell, their fibres and their collaterals must be intact, and the subtle metabolism at once securing nutrition and dispensing energy may not be disturbed or perverted without manifest disturbance of psychic and ordinary nervous rhythm.

I propose in this address to call your attention to some phases of mental disorder which depend on toxæmic states. These are now differentiated by the alienist, and it is only in recent times that their true nature has been unfolded. They have been long recognised as clinical features of disease, and the sources of them are as varied as are the separate toxic elements which induce them. Progress in physiological chemistry and bacteriology has now furnished us with the means to explain these conditions. The origin of these toxins is at least threefold. They may be generated in the body (auto-intoxicants) or by the malign working of microbes introduced from without, or they may arise by impregnation with organic poisons, or yet again result from the habits of alcoholism, chloralism, cocainism, and morphinism. In the majority of cases of insanity I suppose it will be conceded that there is a hereditary or inborn predisposition to the disorder, an instability or a tendency to this cerebral degeneration which may remain latent until conditions arise which are potent to elicit the break-down.[4] In the class of mental disorders we are now to consider there may or may not be this inherited fault of brain tissue. In many instances of toxic insanity we have to deal with persons who are already predisposed to mental instability, but in other cases a previously normal brain may be so damaged by toxic influences as to manifest aberration. We have long recognised the toxic effects on the nervous system of the altered metabolism induced by renal inadequacy in Bright's disease in the varied forms of uræmia, in that strange variety of autotoxy due to inability of the hepatic and muscular tissues to hold carbohydrate in reserve, resulting in diabetic coma, and that variety which depends on acute atrophy of the liver. We can now understand how these auto-intoxications act in disturbing the harmony of intimate brain cell metabolism. Their effects are as certain as are those of poisons directly introduced by the mouth or under the skin. The chemical functions of the brain-cell are disordered in precisely the same manner. In the ordinary practice of medicine we are familiar with states of delirium and mental aberration in the course of the various fevers and in pneumonia. Recognising these as infective disorders we now know that we are dealing with the toxic effects of invading parasites, and that amongst the manifold expressions of their presence are nervous or brain symptoms. *These are frequent* in pneumonia and strangely so when the pulmonary apex is involved. The reason for this is to me inscrutable, and I can only conceive that it results from some special local nervous relations which have hitherto escaped the recognition of the physiologists. With respect both to pneumonia[5] and the various fevers I have to add that a careful inquiry in cases where grave nervous or mental symptoms have supervened has almost always revealed the existence of personal or family neuropathic taint. Puerperal insanity occupies precisely the same position, and inquiries in these cases show that about one-half of them occur in women of neurotic or insane proclivity. Toxic influences naturally affect them more readily and with greater gravity.[6] The insanity of lactation probably owns a different cause and may be attributed to debility and imperfect nutrition, acting probably in many cases upon an originally unstable brain. What has been termed "post-operative insanity," due to infective influence, together with shock or exhaustion, and occurring within a few days after operation, may be similarly classified, although Mr. C. T. Dent is of the opinion that heredity of brain weakness plays but a small part in these cases, and that some of them apparently result from the influences of the anæsthetic agents employed or from iodoform impregnation.

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[2] "We have no evidence to show that regeneration of nerve cells can take place in the higher vertebrates, but there is some evidence in favour of the view that all the nerve cells of the adult body are present in a rudimentary form at birth."—Dr. Mott, F.R.S., Croonian Lectures, Royal College of Physicians of London, 1900, Lecture I., p. 24.

[3] It has been calculated that there are not fewer than 600,000,000 nerve-cells in the human brain, and these do not multiply after birth.

[4] "Strictly speaking, it is the tendency to nervous disease rather than the disease itself which is inherited. ...... The neuropath may be conceived to possess in some portion of his nervous system communities, groups, and systems of neurons, either of defective durability or with an inherited low potential, readily becoming exhausted, and especially liable to functional depression, and which under the influence of contributory factors, such as toxic conditions of the blood or undue stress, undergo premature degeneration. To explain the inherited neuropathic tendency morphologically we may suppose that there is an inherent defect in the germinal plasm which is concerned in the formation of the neurons."—Dr. Mott, op. cit., Lecture III., p. 113.

No clearer evidence of the influence of auto-intoxication is afforded than that which results in aberrant cerebration in some cases of gout. The patient generates his own toxin in his tissues and the effects are recognised in the form of stupor, delirium with delusions, and excitement, sometimes as melancholia, such symptoms lasting occasionally for days or for many weeks, and yielding to some overt metastatic gouty development, generally articular, or to an anti-gouty medication, with complete recovery. In enteric, typhus, and rheumatic fevers, erysipelas, cholera, influenza, diphtheria, and scarlet fever we have examples of distinct toxic infections, producing their specific lesions and amongst them damage to cortical brain-cells leading to various grades of mental aberration, some of these ultimately leading to serious results, especially in cases where any predisposition to brain-degeneration or insanity exists These conditions were brought to the notice of the profession 36 years ago by Sir Herman Weber in a careful paper[7] in which he described the peculiarities of the mental states observed after the crisis had occurred in most of the acute diseases just mentioned. He laid much stress on the condition of shock and collapse which so often accompanies crises and on the associated cardiac debility which doubtless plays a considerable part in the phenomena. The time was not then ripe for the suggestion that toxic influences were concerned. The slow recovery, especially after prolonged attacks, with relapses, of enteric fever is due to the extreme wasting of the body generally, and the starvation of brain-cells in particular I would mention the peculiar loss of speech, or inability to speak, which occurs in some of these cases, several weeks (from five to eight) elapsing sometimes in which not one word is uttered.[8] We may notice a degree of this during the active stage of chorea which I have long distinctly regarded as due to rheumatic toxæmia in the majority of instances and a consequent perverted cortical brain-cell metabolism.[9] Additional proof in support of this view has lately been afforded by the careful researches of Dr. F. J. Poynton and Dr. A. Paine, which have demonstrated apparently the specific diplococcus of true rheumatism.[10]

The malign cerebral distempers due to influenza are very definite and have been well studied in the last epidemics of this plague. We find that all forms of insanity may result from it, and although there is reason to believe that in most instances of their occurrence there is an underlying neurotic proclivity, it is certain that the specific influenzal toxin affects the nervous system very gravely in most cases. According to Dr. John Turner all forms of acute mania are probably of toxic origin, affecting widely-spread areas of brain tissue, and he finds what he considers additional evidence in favour of this view that there is commonly associated in fatal cases a fatty degeneration of the liver.[11] The condition of myxœdema sometimes leads to brain symptoms such as instability, delusions, mania, and melancholia the result both in adults, and in the form of sporadic cretinism, of altered metabolism from deficient thyroidal influences. General paralysis is now regarded as coming into the category of auto intoxications. Syphilis, as its common antecedent, does not, however, provide the toxin, and we must therefore view its part in the etiology as leading to progressive degenerative nervous changes which in turn so modify the intimate metabolism of the tissues as to set free toxic elements. Alcoholic and other excesses are also antecedents in other cases, and sometimes lead impregnation is reckoned as the etiological factor. In cases of juvenile general paralysis congenital syphilis figures to the extent of at least 80 per cent, according to Dr. F. W. Mott, and he regards the malady as essentially due to the effect of syphilis on the germinal plasms of one or both parents. Jaundice as an autotoxic condition is accompanied sometimes by mental depression and hallucinations. I have, however, known xanthopsy to occur without any delusions in catarrhal jaundice.

We may next refer to toxæmic states induced by impregnation of the system with certain organic poisons, of which lead is certainly the most frequent and important source. This subject has been very fully studied. In many cases of saturnine encephalopathy we have to deal with compound conditions the result of possible syphilitic taint, together with chronic alcoholism. The fact that lead impregnation is related to the induction in many cases of gouty manifestations still further complicates the problem, and no less, too, the damaging effect of it on arterial and renal tissues has to be fairly considered in all such instances. The researches of Nissl, Oliver, and Robert Jones and others have now made plain for us the nature of the damage wrought upon the nervous system by this metal. We have to conceive that by degrees a saturation occurs, and chemical changes proceed in the brain and ganglionic cells whereby new compounds are formed within them. We might almost regard these, I think, as a formation of a chemical lead soap or a molecular combination of neural fat with a saturnine base. Again, we have to bear in mind the insoluble salt formed by uric acid with lead. Albeit the changes noted may not always be due to direct chemical influence, for saturnine encephalopathy may occur and no lead be detected in the brain, as shown by Oliver. Like other poisons, lead has a selective power in alighting upon and damaging tissues. Interference with normal metabolism in the cellular plasm, either by direct poisoning or by molecular chemical compounds of a fixed character interfering with function, may well lead to secondary and sclerous changes in the neurons. These, again, may be noxiously affected by freshly formed autotoxins resulting from such impaired cellular nutrition. We are not now concerned with the specific forms of saturnine neuritis which are well ascertained to exist and to produce characteristic symptoms. The whole question of lead encephalopathy is therefore a very complex one. It is, however, certain that many cerebral distempers may issue from it, such as mania, melancholia, dementia with epilepsy, and stupor amounting to coma. Some of these conditions occur after very short exposure to lead impregnation Whether general paralysis is ever strictly due to the specific influence of the poison is not yet quite determined. To be certain in the matter one must be able to eliminate the possibility of syphilitic and alcoholic influence. I am disposed to agree with Dr. Savage that saturnine taint is at least capable of inducing this condition and may do so.

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[5] Cerebral symptoms in pneumonia may be dependent on grosser lesions than those due to brain-cell intoxication, as when pneumococcal meningitis forms part of the disorder.

[6] I am fortified in this opinion by Dr Savage's experience which affords proof that persons neurotically disposed are more than others vulnerable to the influence of specific infection.

[7] Transactions of the Royal Medical and Chirurgical Society of London, 1865.

[8] St. Bartholomew's Hospital Reports, 1885, vol xxi, p. 100.

[9] Vide my paper in the Transactions of the Eleventh International Medical Congress at Rome, La Natura Reumatica della Corea, vol. iii., p. 354.

[10] THE LANCET, Sept. 22nd, 1900, p. [illegible]

[11] Brit. Med. Jour., Sept. 15th, 1900, p. [illegible]

With greater frequency than lead impregnation, we have to deal with alcohol as a poison introduced from without. We recognise the abuse of this as an active destroyer of nervous matter and vascular textures, and recent researches plainly indicate the damage done to the brain cells and neurons and the perverse metabolism which is entailed by it. The conditions displayed under the varieties of subacute and acute alcoholism with delusions, mania, epileptiform attacks, and dementia are unfortunately only too familiar to all of us.

Lastly, we have to note the mental aberrations due to the vicious use of agents such as morphine, chloral hydrate, paraldehyde, ether, and cocaine, and to remark concerning all of them that their abuse increases in frequency with what we are pleased to call the advance of knowledge and civilisation. That our profession is in part to blame for some of this mischief I entertain little doubt. The resort to these and similar agents under conditions which hardly justify their employment and which might often be met by other and simpler therapeutic measures has often led to habits of secret intoxication by patients who indulge in them. The frequent handing over of hypodermic syringes and these poisons to nurses is also to be blamed. The too ready sale of such agents by pharmacists and other tradesmen is a matter so serious that it now calls for some special legislation to restrict it. The danger lies in the special seduction of such agents for women and persons with unstable brains, and no care and precaution can be too great in prescribing for them We are all familiar with the disastrous results of yielding to the cravings for hypnotics and sedatives, and know too well our impotency to do any permanent good in the great majority of such cases. We certainly find that the average patient is singularly intolerant of any pain in these days, and that he clamours for relief at any cost. Our forefathers and foremothers had to suffer more than we do, and I am not sure that they were always the worse for it They certainly escaped the modern terrors of morphinism, chloralism, and cocainism, and the women of those days bravely endured their catamenial discomforts without recourse to stupefiants. I think a good deal of plainer living and higher thinking would avail much to abolish the too common resort to anodynes which unhappily now prevails so largely in several strata of society both in this and other countries.

In conclusion, we note that the various toxic agents which gain admission to the circulation exercise, as we might expect, their specific actions upon the several tissues of the body and manifest elective affinities for particular systems of neurons. We find in brain diseases, as in other morbid states, that the symptoms are the result not seldom of mixed infections and are not always to be ascribed to any one toxin. There is often, indeed, a vicious circle of conditions, as is well seen in some cases of general paralysis, lead poisoning, and alcoholism, where several factors are clearly combined in the production of the successive phenomena, in such a series as primary cell intoxication, with the result of perverted nutrition and plasmic metabolism, with the production of new toxins—e.g., choline and neurine—and decay of their systems of neurons, the exudation and the subsequent sclerosis on the part of the vessels. The student of morbid cerebral anatomy has now to reckon with all these conditions, and the clinical psychologist has to determine, if he can, the relation of them to the different forms of mental distemper. Those fields of study remain as yet much unexplored, but they are already being occupied by stalwart investigators, amongst whom I will claim a distinguished place for our countrymen Mott and Bevan Lewis. The knowledge already gained respecting the insanity of toxæmia cannot fail to prove useful for the purposes of treatment. We readily recognise how entirely preventable are most of these. Poisoning by lead, syphilis, alcohol, morphine, and fashionable anodynes is certainly preventable. The toxins formerly attendant on surgical interference are now practically abolished, while methods of treatment are gradually coming into use which encourage us to hope that we may overcome, or at least modify, the malign effects of such as induce the several infective diseases. We can now better understand than we did how purgatives and eliminants are often of use in dispersing some forms of mental distemper.

The views which now open out before us in respect of the pathogenic relations of toxæmic insanity would almost appear to justify a return to the older conceptions of humoral pathology. I am not concerned in this matter to take up any particular position dogmatically either as a humoralist or purely neural pathologist. I think that our duty is to find the facts, and then to apply them in building up our pathological doctrines. As time goes on it becomes necessary to keep an open mind and to change our views accordingly as modern research throws light on abstruse points. In the meantime I will venture to suggest that for the conditions we have been considering to-day we may consider them as dominated by a pathological doctrine to which we may fairly apply the term "neuro-humoral." By solid advances of knowledge and by revelations of fresh aspects of truth legitimate medicine alone makes progress. Many of you are now engaged in building up on sure foundations an important part of the great fabric of medicine, and some of us who 30 years ago imagined that small progress was being made with this particular work are now satisfied that it is assuming in your hands stateliness and dignity, and that it no less affords evidence of durability. I repeat that I have ventured to address you to-day from the standpoint of general medicine because general medicine most surely includes your special work. It would be bad for medicine and worse for you were such not the case. Some of us, indeed, could wish we were drawn closer together clinically in our great hospitals where our students commonly see little else than the beginnings or the transitory phases of mental aberration. But we urge them to fill up this gap in their education by attendance on lectures and practice, and in my own school we have full equipment and arrangements for this purpose. Let me add, lastly, that we fully recognise the debt which psychological medicine in this country owes to your association and we regard with full sympathy and interest your energy and your constant progress.

Presidential Address

ON

MOUTH-BREATHING AND ITS RELATION TO DISEASES OF THE THROAT, EAR, NOSE, AND ACCESSORY CAVITIES.

Delivered before the British Laryngological, Rhinological, and Otological Association on Nov. 9th, 1900,

BY MAYO COLLIER, M.S. LOND., F.R.C.S. ENG.,

SENIOR SURGEON TO THE NORTH-WEST LONDON HOSPITAL.

MR. PAST PRESIDENT AND GENTLEMEN,—In acknowledging the honour you have done me by electing me as your President a mingled feeling of satisfaction and anxiety is apparent to me—satisfaction that things have so befallen me that you should consider me worthy to preside over your deliberations and anxiety that the debt I owe you in return may be poorly and inadequately repaid. It is the custom, not only in this society, but in other learned societies, for the incoming president to launch himself into power by delivering a lecture on some important subject connected more or less with the aims and objects of the society over which he presides. It is the first penalty you exact from him in return for the greatness you have bestowed upon him. I assure you this is a penalty not easy to pay. I have chosen a subject to address you on to-day that has aroused, and is likely to arouse, not only in this country but in America and the continent, considerable interest and controversy. It was more or less the subject for special discussion at the recent Ipswich meeting of the British Medical Association and it is a subject that has been discussed and animadverted upon by every degree of intelligence, including the many new recruits to the ever-increasing army of rhinologists and several distinguished members of our sister society in America, and, strange to say, it has even exercised the mind of a Past President of our own Royal College of Surgeons of England. Without ear-marking or criticising these various opinions I would take the liberty to-day, as your President, of placing before you my personal convictions, the result of a fairly extensive study of this subject for the past 18 years.

The text of my address to you to day is the relation and bearing of mouth-breathing, or its equivalent nasal obstruction, on affections of the throat, ear, and nose, and accessory cavities, and incidentally I shall touch upon its responsibility for some cases of distortion of the *upper jaw* and palate and its effect upon the general health. Logic has taught us, and very properly too, not to make use of terms we cannot define. It is on the definition or standard of what is nasal obstruction and what is not that so much difference of *opinion exists and so much want of comprehension* and negation of fact occurs.

First, I would remind you that the nose is the upper part of the respiratory tract. It is as much an essential part of the respiratory tract as the larynx or trachea. Its proper patency and physiological activity are just as essential to the respiratory function as are the proper patency and physiological activity of the larynx and the trachea. It is the great laboratory for the preparation of the food for the lungs, in the same way as the mouth is the laboratory for the preparation of the food for the stomach. With this preface I pass on to evolve a definition or standard of nasal obstruction. I must ask you, if we are to follow this subject step by step, to go back with me and look at the anatomical condition of things in the normal body and the physics pertaining to these parts when in normal physiological activity. The nasal cavities are surrounded by rigid bony walls and separated from each other by a thin septum, partly cartilaginous and partly bony, into two equal and symmetrical cavities. Each cavity communicates in front *viâ* the external nose with the air and posteriorly each cavity opens into the cloaca of the pharynx and so becomes the highway to the larynx and lungs. If the nose be of no account to respiration surely the mouth would be a larger, easier, and more direct inlet and outlet for the air in its passage to and from the lungs. Why go by the outer circle when the inner *circle is shorter, broader, easier,* and more direct? The object attained by the air passing through the nose and not through the mouth is to insure its being warmed to close upon 100° F., moistened to saturation, and filtered from all irritating and injurious particles of dust suspended in the atmosphere. And this for very good reasons, for cold air at first contracts the vessels in the respiratory mucous membrane, but subsequently dilatation sets in with accompanying catarrh. Dry air inspissates the mucus in the narrower parts of the respiratory tract and so renders the functions of the ciliated epithelium nugatory, induces collections of inspissated mucus on parts, and so induces coughing to remove the *same*. The air should be filtered in order to get rid of foreign particles and so lessen the chances of the direct introduction of tubercle and other germs to the lungs.

The normal physiological function of respiration is performed unconsciously and repeated some 20,000 times in the 24 hours. *This rapid and frequent filling* and emptying of the lungs that follows the expansion and contraction of the chest wall is only rendered possible by maintaining the normal patency *of the upper respiratory tract*; any obstruction to inspiration would upset the normal frequency of respiration and cause dyspnœa. A normal nasal *respiratory tract* is one capable of conducting air to the lungs with sufficient rapidity to instantly make up the deficit and equilibrate the lessened tension of the air in the lungs caused by the sudden expansion of the chest cavity. A nasal respiratory tract not capable of supplying air to the lungs day and night at the normal rate of inspiration and without the consciousness of the individual is an abnormal and obstructed nasal respiratory tract and the owner of such may be said to suffer from nasal obstruction. In other words, the necessity of supplementing nasal respiration by oral respiration or mouth-breathing is proof of nasal obstruction. Any evidence of mouth-breathing by day or night, and more especially by night, is evidence of deficient nasal respiration and so evidence of nasal *obstruction*. *Mouth-breathing by* day or night is evidence also that the physiological functions of the nose—the warming, the moistening, and the filtering process so admirably performed by the nose—are more or less in abeyance and so lost to the respiratory function.

Depending, as our definition does, on these physiological facts connected with the nose we may logically expect that a case of complete nasal obstruction such as may be caused by polypi on both sides would present one or more of the following symptoms. A nose when thus completely obstructed would be *a typical case of mouth-breathing. In* the abstract it would be possible to state that, given a person in this condition, certain symptoms of affections of the nose, throat, ears, lungs, and general health would probably supervene. The patient would probably be deaf and might have a discharge from one or both ears. He would have a *sense of discomfort and fulness in the nose with at times a* copious discharge and marked intermittent headaches. He would probably have marked post nasal catarrh, some pharyngitis, and cough and dryness of the throat in the morning. Added to this he would be liable to winter cough and bronchitis *and more than likely to attacks of asthma*. The digestion would probably suffer, and this again would induce a condition of neurasthenia and a feeling of something being wrong. Few of us present would refuse to admit that such a case of nasal obstruction as I have indicated might, and probably would, have one or more or all the symptoms enumerated as a direct result of the mouth-breathing.

Such being the symptoms which we clinically find in mouth-breathers it will be as well at this point to study the underlying physical basis on which they depend. The first question that presents itself is: When the air passes to the lungs *viâ* the mouth and not *viâ* the nose, what is the physical and pathological effect, if any, upon the nasal cavities and nose proper? I am well aware that although the nasal respiratory tract may be quite patent and adequate for normal respiratory purposes that voluntarily one can ignore this passage and breathe entirely by the mouth.

We will, therefore, first study the effect of mouth-breathing on an unobstructed nose. Under these circumstances what is the physical condition of the nasal respiratory passages? or, in other words, what is the effect of short-circuiting the respiratory tract? *In the first place, the physiological* functions of the nasal mucous membrane are in abeyance and consequently the air passes into the throat, the larynx, and the lungs much in the same condition as that in which it entered the portals of the mouth—that is to say, more or less dry and cold. The pathological effect of this may be, as we have seen, catarrh of the pharynx and larynx associated with cough and other unpleasant conditions. Has the passage of the air to the lungs *viâ* the mouth any other effect? I maintain that it has. It has a physical as well as a pathological effect. The fact that the nose is temporarily put out of gear or in a state of disuse absolves the dilator muscles of the nose from their functions. They no longer dilate during each act of inspiration and there is consequently a tendency of the wings of the nose to collapse. The weakest point is that part not stiffened with cartilage and is opposite the junction of the vestibule with the nasal cavity proper. *In mouth-breathers there is a marked pit or depression* on the alæ of the nose at this spot. This point may be compared to the rima glottidis in the larynx. It is the narrowest part of the nasal respiratory tract and it is the one most easily *obstructed. The interior of the nose* may be made quite patent and healthy, and yet collapse of *the nose from disuse may remain* and cause complete obstruction. The dimple on the outer aspect of the wing of the nose is diagnostic of the condition and pathognomonic of mouth-breathing. Long continued mouth-breathing or disuse of the nasal respiratory functions begets more or less complete atrophy of the muscles and tissues of the external nose with collapse of the alæ and gives a sharp and pointed expression to the features. I am of opinion, then, that mouth-breathing may induce or cause nasal obstruction from disuse or collapse of the nose valve.

The next proposition is: Does oral respiration or mouth-breathing produce any effect upon the interior of the nasal cavities? Undoubtedly it does. The air on its way to the larynx passes the opening into the naso-pharynx and nasal chambers and according *to a well-known law of physics* abstracts part of their contents. This, with a normal anterior nasal opening would be rapidly repaid and the tension equilibrated. Not so in cases of long-continued mouth-breathing where atrophy and collapse of the nasal *valve has set in*. The portion of air *abstracted* is in this case not adequately repaid; it is either too long in arriving or too little in amount, and the tension is not equilibrated, so that flushing of the whole mucous lining takes place from unsupported intra-vascular pressure. A Seigle's aspirator, as used for the ear, will afford you an excellent example and proof of this. Having properly fixed the instrument into the ear, on compressing the ball even the thick non-vascular lining membrane of the auditory canal is seen to grow pale. On allowing the ball to expand the whole lining membrane becomes a bright red The same thing occurs in the nose where the lining membrane is highly vascular and the vessels are thin-walled and the cellular tissue is lax and abundant. The abstraction of the smallest quantity of air from the nasal chambers and post-nasal space by the stream of air on its way to the lungs *viâ* the mouth, if not instantly compensated by a corresponding inflow from the outside air *viâ* the anterior nares, will cause a lessening of the tension of the air in the nose and accessory cavities. This lessened tension will be responded to by the lining membrane of the nose and accessory cavities as a general redness or flushing of the parts, and this will occur, of course, in direct proportion to the degree of rarefaction. This I hold to be a physical fact and upon the recognition of this fundamental physical fact rests the whole science and treatment of affections of the throat, ear, nose, and accessory cavities

I have taken a condition of things that does not exist in nature—namely, mouth-breathing with a perfectly healthy and physiologically adequate external nose and nasal chambers—and I have shown that even in this impossible and theoretical condition of things, with an unobstructed and healthy nasal tract, the effect and tendency of mouth-breathing is to induce not only anterior nasal obstruction by collapse of the nose valve, but general lessened capacity or obstruction from swelling and engorgement of the spongy and mucous lining of the nose and accessory cavities. I have described to you the collapsed, atrophied, pointed, and pinched nose of the mouth-breather. One other physical alteration is often apparent. The mouth-breather, in order to keep open the oral slit, partly raises the upper lip and in doing so uses a muscle (the levator labii superioris alæque nasi), and so involuntarily and unconsciously raises and arches the lower border of the wings of the nose. This disfigurement is very apparent in some cases of nasal obstruction and can be altered and done away with by curing the nasal obstruction and using the nose and not the mouth as the respiratory inlet. The peculiar arrangement and formation of the external nose has never been sufficiently recognised nor has the fact of its being a valve regulated and presided over by several distinct and more or less powerful muscles been taken into consideration in the diagnosis and treatment of disease of the nasal chambers. If you go to the Zoological Gardens and watch the seals and sea-horses swimming you will observe that before diving these animals completely close the nasal opening by the sphincters of the nose and widely open it by the dilators when arriving at the surface. These same muscles are present in the human nose and are none the less important in regulating the capacity of the portals of the respiratory tract. One may frequently observe in cases of hemiplegia that on the hemiplegic side of the face the wing of the nose is collapsed, and consequently that that side of the nose is obstructed and lost to the respiratory function. In deep chloroform narcosis and some head injuries nasal respiration is usually in abeyance from loss of power in the dilators of the nose.

Now to make matters clear we will sum up my contentions so far: (1) that mouth-breathing, if persisted in even in the hypothetical condition of a healthy and patent nose, would ultimately induce anterior nasal obstruction from atrophy following disuse of the nose valve; (2) that this would be followed by swelling of the lining membrane of the nose and accessory cavities from vascular dilatation; and (3) that this again would lessen the capacity of the nasal respiratory tract and tend to set up nasal obstruction. A vicious cycle is set up. Mouth-breathing tends to obstruct the nose and this very obstruction maintains and continues the mouth-breathing.

Beyond the fact that the external nose itself is liable under certain conditions to be a source of obstruction to nasal respiration, does the normal condition or arrangement of the clothing or lining of the rigid walls of the nasal chambers account for the ease with which the nasal cavities may become obstructed and the nasal respiratory function lessened or placed in abeyance? Although the framework of the nasal chambers is of bone and is admirably fitted to maintain the cavity and capacity of these chambers the necessity of placing within them an organ capable of performing the various physiological functions of the nose discounts the nose to some extent as the main respiratory inlet. We have lining these cavities and their various ledges and recesses a mucous membrane at once remarkable for its histological characters and physiological functions, and varying according to the part of the nasal chamber it may happen to line. In the vestibule the lining membrane is in a transition state between skin and mucous membrane; it secretes mucus, but still retains the hairs and the sebaceous glands proper to the skin. It is firm and closely adherent to the inlet of the nasal chambers and not liable to any appreciable swelling or turgescence. On entering the nasal cavity we find the mucous lining practically divided into two areas, the respiratory and olfactory. All that portion in a horizontal line above the lower border of the middle turbinal body is the olfactory area and the broader and more extensive surface below this line the respiratory area. Now, it is the respiratory area that we are more particularly interested in, and at the onset I would say that if it were not for presence in this area of the lower turbinal body we should hear little of nasal obstruction, and the occupation of the otologist, rhinologist, and laryngologist would be extremely limited. The lower turbinal bone extends from before backwards right in the path of the inspiratory stream and encroaches on the posterior and anterior nasal openings. It is covered with a membrane of peculiar constitution in so far as it is extremely thick, measuring at times from one-eighth to one-half of an inch. It has many vascular cavernous spaces in it resembling erectile tissues and is capable of sudden contraction and dilatation resembling true erectile organs. It so happens that this erectile tissue is more pronounced opposite the anterior and posterior openings of the nose and when distended it is capable of occluding both anterior and posterior openings completely and so capable of stopping nasal inspiration on one or both sides. A close study of the behaviour of this tissue in its various physiological and pathological conditions is a key to the understanding of the various phases of nasal obstruction and the many consequences arising therefrom. A perfectly healthy individual with a normally constituted nasal organ and placed always under normal circumstances would no doubt theoretically pass through the whole span of his existence without even a temporary obstruction to his nasal respiration such as is experienced in a common cold. When, however, one considers that such a condition of things does not and cannot exist—that the child in many cases is born with an affection of the mucous lining inherited from his parents, that his membrane may be affected by the various constitution and local complaints of its owner, that errors of diet, errors in environment, and errors in the constant variations and purity of the inhaled air all may have a disturbing influence on the proper physiological function of the turbinal body,—can we be surprised that the normal physiological working of this organ is frequently upset and ends in dilatation and obstruction? The air enters the nasal chambers some 20,000 times a day and should continue to do so without intermission during the whole life of the individual. The functional activy of the turbinal body is ceaseless and for its size exceeds the functional activity of any other organ of the body. It is calculated that two quarts of water a day are given up to the inspired air by this body and the lining of the nasal respiratory tract, and that all the air that enters the larynx, no matter what the outside temperature may be, is warmed to near the temperature of the body. This is no light duty. The pathological tendency of any organ is in direct proportion to its functional activity. Therefore, the pathological tendency to temporary and permanent dilatation or to engorgement from relaxation of vaso-motor tone and consequent hypertrophy is apparent. 99 cases out of every 100 of obstruction to the nose are due to this cause. The dilatation may be temporary, intermittent, or permanent, but still the tendency is there, the tone is lost, and nasal obstruction is the result.

Nothing is more common than for a patient to tell one that he is all right during the day when he is up and about, that he can breathe through the nose with ease and comfort, and can go upstairs or even take active exercise with the mouth shut. But directly he places his head on the pillow a very short time elapses before the nose is completely blocked. The explanation is simple. The tone of the tissue is so lax that the extra-venous pressure caused by the horizontal position is sufficient to dilate his turbinal bodies and stop his nasal respiration. Many a time have I been told by a patient that, when in bed even, the side of the nose which is lowest is the obstructed one and that on turning over the clear side becomes obstructed and the obstructed side clear. The effect of gravity through a range of four or five inches is sufficient to fill one side and free the other. Loss of tone of the turbinal bodies with or without hyperplasia is the commonest cause of nasal obstruction and this, like atrophy, may be strictly limited to one side, but in the great majority of cases both sides are affected and if one side be affected first the other side follows sooner or later. The recognition of the various degrees of these conditions is difficult, but still with a knowledge of what to look for and a proper subjective examination of the patient a correct diagnosis can be made.

To exemplify the points of the diagnosis I will give you an illustration of a case of atonic turbinal body which set up chronic posterior arytenoiditis, general pharyngitis, with granulations on the pharynx, indigestion, and general *deterioration of health. Quite lately, at the instigation of* Dr. G. Herschell, a gentleman living in France and who is a medical man brought his daughter to me for my opinion. The patient was about 18 years of age; she was of a sallow, muddy complexion and was spotted about the nose, chin, and mouth with acne indurata and acne rosacea. Her chief complaint was discomfort in the throat with cough continuing more or less all the time Her father had consulted several specialists in *Paris, Nice,* and *London,* with the result that most of them differed except on one point—and that one point was that the nose was perfectly healthy and unobstructed. They were all agreed so far; but they could not account for the constant "hemming" cough, just as if it were to clear some little thing away, the general over-moisture and vascularity of the throat, the tendency to sore-throat and to catch cold, and the indigestion and general want of tone. Whatever they did or said they did not cure the patient's trouble or her father would not have brought her to me. I have stated that there was posterior arytenoiditis, general over-vascularity with increased moisture in the pharynx, and some post-nasal catarrh. If the nose was healthy and quite patent and its physiological functions properly performed, what was the cause of the condition of the pharynx and larynx? Every effect has a cause—a patient does not get into this condition without good reason. It was not from syphilis, or tubercle, or gout, or alcohol, or smoking, or anything direct that one could make out. Moreover, it baffled all attempts at treatment by these various specialists; it continued; it was not cured, and why? It was a case of nasal obstruction, more especially at night. True, during the day, when up and about, the nose was clear, and when I examined it there was ample room for nasal respiration, but on cross-examination the patient admitted that her mouth and tongue were dry in the morning, that the discomfort of the cough was worse till she had taken food, and when I mentioned it she said that she had noticed that the nose was not clear at night. I did not rely upon the patient's statement entirely nor did I arrive at my diagnosis by the process of exclusion. I examined the nose; and what did I find? Well, in the first place, there was then ample room for nasal respiration. In no sense could one say that the nose was obstructed. The mucous lining of the nose was of a liver-red colour, with inspissated mucus in patches at various points indicating general congestion of the interior. On the septum opposite to each lower turbinal body was a deep groove or sulcus running from before backwards, its concavity corresponding accurately with the convexity of the turbinal body. There could be no doubt that the turbinal body had formed that groove and when distended it rested and accurately filled that groove. No further evidence was required. I ordered a mild alkaline antiseptic wash for a week. I then with the galvano-cautery pinned down the most prominent parts of the turbinal body to prevent it swelling much, in the way that a button is put on the seat of a chair, and with the help of a little chloride of zinc spray to the larynx sent this patient back to France practically cured in less than one month from the commencement of treatment. This was, then, undoubtedly a case of nocturnal nasal obstruction. The congestion of the nose, the post-nasal space, and the pharynx was started and maintained by the laboured inspiration necessary in these cases. Laboured inspiration means delay in compensating the tension of the air in the respiratory tract and this means vascular dilatation from unsupported intra-vascular pressure. I let in the air with the galvano-cautery, the tension was rapidly equilibrated and the vascular turgescence quickly subsided, the consequent over-secretion disappeared, and the arytenoid cartilages were no longer irritated by the constant dribbling of mucus over their surface into the laryngeal box. The hemming cough was no longer requisite to drive the secretion out again. Mucus in large quantities no longer passed into the stomach to impede digestion and the tone and general condition of the patient improved. This is the history of 99 out of every 100 cases of laryngeal catarrhs, huskiness and morning cough, sore and uncomfortable throat, the tendency to catch cold, and the general catarrhal *condition of the upper respiratory* tract. It all means mouth-breathing from nasal obstruction.

Unfortunately, the effects of atony and dilatation of the turbinal body such as I have endeavoured to place before you are not limited to the respiratory tract proper. We have passing out from the walls of the nose and naso-pharynx certain passages or openings communicating with cavities and chambers of considerable importance. *These chambers or cavities* are one and all *culs-de-sac* and communicate only with the nose or naso-pharynx, and that by in most cases extremely small openings. Each cavity is lined by mucous membrane continuous with that of the nose and is liable to be affected by the same pathological and physical conditions as the nose. Affections of the frontal, ethmoidal, sphenoidal, and maxillary sinuses may be originated or kept up by obstructive conditions of the nose. Catarrh may spread into one or any of these cavities. The opening into the cavity becomes obstructed and the products of catarrh accumulate and may form an abscess. Take the tympanic cavity as the best and commonest instance of this state of things. Nasal obstruction in these cases is fatal to a speedy restoration and cure. The very physical condition of nasal obstruction enhances and keeps up the occlusion of the only outlet to the discharges. In the case of the tympanic cavity it empties itself, as a rule, by perforating the tympanic membrane. But in the case of the frontal and maxillary sinuses the walls are bony and greater difficulty is experienced in getting rid of the contents. Whatever surgical procedure you adopt to empty the contents your first object should be to restore the patency of the natural outlet into the nose and see that outlet is maintained by freely ventilating the nose. A case of ear discharge will not get well unless you restore the natural patency of the Eustachian tube.

I will go one step further. I maintain that obstruction to nasal respiration may set up a rarefaction of the air contained in each of these cavities and cause congestion of the lining membrane and a possible outpour of fluid and blockage of the natural vent, although there be no previous disease or catarrh present. Take the tympanic cavity, where we can see the process developing. Blockage of the opening of the Eustachian tubes leads to deafness, which means that the air is absorbed by the lining of the closed cavity and the drumhead is driven in by the unsupported atmospheric pressure. An examination of the drumhead will now show no fluid present, but in 24 hours or 48 hours if the obstruction be maintained and air be not supplied to the tympanic cavity and the intra-vascular pressure is not equilibrated, fluid is poured out and marked vascularity is apparent down the handle of the malleus and in the neighbourhood of the short process. Occlusion of the frontal and antral openings is followed by the same result. As long as the nose continues to be blocked the deafness will remain. Treatment directed to restore the patency of the nose will restore the patency of the Eustachian tube and the hearing will suddenly return. The difficulty of treating an acute rhinitis is that the occlusion set up by the congestion is the prime *factor* in maintaining the congestion from the necessity of carrying on respiration by the supplemental respiratory opening the mouth. If you can only let air into the nose by any artificial means you will cure the rhinitis in half the time. I maintain, then, that the key to the prevention and treatment of all diseases of the accessory cavities of the nose, including the tympanic cavity, is to maintain the natural physiological condition of the nose and see that its respiratory capacity is sufficient to rapidly equilibrate the air in the respiratory tract during inspiration. I cannot consume your time by giving you illustrations, but you must believe me when I say that my note-books are teeming with cases that support my contentions to the letter.

In chronic deafness with discharges and tinnitus it is just as important to see that there is a free inlet of air to the respiratory passages as in the acute cases. *Chronic deafness,* or what is known as "dry catarrh" (a more ludicrous term could not well be invented), is nothing more or less than chronic Eustachian obstruction due in the great majority of mention it. The choking and coughing on taking fluids, along with the presence of some bronchitis, made me think that the child ought to be fed through a tube, but this did not prove to be necessary. It is well, according to Collins,[27] to delay using the tube as long as it is safe to do so. The danger of food passing into the air passages is, however, a real one. Stress is laid upon it by several writers, including Mackenzie,[28] Gee,[29] Oppenheim,[30] and Maingault.[31] Mr. Rock has recently given me notes of a case in which death resulted in two days' time from the entrance of food into the larynx in a case of diphtheritic palsy. There was present a large amount of membrane in this case. It was stated by Bowman[32] that cases in which there was dense and widely distributed membrane were most surely followed by paralysis. In 53 out of Goodall's[33] 125 cases much exudation was present. If a severe local lesion such as would lead to a large amount of exudation is likely to be followed by a correspondingly severe intoxication, then the frequent association of much exudation and paralysis is readily understood.

CASE 5.—A man, aged 34 years came to the out-patient department of the Leeds Infirmary in October, 1899, and gave the following history. He had severe diphtheria in June, 1899. He was away from work for seven weeks. He then worked for four weeks when he was again obliged to give it up. Fluids regurgitated through the nose after the attack. When he went away after the illness he was a little weak in the legs, but there was no unsteadiness until after he resumed his work. It was this unsteadiness which compelled him to give up his work on the second occasion. The patient was undoubtedly unsteady in walking. Romberg's symptom was distinctly present. The knee heel symptom could also be obtained. There was not the least doubt about the presence of ataxia in the legs. The pupils reacted to light and accommodation. The knee-jerks were absent. There were no bladder symptoms and no pains. Unfortunately, no note was made about sensation, but I believe that it was found unaffected. The patient was improving. He was at his worst in September. He continued further to improve and was eventually lost sight of.

The course of the disease in this case was peculiar as there was a considerable interval between the first paralytic symptoms and the ataxia. The patient was quite clear about his history. He had to relinquish his work on the second occasion on account of the incoördination which was a new symptom to him. There is the same difficulty in understanding how such new symptoms as the above should appear at some interval after the onset of the attack as there is in understanding how relapses as in Case 3 occur, or how a considerable time may elapse between the primary attack and the onset of the paralysis. There was no risk of mistaking this case for one of early tabes dorsalis. It is strange that a difference of opinion should exist as to the frequency with which paralysis follows diphtheria in the adult. Osler[34] and Landouzy, quoted by Goodall,[35] maintain that paralysis follows relatively more often upon the diphtheria of the adult than that of the child. Bowman,[36] quoted by Ross and Bury, has only met with rare instances in the adult which have not been followed by paralysis. Foord Caiger,[37] however, says that young children are more frequently affected than older ones.

CASE 6.—A boy, aged seven years, was brought to the out-patient room of the Leeds Infirmary in October, 1899. He had diphtheria six weeks previously. Fluids regurgitated shortly after the attack. He had not been injected. There was unsteadiness in gait. The child walked with his legs wide apart. He swayed when the eyes were closed and the feet were placed together. No knee-jerks could be obtained. The boy steadily improved so that when seen in the following April the incoördination had entirely disappeared and fluids did not regurgitate. I saw him a few weeks ago and he was quite well. His knee-jerks had returned.

This was a case in which ataxia was the most prominent feature.

Albuminuria and diphtheritic paralysis.—Albuminuria was present in Cases 1, 2, and 3. Unfortunately, the urine was not examined in Cases 4, 5, and 6. The considerable frequency of albuminuria in diphtheria is universally admitted. It is usually estimated as present in from one-half to two-thirds of the cases. The proportion is larger in fatal than in non-fatal cases. Thus H. Mackenzie[38] put it down as occurring in 76 per cent. of the former and in 49 per cent. of the latter. It is also more frequent in the paralytic than non-paralytic cases. Thus in Goodall's cases[39] it was noted in 88 per cent. of the former and only in 30 per cent. of the latter. Of course, it is possible, as Mackenzie remarks, that cases of diphtheria with albuminuria are likely to be kept more carefully under observation than other cases, but this will not account for the considerable discrepancy between the figures. An increase in the albuminuria has even been noticed at the time of the onset of the paralysis, as in Trousseau's well-known case.[40] The significance of albuminuria in diphtheria is important in considering its relation if any to the paralysis. It is very generally looked upon as an expression of the intensity of the intoxication, as Goodall,[41] Tirard,[42] Mackenzie,[43] and others mention. If the paralysis is a toxic symptom then, other things being equal, it would be expected to occur more frequently in cases where the intensity of the intoxication is greatest, that is, in cases in which albuminuria is also most likely to be present. Even if albuminuria is an indication of the severity of the intoxication it does not of course follow that it is an exact measure of the degree of intoxication. It is not, therefore, necessary to hold that the larger the amount of albumin present the more likely is the patient to develop paralysis. Thus Bowman[44] states that there is no real relation between the amount of albumin and the occurrence of paralysis. In Goodall's cases the amount of albumin present was very variable both in different cases and in the same case at different times. Yet Goodall[45] thinks that the more persistent the albuminuria and the greater the quantity, the more severe the case and the more likely are paralysis and cardiac irregularity to follow. The question has been discussed as to whether the paralytic symptoms are not really a manifestation of uræmia. Trousseau[46] long ago pointed out that the nervous accidents in diphtheria do not resemble the symptoms of uræmia and that they may occur in cases in which there is no albumin present. Maingault,[47] in his excellent description of diphtheritic paralysis, says that there is no relation of cause and effect between diphtheritic albuminuria and the paralytic accidents. Cadet de Gassicourt[48] also agrees in this statement. It certainly occurred to me when I heard of the death of Case 1 as to whether the child might not have died from uræmia, but neither Mr. Woods nor I thought that it was so. Of the vomiting occasionally seen in diphtheritic paralysis and present in Case 2 Mackenzie[49] says there are two reasons against its being the result of uræmia—viz., (1) it occurs, though rarely, where the urine is free from albumin; and (2) it is associated with other symptoms of cardiac failure. Gee,[50] however, says that vomiting is in most cases associated with an affection of the kidney. The urine is albuminous and scanty and even entirely suppressed. The patient, however, retains consciousness and convulsions rarely precede death. B. E. Myers[51] further states that the general nervous symptoms are convulsions, drowsiness, delirium rarely and restlessness frequently. We may apparently conclude that diphtheritic albuminuria has no other relation to diphtheritic paralysis than that both complications are more prone to occur where the diphtheritic intoxication is most intense. The question is not considered here as to whether kidneys damaged by a toxic nephritis are not more likely to lead to the retention within the body of the paralysis-producing poisons than would happen with healthy kidneys.

Ataxia in diphtheritic paralysis.—Ataxia was present in Cases 1, 5, and 6. It is now very generally recognised that diphtheritic paralysis is due to an affection of the peripheral nerves, although slight lesions have been occasionally found in the spinal cord. Quite recently Playfair and Rainy[52] have published a case with slight lesions in the spinal motor-cells and none in the nerves, and Rainy[53] has induced changes in the motor-cells by the injection of diphtheria toxin into rabbits. Since Déjerine's classical paper[54] on pseudo-tabes the possible occurrence of ataxia in diseases of the peripheral nerves has been everywhere admitted Long before any exact knowledge was obtained in regard to the pathology of diphtheritic paralysis a certain clumsiness in movement and an uncertain gait were noted by early writers on this subject. Trousseau was one of the first to call attention to it. In 1877 Rumpf[55] recorded a case from Erb's clinic in which the ataxia was very pronounced and he refers to similar cases recorded by Grainger Stewart[56] and Foot[57] The ataxia is nearly always combined with more or less paresis Some authors, such as Baginsky,[58] Rumpf,[59] and G. Stewart,[60] state that the ataxia appears first and then later the weakness. Of course, the weakness would tend to mask the ataxia. It is quite true that it is very unusual to find in diphtheritic paralysis the degree of disorderly movements with the flinging, stamping gait so commonly seen in tabes, but this is no reason why slighter degrees of incoordination should not be admitted. Babinski,[61] in his excellent article on neuritis, thinks that the term "ataxia" has been used too loosely in connexion with peripheral neuritis. He argues that mere weakness of certain groups of muscles—such, for instance, as the muscles of the back of the thigh in addition to the extensors of the foot—might give rise to a gait that had many resemblances to the true tabetic gait. He refers to the fewness of cases of multiple neuritis with the true tabetic gait which have been recorded and thinks that in a case reported by Jaccoud there must have been spinal cord lesions as well. This, however, would not invalidate the contention that typical ataxia may occur in diphtheritic paralysis. The ataxia may be very widespread, as in the case very carefully noted and recorded by Buzzard, in which the clumsiness of movement even extended to the lips. In some cases the ataxia has been of a reeling character, so that there was danger of mistaking it for cerebellar ataxia (Ashby and Wright[62] and Mackenzie[63]) Here probably the ataxia had extended to the trunk muscles.

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[27] Treatment of Nervous Disease, 1900.
[28] Loc. cit.
[29] Loc. cit.
[30] Lehrbuch der Nervenkrankheiten, 1894.
[31] Loc. cit.
[32] Loc. cit.
[33] Loc. cit.
[34] Text-book of Medicine, 1893.
[35] Loc. cit.
[36] Loc. cit.
[37] Loc. cit.
[38] St. Thomas's Hospital Reports, vol xx., 1890.
[39] Loc. cit.
[40] Loc. cit.
[41] Loc. cit.
[42] Albuminuria and Bright's disease, 1899.
[43] Loc. cit.
[44] Loc. cit.
[45] Encyclop Med Diphtheria, vol. i., 1900.
[46] Loc. cit.
[47] Loc. cit.
[48] Loc. cit.
[49] Loc. cit.
[50] Loc. cit.
[51] THE LANCET, Sept. 22nd, 1900, p 869.
[52] Edinburgh Hospital Reports, vol. vi., 1900.
[53] Journal of Pathology, July, 1900.

Ataxia is supposed to be largely due to disturbance of the muscular sense. Von Leyden and Goldscheider[64] say that the integrity of the sensory sphere is necessary for the coördination of movement. Thus, the occurrence of sensory changes in diphtheritic paralysis, especially with ataxia, becomes a matter of some interest Jacobi[65] says that there are in some cases sensitive changes such as to cause ataxia. He no doubt includes here the muscular sense. Lloyd[66] speaks of diphtheritic pseudo tabes under the sensory type of multiple neuritis where the muscular sense is abolished. The changes in sensation are usually slight in diphtheritic paralysis They appear often to be limited to the ends of the extremities, as in Mott's case[67] In some cases there is *only subjective alteration in sensation Thus,* I have notes of a case of an adult in whom there was a severe faucial lesion but relatively few general symptoms, due probably to the serum treatment. During convalescence she complained of numbness and pins and needles in the feet and legs, The onset of paralysis was feared, but she never had anything *more than a very slight* regurgitation of fluid *into the nose* In some cases where there is ataxia there may be no alteration in sensation. This was so in Rumpf's case[68] previously alluded to. On the other hand, in Hansemann's[69] case, where there was considerable ataxia, there was also impairment of sensation, including that of location. Disturbances of sensation, as unfortunately happened in my cases, do not receive the attention which they deserve, partly on account of the difficulty of investigating them in children

Diagnosis—There is rarely any real difficulty in recognising diphtheritic paralysis. The only cases in which doubt may arise are those in which the nature of the sore-throat has been overlooked Cases with very slight initial lesions have ultimately come to bear some resemblance to tabes dorsalis, but the pupillary symptoms, disturbance of the bladder functions, pains, mode of onset and course should make the distinction comparatively easy. Gowers,[70] Buzzard,[71] Oppenheim,[72] Baginsky,[73] Grainger Stewart,[74] and others refer to this possible *difficulty in diagnosis,* but Déjerine appears to think that it may be exaggerated. A very unusual example of exceptional difficulty is recorded by Morton Prince.[75] A medical student inoculated himself while making a necropsy on a case of diphtheria. The wound became inflamed and 10 days later there was difficulty in swallowing and regurgitation of fluid through the nose. Some months later he presented some of the symptoms of early tabes. The pupils, however, reacted normally and there were no pains or bladder disturbance. The patient recovered completely, but not until after absolute rest in bed had been had recourse to It has been stated that paralysis may be the first manifestation of diphtheria (Cadet de Gassicourt[76] and Henoch[77]). Henoch, however, adds that it is more likely that the initial lesion has been overlooked. The diagnosis might in such cases be very difficult if the diphtheritic paralysis pursued at all an anomalous course. Lindsay Steven[78] mentions that there might be some difficulty in distinguishing between Landry's paralysis and diphtheria, and one or two authors, such as Maingault,[79] say that hysteria might also give rise to errors in diagnosis.

Prognosis—The question may first be discussed as to whether it is possible to predict the occurrence of paralysis. Apart from what has been previously mentioned as regards the kind of cases in which paralysis is more likely to supervene, it has also been stated that anæsthesia of the palate may enable the observer to foretell the onset of the paralysis some days before it appears. Cadet de Gassicourt[80] pointed this out in reference to laryngeal diphtheria. It is true that Gee[81] emphasises the fact that paralysis is very rare after laryngeal diphtheria, no doubt because the patients die before it has time to develop All authors do not take the same view as Gee and unquestionably the serum treatment, by increasing the number of recoveries from laryngeal diphtheria, has also increased the number of cases which are likely to develop paralysis. In the first place it may be stated that recovery from the paralysis will occur *if life is preserved, although* several months may elapse before the patient is well In general the prognosis of diphtheritic paralysis is good, yet the number of deaths amounts to from 12 to 15 per cent. Cadet de Gassicourt[82] and Mott[83] think that it is more fatal than is usually believed. There is reason to think that in some epidemics the *mortality is higher than in others* Among a group of 275 cases reported by Myers[84] 80 died, or nearly 30 per cent In considering more closely the question of prognosis it is well to divide diphtheritic paralysis into (1) the localised; (2) the general; and (3) the cardio-pulmonary forms The prognosis of the localised and even the *generalised forms is good,* but that of the *cardio pulmonary* form is bad and generally very bad. This cardio pulmonary form may not only exist by itself but may supervene upon the generalised and even the localised forms. Hence an element of uncertainty is introduced even among the milder forms of the affection. In Cadet de Gassicourt's[85] 15 cases of the cardio-pulmonary type 14 died; in 10 of these cases the paralysis was otherwise limited to the palate. Case 1 in the earlier stages did not seem to be really serious, yet fatal respiratory symptoms soon supervened. On the other hand, some of the worst cases, especially with threatening respiratory symptoms, may recover, so that both Osler[86] and Lloyd[87] say that the outlook is not always so hopeless as the patient's appearance would indicate This fact was well illustrated in Case 2 Mr. Woodcock, Dr Ballantyne, and myself all thought the case quite hopeless, and yet recovery ensued.

In the cardio pulmonary form death may occur by paralysis of the heart or respiration, including in the latter broncho-pneumonia resulting from the respiratory paralysis. Sometimes, owing to paralysis of the depressors of the epiglottis, food may get into the air-passages and even produce sudden death, as in Maingault's case,[88] or a fatal broncho-pneumonia. In cases of diphtheritic paralysis it is mention it. The choking and coughing on taking fluids, along with the presence of some bronchitis, made me think that the child ought to be fed through a tube, but this did not prove to be necessary. It is well, according to Collins,[27] to delay using the tube as long as it is safe to do so. The danger of food passing into the air passages is, however, a real one. Stress is laid upon it by several writers, including Mackenzie,[28] Gee,[29] Oppenheim,[30] and Maingault.[31] Mr. Rock has recently given me notes of a case in which death resulted in two days' time from the entrance of food into the larynx in a case of diphtheritic palsy. There was present a large amount of membrane in this case It was stated by Bowman[32] that cases in which there was dense and widely distributed membrane were most surely followed by paralysis. In 53 out of Goodall's [33] 125 cases much exudation was present. If a severe local lesion such as would lead to a large amount of exudation is likely to be followed by a correspondingly severe intoxication, then the frequent association of much exudation and paralysis is readily understood.

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[54] Archives de Physiologie Normale et Pathologique, 1884, vol. i.
[55] Deutsches Archiv für Klinische Medicin, 1877.
[56] Edinburgh Medical Journal, 1870
[57] Dublin Journal of Medical Science, 1872.
[58] Loc cit. [59] Loc. cit.
[60] Loc. cit. [61] Traité de Médecine, 1894.
[62] Diseases of Children, 1896
[63] Loc cit
[64] Nothnagel's Specielle Pathologie und Therapie, Band x., 1895.
[65] Loc. cit [66] Loc. cit.
[67] International Clinics, 1895.
[68] Loc cit
[69] Virchow's Archiv, 1893.
[70] Text book of Nervous Disease, 1899.
[71] Harveian Lectures, 1885.
[72] Loc cit. [73] Loc cit. [74] Loc cit
[75] Boston Medical and Surgical Journal, 1879.
[76] Loc cit [77] Loc cit
[78] Clinical Lectures 1900
[79] Loc cit [80] Loc cit. [81] Loc. cit
[82] Loc cit [83] Loc cit.
[84] Loc cit
[85] Loc cit.
[86] Loc. cit [87] Loc. cit
[88] Loc. cit.

CASE 5.—A man, aged 34 years came to the out-patient department of the Leeds Infirmary in October, 1899, and gave the following history. He had severe diphtheria in June, 1899 He was away from work for seven weeks. He then worked for four weeks when he was again obliged to give it up. Fluids regurgitated through the nose after the attack. When he went away after the illness he was a little weak in the legs, but there was no unsteadiness until after he resumed his work. It was this unsteadiness which compelled him to give up his work on the second occasion. The patient was undoubtedly unsteady in walking. Romberg's symptom was distinctly present. The knee heel symptom could also be obtained. There was not the least doubt about the presence of ataxia in the legs. The pupils reacted to light and accommodation. The knee-jerks were absent. There were no bladder symptoms and no pains. Unfortunately, no note was made about sensation, but I believe that it was found unaffected. The patient was improving. He was at his worst in September. He continued further to improve and was eventually lost sight of.

The course of the disease in this case was peculiar as there was a considerable interval between the first paralytic symptoms and the ataxia. The patient was quite clear about his history. He had to relinquish his work on the second occasion on account of the incoordination which was a new symptom to him. There is the same difficulty in understanding how such new symptoms as the above should appear at some interval after the onset of the attack as there is in understanding how relapses as in Case 3 occur, or how a considerable time may elapse between the primary attack and the onset of the paralysis. There was no risk of mistaking this case for one of early tabes dorsalis. It is strange that a difference of opinion should exist as to the frequency with which paralysis follows diphtheria in the adult. Osler[34] and Landouzy, quoted by Goodall,[35] maintain that paralysis follows relatively more often upon the diphtheria of the adult than that of the child. Bowman,[36] quoted by Ross and Bury, has only met with rare instances in the adult which have not been followed by paralysis Foord Caiger,[37] however, says that young children are more frequently affected than older ones.

CASE 6—A boy, aged seven years, was brought to the out-patient room of the Leeds Infirmary in October, 1899. He had diphtheria six weeks previously. Fluids regurgitated shortly after the attack. He had not been injected. There was unsteadiness in gait. The child walked with his legs wide apart. He swayed when the eyes were closed and the feet were placed together. No knee-jerks could be obtained. The boy steadily improved so that when seen in the following April the incoordination had entirely disappeared and fluids did not regurgitate. I saw him a few weeks ago and he was quite well. His knee-jerks had returned.

This was a case in which ataxia was the most prominent feature.

Albuminuria and diphtheritic paralysis.—Albuminuria was present in Cases 1, 2, and 3. Unfortunately, the urine was not examined in Cases 4, 5, and 6 The considerable frequency of albuminuria in diphtheria is universally admitted. It is usually estimated as present in from one-half to two-thirds of the cases. The proportion is larger in fatal than in non-fatal cases. Thus H. Mackenzie[38] put it down as occurring in 76 per cent. of the former and in 49 per cent. of the latter. It is also more frequent in the paralytic than non-paralytic cases. Thus in Goodall's cases[39] it was noted in 88 per cent of the former and only in 30 per cent. of the latter. Of course, it is possible, as Mackenzie remarks, that cases of diphtheria with albuminuria are likely to be kept more carefully under observation than other cases, but this will not account for the considerable discrepancy between the figures. An increase in the albuminuria has even been noticed at the time of the onset of the paralysis, as in Trousseau's well-known case.[40] The significance of albuminuria in diphtheria is important in considering its relation if any to the paralysis. It is very generally looked upon as an expression of the intensity of the intoxication, as Goodall,[41] Tirard,[42] Mackenzie,[43] and others mention. If the paralysis is a toxic symptom then, other things being equal, it would be expected to occur more frequently in cases where the intensity of the intoxication is greatest, that is, in cases in which albuminuria is also most likely to be present. Even if albuminuria is an indication of the severity of the intoxication it does not of course follow that it is an exact measure of the degree of intoxication. It is not, therefore, necessary to hold that the larger the amount of albumin present the more likely is the patient to develop paralysis. Thus Bowman[44] states that there is no real relation between the amount of albumin and the occurrence of paralysis. In Goodall's cases the amount of albumin present was very variable both in different cases and in the same case at different times. Yet Goodall[45] thinks that the more persistent the albuminuria and the greater the quantity, the more severe the case and the more likely are paralysis and cardiac irregularity to follow. The question has been discussed as to whether the paralytic symptoms are not really a manifestation of uræmia. Trousseau[46] long ago pointed out that the nervous accidents in diphtheria do not resemble the symptoms of uræmia and that they may occur in cases in which there is no albumin present. Maingault,[47] in his excellent description of diphtheritic paralysis, says that there is no relation of cause and effect between diphtheritic albuminuria and the paralytic accidents. Cadet de Gassicourt[48] also agrees in this statement It certainly occurred to me when I heard of the death of Case 1 as to whether the child might not have died from uræmia, but neither Mr. Woods nor I thought that it was so. Of the vomiting occasionally seen in diphtheritic paralysis and present in Case 2 Mackenzie[49] says there are two reasons against its being the result of uræmia—viz, (1) it occurs, though rarely, where the urine is free from albumin; and (2) it is associated with other symptoms of cardiac failure. Gee,[50] however, says that vomiting is in most cases associated with an affection of the kidney. The urine is albuminous and scanty and even entirely suppressed. The patient, however, retains consciousness and convulsions rarely precede death. B. E. Myers[51] further states that the general nervous symptoms are convulsions, drowsiness, delirium rarely and restlessness frequently. We may apparently conclude that diphtheritic albuminuria has no other relation to diphtheritic paralysis than that both complications are more prone to occur where the diphtheritic intoxication is most intense. The question is not considered here as to whether kidneys damaged by a toxic nephritis are not more likely to lead to the retention within the body of the paralysis-producing poisons than would happen with healthy kidneys.

Ataxia in diphtheritic paralysis.—Ataxia was present in Cases 1, 5, and 6. It is now very generally recognised that diphtheritic paralysis is due to an affection of the peripheral nerves, although slight lesions have been occasionally found in the spinal cord. Quite recently Playfair and Rainy[52] have published a case with slight lesions in the spinal motor-cells and none in the nerves, and Rainy[53] has induced changes in the motor-cells by the injection of diphtheria toxin into rabbits. Since Déjerine's classical paper[54] on pseudo-tabes the possible *occurrence of ataxia in diseases* of the peripheral nerves has been everywhere admitted. Long before any exact knowledge was obtained in regard to the pathology of diphtheritic paralysis a certain clumsiness in movement and an uncertain gait were noted by early writers on this subject. Trousseau was one of the first to call attention to it. In 1877 Rumpf[55] recorded a case from Erb's clinic in which the ataxia was very pronounced and he refers to similar cases recorded by Grainger Stewart[56] and Foot[57] The ataxia is nearly always combined with more or less paresis Some authors, such as Baginsky,[58] Rumpf,[59] and G. Stewart,[60] state that the ataxia appears first and then later the weakness. Of course, the weakness would tend to mask the ataxia. It is quite true that it is very unusual to find in diphtheritic paralysis the degree of disorderly movements with the flinging, stamping gait so commonly seen in tabes, but this is no reason why slighter degrees of incoördination should not be admitted. Babinski,[61] in his excellent article on neuritis, thinks that the term "ataxia" has been used too loosely in connexion with peripheral neuritis. He argues that mere weakness of certain groups of muscles—such, for instance, as the muscles of the back of the thigh in addition to the extensors of the foot—might give rise to a gait that had many resemblances to the true tabetic gait. He refers to the fewness of cases of multiple neuritis with the true tabetic gait which have been recorded and thinks that in a case reported by Jaccoud there must have been spinal cord lesions as well. This, however, would not invalidate the contention that typical ataxia may occur in diphtheritic paralysis. The ataxia may be very widespread, as in the case very carefully noted and recorded by Buzzard, in which the clumsiness of movement even extended to the lips. In some cases the ataxia has been of a reeling character, so that there was danger of mistaking it for cerebellar ataxia (Ashby and Wright[62] and Mackenzie[63]). Here probably the ataxia had extended to the trunk muscles.

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[27] Treatment of Nervous Disease, 1900
[28] Loc. cit.
[29] Loc cit.
[30] Lehrbuch der Nervenkrankheiten, 1894.
[31] Loc. cit.
[32] Loc. cit.
[33] Loc cit.
[34] Text-book of Medicine, 1898.
[35] Loc. cit.
[36] Loc. cit.
[37] Loc. cit.
[38] St. Thomas's Hospital Reports, vol xx., 1890.
[39] Loc. cit.
[40] Loc cit.
[41] Loc cit
[42] Albuminuria and Bright's disease, 1899
[43] Loc. cit.
[44] Loc cit
[45] Encyclop Med Diphtheria, vol i., 1900.
[46] Loc cit.
[47] Loc. cit.
[48] Loc. cit.
[49] Loc cit.
[50] Loc. cit.
[51] THE LANCET, Sept. 22nd, 1900, p 869
[52] Edinburgh Hospital Reports, vol. vi, 1900.
[53] Journal of Pathology, July, 1900.

Ataxia is supposed to be largely due to disturbance of the muscular sense. Von Leyden and Goldscheider[64] say that the integrity of the sensory sphere is necessary for the coördination of movement. Thus, the occurrence of sensory changes in diphtheritic paralysis, especially with ataxia, becomes a matter of some interest. Jacobi[65] says that there are in some cases sensitive changes such as to cause ataxia He no doubt includes here the muscular sense. Lloyd[66] speaks of diphtheritic pseudo tabes under the sensory type of multiple neuritis where the muscular sense is abolished. The changes in sensation are usually slight in diphtheritic paralysis. They appear often to be limited to the ends of the extremities, as in Mott's case.[67] In some cases there is only subjective alteration in sensation. Thus, I have notes of a case of an adult in whom there was a severe faucial lesion but relatively few general symptoms, due probably to the serum treatment. During convalescence she complained of numbness and pins and needles in the feet and legs. The onset of paralysis was feared, but she never had anything more than a very slight regurgitation of fluid into the nose. In some cases where there is ataxia there may be no alteration in sensation. This was so in Rumpf's case[68] previously alluded to. On the other hand, in Hausemann's[69] case, where there was considerable ataxia, there was also impairment of sensation, including that of location. Disturbances of sensation, as unfortunately happened in my cases, do not receive the attention which they deserve, partly on account of the difficulty of investigating them in children.

Diagnosis —There is rarely any real difficulty in recognising diphtheritic paralysis. The only cases in which doubt may arise are those in which the nature of the sore-throat has been overlooked Cases with very slight initial lesions have ultimately come to bear some resemblance to tabes dorsalis, but the pupillary symptoms, disturbance of the bladder functions, pains, mode of onset and course should make the distinction comparatively easy. Gowers,[70] Buzzard,[71] *Oppenheim*,[72] Baginsky,[73] Grainger Stewart,[74] and others refer to this possible difficulty in diagnosis, but Déjerine appears to think that it may be exaggerated. A very unusual example of exceptional difficulty is recorded by Morton Prince.[75] A medical student inoculated himself while making a necropsy on a case of diphtheria. The wound became inflamed and 10 days later there was difficulty in swallowing and regurgitation of fluid through the nose. Some months later he presented some of the symptoms of early tabes. The pupils, however, reacted normally and there were no pains or bladder disturbance. The patient recovered completely, but not until after absolute rest in bed had been had recourse to It has been stated that paralysis may be the first manifestation of diphtheria (Cadet de Gassicourt[76] and Henoch[77]). Henoch, however, adds that it is more likely that the initial lesion has been overlooked. The diagnosis might in such cases be very difficult if the diphtheritic paralysis pursued at all an anomalous course. Lindsay Steven[78] mentions that there might be some difficulty in distinguishing between Landry's paralysis and diphtheria, and one or two authors, such as Maingault,[79] say that hysteria might also give rise to errors in diagnosis.

Prognosis —The question may first be discussed as to whether it is possible to predict the occurrence of paralysis. Apart from what has been previously mentioned as regards the kind of cases in which paralysis is more likely to supervene, it has also been stated that anæsthesia of the palate may enable the observer to foretell the onset of the paralysis some days before it appears. Cadet de Gassicourt[80] pointed this out in reference to laryngeal diphtheria. It is true that Gee[81] emphasises the fact that paralysis is very rare after laryngeal diphtheria, no doubt because the patients die before it has time to develop. All authors do not take the same view as Gee and unquestionably the serum treatment, by increasing the number of recoveries from laryngeal diphtheria, has also increased the number of cases which are likely to develop paralysis. In the first place it may be stated that recovery from the paralysis will occur if life is preserved, although several months may elapse before the patient is well. In general the prognosis of diphtheritic paralysis is good, yet the number of deaths amounts to from 12 to 15 per cent. Cadet de Gassicourt[82] and Mott[83] think that it is more fatal than is usually believed. There is reason to think that in some epidemics the mortality is higher than in others. Among a group of 275 cases reported by Myers[84] 80 died, or nearly 30 per cent. In considering more closely the question of prognosis it is well to divide diphtheritic paralysis into (1) the localised; (2) the general; and (3) the cardio-pulmonary forms. The prognosis of the localised and even the generalised forms is good, but that of the cardio pulmonary form is bad and generally very bad. This cardio-pulmonary form may not only exist by itself but may supervene upon the generalised and even the localised forms. Hence an element of uncertainty is introduced even among the milder forms of the affection. In Cadet de Gassicourt's[85] 15 cases of the cardio-pulmonary type 14 died; in 10 of these cases the paralysis was otherwise limited to the palate. Case 1 in the earlier stages did not seem to be really serious, yet fatal respiratory symptoms soon supervened. On the other hand, some of the worst cases, especially with threatening respiratory symptoms, may recover, so that both Osler[86] and Lloyd[87] say that the outlook is not always so hopeless as the patient's appearance would indicate This fact was well illustrated in Case 2. Mr. Woodcock, Dr. Ballantyne, and myself all thought the case quite hopeless, and yet recovery ensued.

In the cardio-pulmonary form death may occur by paralysis of the heart or respiration, including in the latter broncho-pneumonia resulting from the respiratory paralysis. Sometimes, owing to paralysis of the depressors of the epiglottis, food may get into the air-passages and even produce sudden death, as in Maingault's case,[88] or a fatal broncho-pneumonia. In cases of diphtheritic paralysis it is necessary to be on the look-out for any alteration in the pulse, such as infrequency, acceleration, and irregularity. Judson Bury[89] also states that the respiration may give warning of approaching danger. In Case 3, as mentioned above, the respiration became irregular at times. It was a disquieting symptom, but the patient recovered. Cardiac failure is not necessarily the result of an affection of the cardiac nerves. It may sometimes be due to an intense and acute degenerative myocarditis such as occurred in a case which I reported a few years ago.[90] Mott[91] has further shown that in such cases the cardiac nerves may be free from disease.

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[54] Archives de Physiologie Normale et Pathologique, 1884, vol. i.

[55] Deutsches Archiv für Klinische Medicin, 1877.

[56] Edinburgh Medical Journal, 1870

[57] Dublin Journal of Medical Science, 1872.

[58] Loc. cit.

[59] Loc. cit

[60] Loc. cit.

[61] Traité de Médecine, 1894.

[62] Diseases of Children, 1899

[63] Loc. cit

[64] Nothnagel's Specielle Pathologie und Therapie, Band x., 1895.

[65] Loc. cit

[66] Loc. cit.

[67] International Clinics, 1895.

[68] Loc. cit

[69] Virchow's Archiv, 1889.

[70] Text-book of Nervous Disease, 1899.

[71] Harveian Lectures, 1896.

[72] Loc. cit.

[73] Loc. cit.

[74] Loc. cit

[75] Boston Medical and Surgical Journal, 1889

[76] Loc. cit

[77] Loc. cit.

[78] Clinical Lectures, 1900.

[79] Loc. cit.

[80] Loc. cit.

[81] Loc. cit.

[82] Loc. cit

[83] Loc. cit.

[84] Loc. cit.

[85] Loc. cit.

[86] Loc. cit

[87] Loc. cit.

[88] Loc. cit.

There are certain symptoms which various authors look upon as of evil import. Thus Dawson Williams[92] says that cases with paralysis of the cervical muscles or marked ataxia call for a guarded prognosis. Early and especially repeated vomiting (Gee[93] and Mackenzie[94]) is a bad sign. Very early appearance of the paralysis must give rise to considerable misgiving as regards the termination of the illness. Little further need be added upon the question of albuminuria in relation to prognosis. Case 2 with considerable albuminuria and severe paralysis recovered and Case 1 with albuminuria and apparently a less severe attack of paralysis died. Abercrombie[95] writing in 1881 described the occurrence of albuminuria in diphtheritic paralysis as a grave symptom. This statement would hardly apply where the albuminuria is slight. No doubt the presence of a considerable and persistent albuminuria would add to the gravity of the case. Other things being equal the prognosis of a case with albuminuria should be more serious than one without albuminuria, since the presence of albuminuria shows a more profound intoxication. Generally stated the prognosis as regards life is bad in the cardio-pulmonary type of diphtheritic paralysis; it is good in the localised and generalised forms, but some reserve must be expressed lest the paralysis extend to the heart or respiration. Cadet de Gassicourt[96] insists that this reserve must be made to include even mild cases of diphtheritic paralysis.

Treatment.—The first point in the treatment may very naturally be made to include the question as to whether anything can be done to prevent this formidable complication of diphtheria. Some authors strongly insist on the importance of rest. Thus Mott[97] says that paralysis is often the result of a neglect of proper treatment and rest during convalescence. The heart has been pointed out as specially liable to paralysis because it cannot rest. Collins[98] is convinced that many cases of diphtheritic neuritis would not occur if the period of convalescence were more carefully guarded. It seems to be a wise and almost imperative measure to insist upon rest, at any rate partial, until the time of the greatest incidence of paralysis is past (second, third, and fourth weeks)

I may here quote the conclusions drawn by Dr. F. Ransom[99] from a valuable experimental research conducted in Professor Behring's laboratory. He shows that paralysis may certainly be expected after intoxication with not less than one-fourth of the minimal fatal dose of toxin. With doses between one-fourth and one-eighth paralyses occur but are not constant, and below one-eighth no paralysis was noticed. The larger the dose of toxin the severer will be the paralysis if the animal survive long enough. If the paralysis is a toxic manifestation, as the experiments of Ransom and others certainly show that it is, then any treatment which antagonises this intoxication should on theoretical considerations at least lessen the liability to paralysis. It has been stated by some very reliable observers (Baginsky,[100] Goodall,[101] and Marsden[102]) that if the serum treatment were more generally adopted paralysis would be less frequent. If this could be definitely proved it would be a telling argument in favour of injecting every case of diphtheria, however slight. On the other hand, severe paralysis does occur in cases (Case 3) which have been injected and apparently sufficiently injected. Also Huber[103] states that treatment by antitoxin or otherwise has apparently no influence upon the subsequent development of paralysis. The remaining conclusions by Dr. Ransom bear very directly on this point. He continues: "Neutralised mixtures of toxins and antitoxins containing only about one lethal dose or less do not appear to cause paralysis. Antitoxin given 15 to 22 hours after intoxication with doses of toxin not greater than the lethal dose exercises a mollifying influence on the subsequent paralysis. This influence is more evident on smaller doses of toxin than on such as are but little less than the minimal fatal dose. Small doses of antitoxin have no evident effect in diminishing the paralysis." Dr. Ransom further adds: "Transferring these results to practice amongst human beings, we may expect liberal doses of antitoxin given early in the illness to influence favourably the subsequent paralysis, and this beneficial influence is likely to manifest itself not so much on the local paralysis (soft palate, &c.) as on such symptoms as failure of the heart. Severe cases are, *however, likely to be followed by some paralysis in spite of* even large doses of antitoxin." I set aside here purposely the question as to whether the serum treatment can be made responsible for the occurrence of paralysis, as I take it that there is no sort of reliable evidence, either clinical or experimental, in support of this view.

If rest is to be recommended in the hope of preventing the paralysis it is even of still greater importance in the treatment of this complication, both with the view of preventing its extension and in promoting recovery. Nearly all authors are in accord on this question of rest in the treatment of diphtheritic paralysis. On the least suspicion of the slightest implication of the heart absolute rest in the recumbent posture is essential. It may be well not even to let the patient feed himself. If symptoms of cardiac failure arise efforts must be made to counteract it—frequent and regular stimulation, subcutaneous injection of strychnine or sparteine (Comby),[104] ice to the præcordium (Collins),[105] galvanism, &c. Collins recommends faradaism judiciously employed. The value of electrical treatment in warding off alarming symptoms of cardiac failure is shown by a case related by Duchenne,[106] but the patient ultimately succumbed to respiratory paralysis. If the respiratory muscles fail, the faradaic current, inhalation of oxygen, and injection of strychnine may be tried. Respiratory movements may be artificially assisted. Huber also mentions tongue traction. If there is evidence of paralysis of the epiglottis (choking after food) the milk should be first thickened with isinglass (Mackenzie),[107] or the head may be bent backwards in swallowing (Cadet de Gassicourt).[108] If these fail then the tube must be used either through the nose or the mouth. Nutrient enemata may also be employed. During later convalescence massage and galvanism in short sittings and tonic remedies, including strychnine, may be useful. An American author (Mundorff[109]) suggests the treatment of these cases of paralysis by the injection of anti-diphtheritic serum and he relates two cases in support of his views.

Leeds.

THE DIAGNOSIS OF PLAGUE.

By W. C. HOSSACK, M.D. ABERD.,

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IN view of the sinister fact that the long-expected has at last happened and that the British Isles at the time of writing show a focus of indigenous plague in the city of Glasgow, a short notice on the diagnosis of plague from the practical point of view of one who has been working at it in India for the last three years may not be out of place. Two diametrically opposed views are constantly expressed on this subject: that nothing can be more clear, definite, and easy to recognise than plague, and that no disease is more difficult to follow in its multiform varieties. The fact is that both opinions are partly true. To one who has had practical experience of an epidemic of plague the majority of cases are as unmistakeable as fracture of the thigh would be; but a small proportion will remain, to come to a clear decision regarding which may tax to the utmost the powers of diagnosis of the practitioner, as may be gathered from the definite instances which later I will give. On the other hand, a man who is devoid of experience and has seen no plague, unless he is particularly on the alert too often fails as completely to recognise a perfectly typical case as would a herbalist if confronted with an incipient case of locomotor ataxy! The statement may sound alarming and may be regarded as a distinct slur on the profession, but unfortunately it is founded not on a little personal experience in Calcutta but on a survey of epidemics of plague in every country. In going over the records it will be found that almost every outbreak, whether in Oporto, Buenos Ayres, Bombay, or Calcutta, has been ushered in either by a series of unrecognised cases or, if they were recognised at the time, by an outburst of popular denial supported very often by men of distinct standing in the profession A very good example is to be found in the "Report on the Malignant Fever called Pali Plague," 1838 The medical men who investigated the disease on the spot were unanimous and uncompromising in their diagnosis of the disease as "Levantine plague," as it was called then, and their detailed reports are identical with the clinical records of the present epidemics in India But Dr. Ranken, secretary to the Bengal Medical Board, who prepared the general report sums up thus: "The affection of the glands is the sole peculiarity of the Pali disease as an Indian fever, and there are facts which prove that symptom to be no diagnostic or necessary attendant of the plague. The affection of the glands often does not appear in marked cases of the Egyptian pest, and it has been observed, however rarely, in all the types of fever known in Europe, North America, and the West Indies The Pali disease is therefore not plague in the sense of modern authors and teachers, implying its derivation directly or indirectly from Egypt or the Levant by specific contagion, but a fever which local causes produced and circumstances rendered malignant and infectious"

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[89] Allbutt's System of Medicine, vol. vi, 1899.
[90] THE LANCET, Jan. 25th, 1896, p. 226.
[91] Loc. cit.
[92] Diseases of Children, 1898.
[93] Loc. cit.
[94] Loc cit.
[95] Transactions of the International Medical Congress, 1881.
[96] Loc. cit.
[97] Loc cit.
[98] Loc. cit.
[99] Journal of Pathology, July, 1900.
[100] Brit. Med. Jour., vol. ii, 1893.
[101] Ibid.
[102] Ibid., Sept. 8th, 1900.
[103] Loc. cit.
[104] Thérapeutique et Prophylaxie des Maladies des Enfants, 1900.
[105] Loc cit.
[106] De l'Électrisation Localisée, 1872.
[107] Loc. cit.
[108] *Loc. cit.*
[109] Medical Record, 1896.

Many similar instances will be found noted in a paper by Professor W. J. Simpson in THE LANCET of April 14th, 1900 (p. 1063), and without going into detail it may be stated that they have been far from uncommon in Calcutta The latter are better left alone, but it may be permissible to cite a couple of cases as instancing how in their inexperience the very best men may fail to recognise the most clear and well-defined cases In investigating a case of illness I gathered from the contradictory and unreliable statements made by the friends of the patient that they had suspected the illness to be plague. When the case was followed up to one of the leading Government hospitals in Calcutta—one where a special plague ward had just been instituted—it was found to be a case of typical plague pneumonia, but the patient was lying in an ordinary ward with a diagnosis of fever with pneumonia The case had entirely escaped suspicion, though when attention was called to it the diagnosis of plague was made at once and the patient was removed to the plague ward Again, a leading surgeon, a man with an established European reputation, was called to see in consultation a typical case with parotid bubo He confirmed the diagnosis of the attending native physician—erysipelas. Some time afterwards he admitted his mistake and explained that in his inexperience he had thought it impossible for a case of plague to show so much cellulitic œdema round the gland. Similar instances might be multiplied indefinitely, but enough has been said to make it clear that until practical experience has been gained the average practitioner is very liable indeed to let the disease pass quite unrecognised. Unfortunately it is only during the period when he still has this experience to gain that it is so essential for him to recognise cases. It is of little use, comparatively, to recognise cases when an epidemic has got well started, because the almost universal experience in large cities has been that the disease spreads so widely and rapidly that the exhaustive application of preventive measures becomes almost impossible and the eradication of the disease entirely so But if the early cases are at once detected, if no case is allowed to pass unrecognised, then there is every prospect that if strict measures are rigidly enforced the disease may be prevented from gaining a foothold With this consideration in view the necessity will be understood for dwelling at length on clinical facts that to one with any knowledge of the disease will seem ridiculously plain and self evident.

GENERAL CHARACTERISTICS.

The disease may be defined as an acute epidemic septic disease due to bacillus pestis and generally characterised by the presence of buboes or glandular swellings. The word "septic" is used in its general application, regardless of whether the organisms themselves or only their products are circulating in the blood,[1] for the clinical entity called loosely by the word "sepsis" is one of the most universal and characteristic features of the disease and forms an excellent foundation from which to build up a complete picture of it. Think of the general characters of an acute case of puerperal septicæmia and you have an idea of the general characters of the typical case of plague Where buboes are not present—and this may be in a large proportion of the cases, amounting in the epidemic of 1900 in Calcutta to about 30 per cent. in my district—this acutely septic character is the chief basis of diagnosis. Where the septic characters are wanting or are little marked, as they are in a small proportion of cases, the bubo is generally sufficiently characteristic to guide the practitioner. Several varieties of the disease are described, but it must be borne in mind that the different types overlap so much that in individual cases one might be justified in classifying the case under almost any or all of the headings. The types recognised are as follows: (1) the bubonic, (2) the pneumonic, (3) the septic, (4) the intestinal, (5) the meningeal, and (6) the carbuncular. Before taking up these types in detail it will first be necessary to consider the diagnostic characteristics common to all. The onset of the disease is almost invariably sudden, without premonitory symptoms Very rarely I have seen the onset gradual, so that the patient could go about his business for a day or two. The intensity and rapidity of the course of the disease are such that excepting cholera there is hardly any other disease likely to produce so grave a general condition within so short a time The tongue is of considerable diagnostic value The characteristic feature is that while the dorsum is coated, the edges, the tip, and often the median raphe remain pink and clean, sometimes getting red and dry. The coating is at first rather thin and white as a rule. It may be yellowish and in severe cases it generally becomes brown. Whether white or brown the edges and the tip remain typical. When the last epidemic was at its height and cases were very rapidly fatal I several times saw tongues yellowish brown from the very onset, but this is exceptional and the silvery white tongue is the rule The pulse is the most valuable factor in diagnosis Over and over again it will put one on the track when confronted with an abnormal case with very mild general symptoms, for it is invariably fast and out of proportion to the general condition of the patient. A preliminary stage of fulness is sometimes described[2] but it is very evanescent and within a few hours the pulse becomes quick and feeble, 100 a minute in a mild case and 120 in the average case, and frequently up to 140 It is very compressible and it tends to become rapidly dicrotic and running. Intermittency is common and is generally a very fatal sign. Eventually it becomes difficult or impossible to count It is a pulse, in short, that almost from the very beginning indicates the presence of some acutely toxic condition, a pulse that might be expected towards the conclusion of a fatal attack of enteric fever rather than after an illness the duration of which is to be reckoned in hours. Though not so constant a feature as the rapid feeble pulse, muscular incoördination is very common and is of great diagnostic importance. The gait is staggering and drunken and the speech is thick, slow hesitating, blurred, and halting. Sometimes complete aphonia is met with during the illness. Captain Thompson, I M S, records seven cases of development of aphonia after convalescence[3] Early in the disease the face is drawn and anxious-looking and the corners of the mouth are drawn down in an expression of extreme weariness and pain. Later in the disease, or sometimes from the beginning, the face is blurred, heavy, stupid, and expressionless As to the mental condition of the patient, he is as a rule heavy, drowsy, stupid, and incapable of answering questions or of taking an interest in what is going on around him. He will put out his tongue, but only when he is shouted at This condition gradually deepens into stupor and coma. Delirium is generally present, especially at night, commonly it is low and muttering, but sometimes very violent The very early onset of the stupor or delirium is a valuable characteristic At the same time it must be remembered that it is by no means constant I have frequently heard the statement made: "Oh, it cannot have been plague, for he was conscious all along" I recall a case where the duration of illness was only 24 hours, and there was just time for the femoral bubo to begin to appear before the attack ran its course. 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[1] Vide Hamilton's Pathology, vol. II., p. 1712.
[2] Condon, The Bombay Plague, 1900, p. 73.
[3] General Gatacre's Plague Report, 1896-97, p. 65.

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THE CARBUNCULAR TYPE.

This type of plague is rare. In the last epidemic I only saw one case of it and in the previous epidemic only three cases. What struck me in most of those cases which I did see was the superficiality of the swelling and the fact that the induration was marginal rather than deep, also there were no deep excavating sloughs, but only a shallow widespread sloughing of the skin. Dr. K. C. Bose, C.I.E., has remarked the same thing. At the same time I have seen very deep excavation of the thigh in Calcutta and another huge excavation in the lumbar region in Poona. Captain Evans got cultures from a carbuncle on the face, but does not describe it. Our knowledge of this type is at present deficient, and our diagnosis must rest mainly on probability and the excessive gravity of the symptoms compared with the size of the carbuncle. One case of this type was seen by a number of medical men, the diagnosis of plague made by the district medical officer having been questioned. At least one of those gentlemen declared the man to be suffering from simple boil on the buttock, and all came to the conclusion that it was not plague. Nevertheless the man died within 24 hours.

DISEASES LIKELY TO BE CONFOUNDED WITH PLAGUE.

It must, in the first place, be remembered that there is hardly one of the specific fevers in which glandular swellings do not occasionally occur even if rarely and that in an epidemic of no matter what disease there is the liability to have abnormal and malignant cases of very short duration that approximate plague in general characters: for example, a case of measles with meningitis. In such cases probability must be taken into account. I shall only mention those diseases which have actually been mistaken for plague in Calcutta or have at least caused difficulty.

Puerperal fever.—Plague in pregnant women almost invariably causes abortion or premature delivery. The point to be noted, then, in puerperal fever is whether the fever has come on before the onset of labour: such a case must be looked upon as suspicious. Plague under such conditions is very liable to be overlooked.

Septicæmia.—In septicæmia the diagnosis is bacteriological or by probability.

Pyæmia.—I recall a case where even at the post-mortem examination the diagnosis was not clear whether it was pyæmia or plague, incipient pus formation being evident in the gland substance of the mamma and about the glands of the neck. Cultures settled that it was plague. Another case was diagnosed in hospital as pyæmia and sloughing of the scrotum, but I still maintain that it was plague for the following reason. With the onset of fever came a right axillary bubo. On the third day glands appeared in the left inguinal region and swelling of the left testicle. By this time the axillary bubo had almost entirely subsided. This rapid subsidence I have seen more than once in cases of multiple bubo, but it is highly improbable that a pyæmic swelling in a case like this, which went on to a fatal termination, would thus resolve.

Small-pox.—I have once diagnosed small-pox as plague and have twice seen it thus diagnosed. The advent of the eruption, of course, made the correct diagnosis clear.

Influenza.—The more malignant forms of influenza are extremely difficult to distinguish from plague without tubes for the leading characteristics of both diseases are the same. In both nervous disorders are predominant and in both the pneumonia is lobular and ill-defined; sweats are highly illness was only 24 hours, and there was just time for the femoral bubo to begin to appear before the attack ran its course. Yet the patient, a child-wife, aged 13 years, put out her tongue and told me her name three minutes before she breathed her last. Her feet and hands were already cold, and she was *in articulo mortis.* Another case was seen on the sixth day of illness in the following condition: there was a large left axillary bubo, the pulse was 150, the temperature was 103° F., the breathing was stertorous, and liquid râles were heard from the bedside. Yet the patient was sufficiently clear mentally to recognise me as the plague medical officer, to make a last pitiful effort at concealment with the words, "I am all right; I am not ill at all," and to refuse to allow me to examine his chest. This was within a few hours of his death. Again I have seen an English-speaking Eurasian solicitor on the fifth day of his illness within 12 hours of his death perfectly conscious and rational. The femoral gland had begun to subside and his condition was such that the medical attendant thought the attack done with and demurred strongly when I gave an absolutely bad prognosis based on symptoms of pneumonia in both apices. The daughter of the patient was taken ill on the same day as the father and she died at the same hour, yet 12 hours before death she had been conscious and rational and her speech was unaffected, and the mother, complaining that she could not keep her in bed, asked me to talk to her and to scold her, while the sign of approaching death was written plainly in a distinctly intermittent pulse of 120. In this case, too, the femoral gland was beginning to subside and had lost its tenderness. Such cases are rather exceptional, but I have dwelt on them because it seems very generally to be held that a plague patient must necessarily show cerebral derangement and that if it is absent the case cannot be plague. This contention was the turning-point of a will case in Bombay. Conjunctival congestion is a very fairly constant feature. The whites of the eyes may look quite red, while at times they may only be muddy. It is of value particularly where one has to diagnose a case from the history solely. The temperature in plague is so irregular that it is of very little diagnostic value. It tends to be very high (from 103° to 105° F.) but it is liable to irregular remissions particularly on the second or the third day. Recovery is generally by rapid lysis, rarely by crisis. The normal is generally reached from the fifth to the seventh day.

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[6] Major Lyons, I.M.S., p. 78, V. (1).

[7] An Undescribed Form of Plague Pneumonia, Brit. Med. Jour., February, 1900; Journal of Tropical Medicine, 1900.

[8] Report of the Outbreak of Plague in the Jullunder and Hoshiapur Districts of the Punjab, 1897-98, p. 147.

[9] Gatacre's Report, p. 128.

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I have called this cerebral in preference to meningeal, as in so many cases where the symptoms would have led to the expectation of finding at the post-mortem examination gross meningeal or cerebral lesions none have been present Sometimes, however, distinct signs of meningitis are present, according to Captain Thompson 0 66 per cent. He says: "The frequent presence of cerebral disturbance and the rarity of true meningeal inflammation would seem to prove that the symptoms depend on toxæmia."

THE CARBUNCULAR TYPE

This type of plague is rare. In the last epidemic I only saw one case of it and in the previous epidemic only three cases What struck me in most of those cases which I did see was the superficiality of the swelling and the fact that the induration was marginal rather than deep, also there were no deep excavating sloughs, but only a shallow widespread sloughing of the skin Dr. K. C. Bose, C.I E , has remarked the same thing. At the same time I have seen very deep excavation of the thigh in Calcutta and another huge excavation in the lumbar region in Poona Captain Evans got cultures from a carbuncle on the face, but does not describe it Our knowledge of this type is at present deficient, and our diagnosis must rest mainly on probability and the excessive gravity of the symptoms compared with the size of the carbuncle. One case of this type was seen by a number of medical men, the diagnosis of plague made by the district medical officer having been questioned. At least one of those gentlemen declared the man to be suffering from simple boil on the buttock, and all came to the conclusion that it was not plague. Nevertheless the man died within 24 hours.

DISEASES LIKELY TO BE CONFOUNDED WITH PLAGUE.

It must, in the first place, be remembered that there is hardly one of the specific fevers in which glandular swellings do not occasionally occur even if rarely and that in an epidemic of no matter what disease there is the liability to have abnormal and malignant cases of very short duration that approximate plague in general characters: for example, a case of measles with meningitis In such cases probability must be taken into account. I shall only mention those diseases which have actually been mistaken for plague in Calcutta or have at least caused difficulty

Puerperal fever—Plague in pregnant women almost invariably causes abortion or premature delivery. The point to be noted, then, in puerperal fever is whether the fever has come on before the onset of labour such a case must be looked upon as suspicious Plague under such conditions is very liable to be overlooked

Septicæmia—In septicæmia the diagnosis is bacteriological or by probability.

Pyæmia.—I recall a case where even at the post-mortem examination the diagnosis was not clear whether it was pyæmia or plague, incipient pus formation being evident in the gland substance of the mamma and about the glands of the neck. Cultures settled that it was plague Another case was diagnosed in hospital as pyæmia and sloughing of the scrotum, but I still maintain that it was plague for the following reason With the onset of fever came a right axillary bubo On the third day glands appeared in the left inguinal region and swelling of the left testicle By this time the axillary bubo had almost entirely subsided. This rapid subsidence I have seen more than once in cases of multiple bubo, but it is highly improbable that a pyæmic swelling in a case like this, which went on to a fatal termination, would thus resolve

Small pox—I have once diagnosed small-pox as plague and have twice seen it thus diagnosed. The advent of the eruption, of course, made the correct diagnosis clear.

Influenza.—The more malignant forms of influenza are extremely difficult to distinguish from plague without cultures for the leading characteristics of both diseases are the same. In both nervous disorders are predominant and in both the pneumonia is lobular and ill defined; sweats are highly characteristic of influenza, but may not infrequently be seen in plague.[10]

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[6] Major Lyons, I M S p 73, V. (1)

[7] An Undescribed Form of Plague Pneumonia, Brit. Med Jour., February, 1900; Journal of Tropical Medicine, 1900.

[8] Report of the Outbreak of Plague in the Jullunder and Hoshiapur Districts of the Punjab, 1897 98, p 147

[9] Gatacre's Report, p. 132.

Cerebro-spinal meningitis.—This, like the last-mentioned disease, I have also mistaken for plague. Meningeal symptoms are common in plague, but actual meningitis is rare. Hence one would not expect the extreme retraction of the head seen in cerebro-spinal meningitis. The symptoms also would not probably be relieved by lumbar puncture.[11]

Diphtheria and angina.—If the mouth can be opened there should be no difficulty. I saw a case on H.M.S. *Eclipse* of angina where the swelling of the submaxillary and cervical glands was so marked that the throat could not be examined, and owing to the severity of the general symptoms the case was at first looked upon as being very suspicious.

Erysipelas.—It must be remembered that diffuse cellulitis often complicates plague. I have seen the hand, the arm, and the shoulder affected. In another case when the left parotid bubo was subsiding there started from the right parotid a very œdematous cellulitis that passed over the vertex above, closed the right eye completely, and passed completely round the chin to the left side below.

Measles.—Twice I have seen morbilliform eruptions. They appeared about the tenth day when the patients were becoming convalescent. In one case this eruption became eventually hæmorrhagic.

Gonorrhœa.—As a rule there is little difficulty with this condition, but the following extraordinary case sent me completely astray. I went to examine a case reported by a very reliable practitioner as plague. To my surprise I found the patient sitting up in bed, talking freely and apparently free from fever. His appearance and symptoms seemed so incompatible with plague that when I had verified the presence of an inguinal bubo I naturally asked as to any history of gonorrhœa. The answer was to unwrap a penis swimming in pus. The case seemed clearly to be one of gonorrhœal bubo; either the medical officer had made a mistake or, what seemed more likely, the wrong patient had been shown me. However, within 24 hours of my visit the man died. On subsequent visits I got the true history of the case. The man after repeated contact with plague cases had suddenly got ill, a bubo developed, and for four days before my visit he had very high fever and delirium. On the morning of the day on which I saw him the temperature dropped for the first time and the symptoms subsided with the fever. In the evening the temperature again rose to 104° F., he became delirious, and on the next day he died. The urethral discharge was due to a chronic gleet which he had had for years and which got better and worse.

Syphilis.—Plague complicating syphilis is not uncommon. In Poona a man had been in the segregation camp for three or four days with a large hard sore on the penis and a couple of buboes, when suddenly he developed high fever and grave symptoms. I sent him to hospital as suffering from plague and the diagnosis was confirmed there. I have a history of an exactly similar case.

Mumps.—Occasionally mild cases with parotid swelling are presented for diagnosis, which may be very difficult to distinguish from mumps unless taken in connexion with previous and subsequent cases. The most marked case of this which I have had was that of a groom, aged 30 years, who was taken ill on Feb. 8th, 1900. Two days later he was seen walking about with two parotid buboes, a temperature of 101° F., and a pulse-rate of 120. He walked, talked, and moved about with the greatest freedom. On that same day he did his ordinary duty in riding horses. On the next day both glands had almost disappeared and with the exception of a little yellowish coating on the back of the tongue he was all right. There had previously been suspicious deaths in this collection of huts and in the next two months there were numerous cases. Most observers believe such cases to be plague, but it has yet to be proved.

Malaria.—This generally causes little difficulty. The edges of the tongue are not clean. In one case the patient had only four days previously recovered from an attack of malaria and was thin and anæmic. The temperature was 103° F., the pulse was 120, and the white tongue coating covered the tip and edges of that organ. No glands or pneumonia could be made out and the probable diagnosis seemed to be malaria; but as rats had been found dead in the house, and as his master wished it, he went to the hospital. He developed a bubo there.

Cerebral embolism and scrofulous glands.—These conditions have once caused difficulty.

Captain Thompson under "Diagnosis" notes many of the diseases given, and in addition mentions the following: epilepsy, cerebral apoplexy, uræmic coma, ulcer with sympathetic glands, diarrhœa, debility, marasmus, and phthisis. Major Lyons mentions relapsing fever, typhus fever, and alcoholic poisoning.

BACTERIOLOGICAL DIAGNOSIS.

Undoubtedly this is the great stand-by in diagnosis of plague, but this paper is already sufficiently long without taking it up. Moreover, in Calcutta the conditions of work have been such that we have had to work without the aid of either post-mortem examinations or cultures. The following practical points may, however, be mentioned. Puncture of a gland for diagnostic purposes is to be avoided unless in cases almost certainly fatal, for there is a risk that a simple case may be transformed into a septicæmic case. Cultures from the blood, the finger-tip, are not to be expected unless in virulent cases or shortly before death. Owing to the almost insuperable difficulty of separating the bacillus from mixed cultures there is a possibility of failure in an attempt to cultivate it from sputum, owing to the growth of ordinary mouth organisms. Major Lyons, however, says that "the presence in all cases of immense numbers of plague bacilli in the sputum, from which cultures can be obtained, renders the diagnosis certain." Judging from the results obtained in rats it is advisable that post-mortem cultures should be made, if possible, within 24 hours after death. The bacillus is not to be found in the pus of a bubo.

Calcutta.

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[10] Hossack: Mixed Infection in Houses of Plague and Influenza, Brit. Med. Jour., Oct. 27th, 1900.

[11] Ibid.

LANDRY'S PARALYSIS.

BY P. RHYS GRIFFITHS, M.B., B.S. LOND.,
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OPPORTUNITIES for observing the very interesting condition of acute ascending paralysis occur very rarely and it is for this reason that I wish to record the following case.

The patient was seen in consultation with his medical attendant, Dr. D. E. Powell of Cardiff. He was a tall, well-developed man, of dark complexion, 32 years of age. He was engaged as a railway guard. His wife told me that for a fortnight before the attack came on he had not been well. There were no special symptoms, but he complained of weakness and general malaise. He sent for his medical attendant on account of severe pains in the legs. At the time there was an epidemic of influenza and he was treated for this disease, but his condition gradually becoming worse he was seen by his medical attendant's partner on the evening before I visited him. They diagnosed Landry's paralysis and very properly expressed a grave prognosis.

When seen by me the patient was extremely ill and I was not able to make so thorough an examination as I should have desired. He was sitting propped up in bed supported by a friend and his face expressed considerable distress, but his mental functions were unimpaired. His breathing was very short and he told me that he was choking and that he was unable to swallow. He was given some milk and brandy, which he was quite unable to swallow.

On examination I found that his lower extremities were completely paralysed. His abdominal muscles were flabby and evidently paralysed. There was some slight movement of the chest, but the breathing was mainly diaphragmatic. There was well-marked paresis of the upper extremities and he was unable to control the movements of his head. There was no paralysis of the muscles of the face or of the muscles of the eye. His deglutition was seriously affected. Cutaneous sensibility, though not abolished, was notably blunted. His power of localising light tactile impressions was much impaired. No observation was made with regard to temperature or electrical skin reactions, nor was any attempt made to ascertain the electrical condition of his muscles. The sphincters were said not to be affected. The exact duration of the paralysis was uncertain, but as far as I could ascertain it must have been two or three days. It began in the legs and rapidly spread upwards. The pulse was rapid and feeble. His temperature had generally been about 100° F. He died a few hours after he was seen by me, the cause being stated to be asphyxia. I was unfortunately not able to secure a post-mortem examination.

In several of our text-books it is stated that Landry's paralysis is a rapid general motor paralysis, usually starting in the lower extremities without any very marked implication of the sensory apparatus. In looking up the notes of the historical case which occurred in June, 1859, upon which the definition of this disease is in the main based, it is stated that the senses of pain and temperature and the electrical sensibility were not affected, but that the muscular sense was lost in the feet and toes and tactile sensibility was diminished in the distal segments of the limbs and completely lost over the tips of the fingers. Landry states further that "sensibility and motility may be equally affected." Tactile sensibility was very markedly and very generally affected in my case.

I think it highly probable that the disease was the result of influenzal toxæmia. Dr Powell had no doubt that he was dealing with the ordinary form of influenza for some days antecedent to the onset of the paralysis.

Various other causes are given—e g., exposure to cold and alcoholic excesses. It has been attributed to the poisons of specific fevers, such as small-pox, typhoid, measles, diphtheria, syphilis, and septicæmia It occurs more often in men than in women, the ratio being three to one. It is a disease chiefly of adult life. The onset may be abrupt or it may be preceded by a variety of premonitory symptoms, mainly of a sensory character. Occasionally they may also be motor or the disease may be ushered in by a feeling of general malaise. The feature which overshadows everything else is the progressive diminution of muscular force, the finer movements disappearing first to be followed by the grosser. Although the feet are generally implicated first, yet this order may be varied by implication of the upper before the lower extremities. In about one-half of the cases the cranial nerves are affected. The nerves most often affected are those supplying the muscles of speech and deglutition. In some cases the soft palate alone is, or the soft palate and the epiglottis are, paralysed; in others—and this was a marked feature in my case—the pharynx and the œsophagus are also involved. Facial paralysis has been observed and also paralysis of the extrinsic and intrinsic muscles of the eye. Dr. Judson Bury states that the plantar and other superficial reflexes are probably lost. In my case there was no doubt that these had disappeared. The diaphragm is said to be generally involved before the intercostal muscles. I feel quite sure that this was not so in my case. The actual death-rate I do not know, but it is certainly very high. Dr. Judson Bury states that in 60 per cent. of the fatal cases death occurred before the tenth day; in 40 per cent. it occurred in two, three, or four weeks; occasionally it is fatal in two days

The pathology of this disease is at present obscure. In some cases no changes have been noted in the cord or nerves; in others the changes were those usually met with in myelitis; while in a further set neuritis of the peripheral nerves has been the main feature.

Cardiff.

ICHTHYOL AND ITS USES IN SOME SKIN DISEASES.

BY ALEXANDER BROWNLIE, M.D. EDIN.

IN publishing notes of some typical cases of eczema and acne treated with ichthyol I would point out that the results have been obtained in private practice, and not in hospitals, where patients have the advantage of trained nurses and resident physicians.

ECZEMA

Ichthyol, whether administered internally or applied externally, is, in my opinion, one of the most efficient agents in our hands for treating eczema in all its stages. The cases now quoted to show its value are not taken in any prescribed order but are selected at random from my notebook. The first case which I quote is the first in which I employed ichthyol, and as at that time my knowledge of the substance was limited my notes are naturally fuller of detail than in subsequent cases.

CASE 1.—The patient was a man, aged 33 years, married, with five children. When he was 16 years of age he had severe hæmorrhage during an attack of typhoid fever. He was of strumous constitution and had suffered from eczema for two years before seeing me in February, 1895. His face and neck were acutely eczematous, weeping, painful, and itchy. On the flexor aspects of his arms and thighs there was a drier form of eczema. His tongue was furred, he was constipated, and he had no appetite. I ordered light diet and gave internally a mixture containing nux vomica, liquor arsenicalis, and chiretta. The following ointment was applied externally twice daily: salicylic acid, five grains; ichthyol, 30 minims; resorcin, 20 grains; powdered boric acid, 30 grains; powdered starch, 60 grains; and vaseline to make up two ounces. On Feb. 17th there was no improvement and the itching was very bad; the ointment was also said to cause pain. I therefore stopped it and used the following: subnitrate of bismuth, two drachms; oxide of zinc, one drachm; ichthyol, 30 minims; and vaseline to make up two ounces. On the 21st there was still much itching. On the neck large brown epithelial scales were beginning to peel off. On the 26th, the arms and legs being dry, I prescribed 20 per cent. ichthyol paint in distilled water, which relieved the itching better than anything previously tried; 15 grains of trional were also given each night. On March 14th the neck and face showed some improvement, the exudation and pain being less. I now gave two and a half grains of ichthyol in a pill three times a day after food. On the 29th there was a distinct improvement. There was no more exudation and there were no papules on the face. For washing his face the patient used 10 per cent. ichthyol soap, and the ointment was changed to simple 4 per cent. ichthyol lanoline salve. By the middle of April the arms and legs were distinctly better, but the face and neck still showed some redness and a few papules. In May the patient was sent to Harrogate and he returned greatly improved in general health. The only symptoms of eczema now remaining were a slight scaliness of the neck and itching in parts which were quite healed. I therefore sent him to Dr. Allan Jamieson of Edinburgh, who prescribed a carbolic acid and spirit lotion with a weak ichthyol and resorcin ointment. The itching was not relieved at once but it gradually wore off. Any slight recurrence during the next two years was quickly subdued by 5 per cent. ichthyol salve. For the last three years he has had no more attacks.

CASE 2.—This patient was an unmarried man, 26 years of age, who was suffering from eczema of the leg, not varicose. Above the ankle there was a large red itchy patch, showing serous exudation. The treatment was commenced on Feb 21st, 1895. The part was directed not to be washed with soap but with oatmeal water. Ichthyol in five grain doses was given internally twice daily, and the following ointment was applied externally: ichthyol, 30 minims; subnitrate of bismuth, two drachms; oxide of zinc, one drachm; powdered starch, two drachms; and vaseline to make up two ounces. On March 1st the patient's condition was much improved. There was now no pain and no weeping, but the part was dry and scaly. A lotion containing 50 minims of ichthyol in an ounce of water was applied twice a day. On the 14th the skin was normal and the patient considered himself to be quite well. He has never been troubled since.

CASE 3.—This patient was a man, 68 years of age. He had a slight tendency to gout, but beyond this there was nothing particular either in his own history or in that of his family. The treatment was commenced on May 5th, 1899. There was eczema of the right leg, which from the knee to the toes was swollen to twice its usual size, pitted on pressure, was everywhere red, inflamed, and weeping, and in many places was covered with crusts, which on being detached left an exuding red surface On the right hand and arm there were small patches of dry and scaly eczema. Complete rest was ordered with elevation of the leg. A five-grain ichthyol pill was given thrice daily after food, and a mixture containing strychnine and digitalis to improve the circulation was ordered. The following ointment was applied twice a day: subnitrate of bismuth three drachms; ichthyol, 24 minims; and oxide of zinc ointment to make up two ounces On the 22nd the swelling, pain, and weeping were reduced, and large brown scales were detachable. The arm and hand were treated with 10 per cent. ichthyol lanolin salve. On June 10th the swelling was almost gone and the leg was in a dry and scaly condition, except at a small spot on the back. The following ointment was then applied: ichthyol, one drachm; ammoniated mercury, 10 grains; resorcin, 20 grains; vaseline, one ounce; and lanoline to make up two ounces. On the 19th the leg was normal in size and it was dry. The patient was now allowed to walk. On July 30th the leg was quite well. This was a bad case, which had already been under other treatment for six months. The constant rest was helpful, but the relief afforded by the action of the ichthyol on the dilated vessels was the direct means of cure.

CASE 4.—This patient was a married woman, 60 years of age, who had for years suffered from recurrent attacks of eczema. Any nervous excitement or worry brought on an attack. Both knees and wrists were scaly, red, and itchy, whilst the lower part of the abdomen and vulva and the upper part of the thigh were red and painful and exuded a copious serous discharge. The treatment was commenced on Oct. 30th, 1899. The abdomen being very painful I applied at first simply a dusting powder of starch and bismuth with a little boric acid. On Nov. 9th I prescribed 15 grains of ichthalbin thrice daily in cachets. On the 17th there were much less pain and exudation. I now ventured to apply 3 per cent ichthyol lanoline salve which answered admirably; the itching was relieved and the skin soon resumed a normal appearance. On the legs and arms the following ointment was used twice daily: ichthyol, one drachm; ammoniated mercury, 10 grains; oxide of zinc, two drachms; resorcin, 10 grains; vaseline, six drachms; and lanoline to make up two ounces. An improvement was manifest from the first, and recovery followed in six weeks.

In the acute cases no washing with soap was allowed, but with warm oatmeal water instead. When the parts were dry 10 per cent. ichthyol soap was used. No special diet was imposed. Ointments were not merely smeared over, but were gently rubbed in and the parts were covered with lint, linen, or silk, no cotton or flannel being allowed to touch the surface. In cases of eczema of the face I have also used with benefit zinc-ichthyol salve muslin, but it is rather difficult to keep applied.

ACNE.

Ichthyol is particularly beneficial in this disease, both in acne vulgaris and acne rosacea. In the former strong external applications can be borne, but in the latter much weaker strengths must be used. The best results are obtained when external and internal treatment are combined, and in some cases of acne rosacea in which the skin is too thin and irritable to bear even weak solutions the internal administration of ichthyol alone with steaming will suffice to effect a cure. My general plan of treatment is to begin with five grains of ichthyol thrice daily after food, increasing to 10 grains. Every night and morning the face is steamed for 15 minutes and then washed with ichthyol soap made into a lather and allowed to dry on, which is then gently washed off with water. After each washing, if it can be borne, ichthyol salve (often combined with ammoniated mercury) is applied. In acne vulgaris, after steaming strong sulphur and ichthyol soap is used, with brisk rubbing by means of a flesh-glove. The diet is regulated. Ichthyol itself relieves mild cases of constipation, but if it does not I give a compound pill of iridin and euonymin or podophyllin.

CASE 1.—This patient, a married woman, 46 years of age, had been treated for acne rosacea for six years. When she was first seen by me in February, 1897, her face was red all over and the smaller blood-vessels were very prominent. The nose, the brow, and the chin were covered with inflamed sebaceous glands, partly papular, others pustular. Her face was painful and she could not go out without a veil. She was placed on five grains of ichthyol thrice daily, and the following ointment was applied twice daily: ichthyol, 25 grains; ammoniated mercury, five grains; and vaseline and lanoline, of each half an ounce. Improvement was perceptible from the first and in a fortnight it was distinct. The amount of ichthyol was now doubled and extract of nux vomica was given before meals. In another month there were scarcely any inflamed glands and the redness was confined to a few dilated vessels on the cheeks. Two months later there were no traces of acne and the patient has remained free from it ever since. This case had resisted all remedies for six years; improvement commenced immediately that ichthyol was given, and to ichthyol I unhesitatingly give the credit of the cure. A similar condition existed in this patient's daughter, aged 24 years; it yielded to ichthyol in an equally satisfactory manner.

CASE 2.—This patient was a female, 17 years of age, who suffered from acne vulgaris. Her face was covered with inflamed sebaceous glands and "blackheads." Constipation was also complained of. Steaming, brisk rubbing with flesh-gloves, and the use of sulphur soap were prescribed. Internally saline purges were given. As this treatment did not do the good that I expected I ordered 10 per cent. ichthyol soap and the following ointment to be rubbed into the skin night and morning: ichthyol, 72 minims; resorcin, 10 grains; vaseline, two drachms: and lanoline to make up one ounce. Internally five grains of ichthyol were given thrice daily and on every second night a compound iridin pill. Improvement was gradual but sure and in three months the cure was complete.

OTHER APPLICATIONS OF ICHTHYOL.

I have also used ichthyol with success in many other diseases, such as endometritis, in which I have had some startling results. Although it does not come within the proper scope of this paper I should like to mention one case of endometritis which under the ordinary routine practice would have involved the scraping of the uterine mucous membrane, but which was cured by continued nightly applications of glycerine-ichthyol tampons in the proportion of two drachms of ichthyol to one ounce of glycerine. This patient had had two mucous polypi removed from the cervix without relieving the pain, and she was therefore very reluctant to undergo another operation. The ichthyol treatment was persisted in for five months, and ergot, nux vomica, and potassium chlorate were prescribed at the menstrual periods. The result has been highly satisfactory, as all pain and feeling of "bearing down" are gone and the patient feels quite well again. I had a similar case in an unmarried woman with equally good results.

Recently I have used strong solutions of ichthyol to paint over sprains. The swelling was quickly reduced in the few cases in which I have tried it.

CONCLUSIONS.

My experience has been that from 2 per cent. to 5 per cent. ichthyol applications are best in acute forms of inflamed skins and from 5 per cent. to 10 per cent strengths in more chronic, drier conditions. In acne vulgaris anything up to 25 per cent.—namely, between 10 per cent. and 25 per cent.—is useful. In all cases the internal administration of the drug is an assistance. I believe that ichthyol taken internally has a direct influence on the skin and is most probably excreted by it. Moreover, the taking of ichthyol internally increases weight, and this applies more particularly to weakly, strumous children.

The one disappointment which I must record is that itching is not relieved as quickly as one might expect, certainly not as quickly as the pain is relieved. Patients express gratitude for the feeling of comfort experienced, but the itching soon returns. The itchiness does indeed disappear after a time, but it is always the last symptom to go.

In prurigo and pruritus vulvæ or ani I have not found much benefit to result from the use of ichthyol, particularly in those cases where there is no known organic cause such as diabetes, ulcus cervicis, or anal fissure. I have tried ichthyol in 11 such cases and in only one have I had satisfactory results. This patient was a pregnant woman with pruritus vulvæ.

When prescribing ointments I always advise the patients to use their oldest under-linen as ichthyol has a staining effect, although it is stated that if quickly washed in warm water any clothing thus stained is made quite clean again.

Ichthyol, of course, is not applicable to every case of eczema or acne, neither do I claim for it a specific action, but it is undoubtedly a useful drug in these diseases.

Redcar.

FOURTEEN AND A HALF HOURS' ARTIFICIAL RESPIRATION IN A CHILD ONE WEEK OLD; RECOVERY.

BY GEORGE E. KEITH, M.B., C.M. EDIN.

TOWARDS the end of August I delivered a lady in the country of a healthy boy weighing six and a half pounds. The birth was premature, but only by three weeks. The child was well formed in every respect and, with the exception of a very long and tight foreskin, there was nothing to remark about him. As there was evidently much difficulty in passing water, the urine taking a long time to come and the child screaming and kicking, circumcision was advised as early as possible. This was agreed to, but, owing to the mother having a very severe bilious attack on the day after the confinement and as her milk did not agree with the infant, the operation was postponed from day to day. On the morning of August 27th, one week after birth, the operation was performed. The child did not breathe well under the chloroform and he lost more blood than is usual. He slept for some hours afterwards and awoke in the afternoon looking quite natural. He was then put to the breast, but did not seem to care to take much nourishment. He was quiet until 9 P.M., when he became very wide awake and screamed for two hours. There was no trouble with the urine and he had passed plenty since the morning. At 11 P.M. he became quiet and on being put to the breast took a little milk, but he did not seem to care to take much. He was now very sick and brought up seemingly all the milk that he had taken. Immediately afterwards he went to sleep. Up to 3 A M. the nurse had looked at him several times and each time she found him sleeping heavily. At 3.15 A.M the mother asked the nurse if the infant had not better be roused and put to the breast, and on the nurse picking him up she noticed that his breathing was laboured and that his face was cyanosed. She at once brought him to my room and on seeing him I thought that he must have had a convulsion, but whatever had happened he looked alarmingly ill. I sent her back to the mother's room telling her to give the baby some weak brandy and-water, and hurriedly putting on my clothes I went to the other room, where I found a still more serious state of things, as the breathing of the child stopped entirely a few seconds after I arrived. To all appearances the child was dead On listening to the chest I found the heart still beating, so I at once commenced artificial respiration. Within two or three minutes I was able to desist as the natural breathing was resumed, and after watching the child for ten minutes I returned to my room. In a few minutes I was again sent for, again to see an apparently dead child. Artificial respiration was re-commenced, and after 20 minutes the natural breathing was established, but only to cease in a very few minutes. The heart was now very rapid and the colour was, if anything, worse, and though I began artificial respiration again it was more from a sense of duty than from any expectation of bringing the child to life. Very soon after commencing the artificial respiration for the third time the heart seemed as if it were going to fail as the beats dropped from about 200 to well under 100 to the minute, the exact number being impossible to count as I could only listen with my ear to the chest very hurriedly. I think this slowing of the heart's action was due to performing the forced respirations too seldom to the minute, as on moistening the lips with a good deal of strong brandy-and-water and increasing the number of respirations to about 25 to the minute the heart regained its rapidity. After this I never slowed down to less than 20 to the minute. Hour after hour this monotonous business went on and hour after hour I became more and more convinced that it was all wasted labour and that in spite of all my endeavours the child would ultimately die The first gleam of hope came after it had seemed that all hope had gone, for by noon with every forced expiration and inspiration there came a most ominous creak, showing that the lungs were filling up with fluid and that if this went on increasing the end could not be far off. By 12 30 midday this sound had increased in the most alarming manner and more and more force was required to drive the air in and out of the lungs. The heart was again beginning to show signs that it was being asked to do more work than it was able, the sounds becoming weak and the beats irregular. As early in the morning as possible I had wired to London for cylinders of oxygen to be sent down by passenger train and most fortunately the first arrived just at this time. A slight stream of oxygen was at once directed against the child's nose and mouth, the end of the tube being held a few inches away. Within 15 minutes there was a decided change for the better; the colour of the face lost its earthy look, the moist sounds noticed with the forced respirations gradually died away, and the heart sounds increased in strength and regularity, but still there was no attempt at natural breathing. During all those hours I kept the child warm, as well as possible, by laying him on a blanket over a rubber hot-water bottle which was changed frequently and by covering the chest with a blanket, at least as much as was possible. For nourishment it was only possible to moisten the lips with brandy-and milk, as there was no attempt made to swallow and I was afraid of fluid going into the air-passages if put into the mouth in larger quantities. There was no further improvement until 3 30 P.M., more than 12 hours after the commencement of the illness, when a very feeble attempt at inspiration was noticed. This happened at first every minute, but the intervals got shorter and shorter until at 4 30 P M. the child was inspiring entirely. Still there had been no attempt made at expiration, but the difference which the last hour had made was so marked that I began to hope that there was a slight chance of saving the child's life. The normal expiration began to return about 5 P.M., and in exactly the same manner as the inspiration, and at 5 45 P M. I was able to cease all artificial means of inflating the lungs—exactly 14½ hours from the onset of the symptoms. By now the condition of the child was pitiable. The chest and the upper part of the abdomen resembled raw beef, though the skin was not broken, the arms were red, excoriated, and marked all over with angry lines from the violent use to which they had been put. He was quite unconscious, there was no pulse at the wrist, the heart beats were very rapid, and the breathing was of the most shallow description. The skin covering the anterior fontanelle was depressed and every now and again there was a peculiar contraction of the muscles of the lower jaw. From the commencement of the illness the pupils had been contracted, but not very markedly so, and this condition continued for some days In the afternoon, as I was getting exhausted from the prolonged manipulation required for the artificial respiration, and not knowing how long it would be necessary to continue it, I wired for assistance from town, and though this arrived too late to relieve me of the manipulation there was plenty of work to do in watching the child. After such a terrible experience I felt that a medical man must be in constant attendance on the child day and night About 10 P.M. the child became very cold and I had him wrapped up in cotton-wool. The oxygen was kept constantly playing on his face until midnight, when it was stopped for an hour and a half, but it had to be begun again as the child became very cyanosed, and as immediate benefit was at once noticed the administration did not again cease for many hours. After the normal breathing commenced again he was fed by a spoon with brandy-and water and milk-and water alternately, 20 drops of the former being given at a time, but as there was much difficulty in getting him to take the milk-and water and none in taking the brandy-and-water, the latter was alone given for the next 15 hours; it was given every hour. The breathing was so shallow all through the night that the closest attention was required to say whether the child was breathing or not. At 3 A M. the temperature was 103 6° F. This was the first time that it had been taken. One grain of antitoxin was given and this brought the temperature down two degrees in a couple of hours. About this time the child appeared to become conscious as he gave a few feeble little cries, the first sound he had made for many hours. The bowels were moved early on the morning of August 30th, and as the motions were most offensive and unhealthy one grain of grey powder was given The child remained much in this state all day. I had him put to the breast in the afternoon, but he could not get a proper hold of the nipple so we had to continue feeding him with the brandy-and-water. The temperature did not rise above 102° all day and the heart beats gradually slowed down to 170, and it was now possible to feel that there was a pulse at the wrist, though it was not strong enough to count the beats. The oxygen was still being continuously used As night came on the child did not seem so well; his face became pinched and white, the pulse could no longer be felt at the wrist, the heart beats increased in rate and decreased in strength, there was marked Cheyne-Stokes breathing, and the temperature rose in a most alarming manner. At 1 A M on August 31st the temperature had reached 105°. The child was sponged with tepid water and one grain of antitoxin was given. This quickly brought the temperature down, until at 4 A M. it was 103 8°, when another grain of antitoxin was administered. This had the desired effect, and by 6 A M the temperature had fallen to 101° and it never again rose above that point. Thinking that the oxygen might be helping to keep the temperature up its continuous administration was stopped and it was only given when it was thought necessary, judged of either by the colour or the breathing. By 9 A M. the child was much better. The pulse was quite regular and countable at the wrist, the colour was better, and the breathing, although still shallow, had quite lost its irregular nature. He seemed out of danger, but after the fright that he had given us I still considered it necessary to have him watched continuously by a medical man. He was now screaming incessantly and he seemed to have much colic. The motions remained very offensive, so he was given 10 drops of fluid magnesia every two hours. As he still did not seem to take the breast properly all idea of bringing him up in that manner was abandoned and it was arranged for the Walker-Gordon Company to send down a supply of their milk every day. After a restless morning he became quiet about 2 P.M. and dropped into a sleep. Soon after the breathing became more and more shallow and the face again became cyanosed, but on allowing the inhalation of oxygen for a few minutes the respirations quickly improved. This happened three or four times during the afternoon, but beyond giving oxygen nothing more seemed necessary until 4.30 P.M., when suddenly, without the slightest warning, and after one or two catches in his breathing the respirations stopped entirely. I immediately began artificial respiration and turned on the oxygen. Fortunately this attack only lasted a few minutes. After this, beyond the most constant care and watchfulness, there was no further anxiety, and the little patient is now an ordinary baby of the age of three months. Indeed, it would be impossible to tell from his looks and his general condition what an alarming and dangerous illness he has been through. The manipulation does not seem to have injured him in any way. It was simply marvellous to see how quickly the marks resulting from the prolonged movements disappeared from his chest, abdomen, and arms.

It is not possible for me to come to any definite conclusion as to the reason why the breathing ceased for so long, nor have any of my friends been able to give me a reasonable explanation. Probably it was caused by a combination of the chloroform, the shock, the hæmorrhage, and the disordered stomach, but what part each played in the pathological condition it is difficult to determine.

There were several astonishing features about the case. The amount of brandy which the child required was, for his age, enormous. A smaller amount than 20 drops every hour was tried and the same quantity at longer intervals, but the result under both conditions was the same—he at once seemed to lose ground. The brandy was never at any time thrown off by the lungs; at least it was never noticeable in the breath, so that it is probable that the child used it all up in the struggle which he made for his life. It is also wonderful that this small child, only a week old, was able to stand the manipulation. He was not spared in any way; the urgent thing was to get him to breathe and no thought was given as to how he would be affected if he recovered his breathing powers. It may seem strange that I could keep up artificial respiration for over 14 hours with only occasional breaks, when my nurse did it; but after a time the action became entirely mechanical, and though I was thankful to stop I was not so exhausted as might have been expected. It may be added that the nurse has worked for me for some years and that she was of the greatest possible assistance.

Charles-street, W.

CLINICAL NOTES ON THE RESULTS OF A PURE PROTEID FOOD IN FIFTY-FIVE CASES (VARIOUS DISEASES).

BY R. E. WILLIAMSON, M.B., C.M. EDIN.

AMONG the many foods on the market at the present time there is some difficulty for the busy general practitioner to make a selection of one useful for all-round purposes as an adjunct to ordinary dietaries in sickness and one at the same time within reach of all classes. There are many that have valuable qualities but there are few that do not possess some material drawback—e.g., some disagreeable taste or difficulty of preparation—or that the price does not make them prohibitive to one's poor brethren, so that when such a one is found, which on extended trial seems to answer and maintain its position, I feel it is sufficient apology for giving one's experience. Exact scientific experiment in semi-country practice is impossible, and these notes only pretend to be those of ordinary clinical observation.

I have used plasmon now in 55 cases in my own practice, and my friend and neighbour Mr. H. Hebblethwaite has used it in six cases, four of them of typhoid fever, one of severe anæmia, and one of obstinate and persistent vomiting, and he says that he has never had such a satisfactory diet for patients suffering from typhoid fever and that they did splendidly on it, that the recovery of the anæmic patient was most rapid, and also that in the patient suffering from vomiting it was the first food tolerated.

The cases in my own practice are as follows:—(1) acute gastritis, five cases, in one of which, complicated with cirrhosis of the liver, the patient had very severe hæmatemesis; (2) chronic gastro-intestinal catarrh, 12 cases, three of these patients after somewhat acute paroxysms had catarrhal jaundice; (3) gastric neurasthenia, five cases; (4) anæmia, nine cases; (5) erysipelas, one case; (6) phlebitis, one case; (7) puerperal septicæmia, one case; (8) influenza, five cases; (9) pleurisy, two cases; (10) operation for removal of tonsils and adenoids, four cases; (11) tuberculous diarrhœa, three cases; (12) acute diarrhœa (from errors of diet), three cases; (13) carcinoma of liver, one case; (14) diphtheria, one case; and (15) cardiac disease with gastric complications, two cases. I am not going to give a description of each case, but shall pick out cases which I think may serve as types of the efficiency of plasmon, and I may premise that it seems to be of the greatest use in diseases of the alimentary canal, acute febrile conditions (e.g., influenza, pleurisy, septicæmia, &c.), tuberculous and wasting diseases, and in one case I saw distinct temporary benefit in a case of carcinoma of the liver and a great relief of the painful gastric symptoms.

The first case in which I used plasmon was that of my wife who had been ill for three weeks, suffering from an attack of influenza complicated with gastro-duodenal catarrh and exhibiting some symptoms of a typhoid nature; she had a persistent rise of temperature, varying from 100° to 101° F. in the morning, rising usually in the afternoon to from 103° to 104°, and subsiding in the evening to about the morning temperature. She was most carefully dieted; peptonised milk and other peptonised foods, various special foods, and other preparations in turn were tried, but nothing seemed to agree—all caused nausea, flatulence, and general distress; and when a friend wrote to me and asked if I had tried plasmon, stating that he had derived much benefit from it personally, although I was thankful for the suggestion I fear that I was very sceptical as to the result. I gave it first dissolved in water and added to a little thin barley-water and only in small quantities, two or three teaspoonfuls at a time; this seemed to agree perfectly and so I increased the quantity. I then gave it in chicken-broth, then in milk, gradually increasing the amounts, all of which proved satisfactory. *Post hoc* or *propter hoc* the change was almost magical. The gastric symptoms subsided, the temperature gradually fell, and convalescence was rapid, and faith in the remedy is now so unbounded that she always keeps it in the house and if there are any symptoms of stomachic derangement she promptly goes back to it.

The next case I tried it in was that of sub acute chronic gastric catarrh in an old gentleman, age 75 years, suffering from cardiac dropsy and with whom the taking of even the lightest forms of food caused distressing heart storms, usually only relieved by vomiting; he was put upon the plasmon on Dec. 10th, 1899, and it was given in a similar manner to that employed in the former case. There was a speedy abatement of the gastric trouble, a temporary attempt at cardiac compensation, and considerable lessening of the dropsy, but this was only transient, and the patient died on Jan. 6th, 1900, from gradual cardiac failure, but without any further return of his gastric trouble.

Of the acute cases of gastritis, all of which were alcoholic, I will mention one only—that of a female, aged 34 years. I had attended her frequently for similar attacks and she had also a cirrhosed liver. On April 2nd I was called up early as the patient was vomiting large quantities of blood; this continued for some hours at intervals. For the next two days she was fed per rectum, then plasmon dissolved in water and sweetened with saccharin was given in small doses, and as it agreed with her a similar course was pursued to that described in the former cases, and in spite of the tremendous loss of blood which had occurred her convalescence was more rapid than on any previous occasion, and up to the present time she has better health than she has had for the last two years.

In anæmia I have been greatly struck by the action of plasmon. Two of the cases were very severe in character, extreme breathlessness on the slightest exertion, palpitation, tinnitus, and a syncopic tendency being present. The rapidity of the improvement in these cases under rest, iron, and plasmon dissolved in milk (one drachm in half a pint of milk three or four times a day) was simply marvellous when compared with other cases similarly treated, but without the plasmon.

The case of puerperal septicæmia was that of a woman who was confined of her second child on June 18th, 1900. On July 1st she had a rigor; her temperature rose to 104·5° F. during the next few days, and she had several rigors more or less severe. On the 6th she had a very severe rigor and was violently sick; her temperature at 10 A.M. was 105·2°. She was put upon plasmon which agreed perfectly with her, and in the afternoon she seemed greatly better and the temperature had fallen to 103°. On the next morning it was 99·4°; on the following day it was normal and her convalescence was uninterrupted. The probable cause of the septicæmia in this case was a block in a faulty drain and insanitary conditions arising therefrom, which had in the meantime been rectified.

A woman, aged 32 years, started with severe erysipelas of the head, the neck, and the chest on July 3rd, 1900. This was followed by a large abscess formation over the right infraclavicular region which extended half way down the sternum, which was opened and drained on the 15th. After this the temperature fell and the appetite improved. On the 18th she was very sick and complained that all things disagreed with her and the temperature rose again. On that day she was put on plasmon, which at once seemed to suit her, and there were no further drawbacks.

In the cases of tuberculous diarrhœa, all of which were unfortunately in an advanced stage, plasmon most distinctly gave great relief; the diarrhœa was greatly lessened, the temperature was kept much lower, and the abdominal pain and distension were relieved. That life was considerably prolonged those who saw the cases were convinced, and they could not help thinking that had it been used in the early stages the prognosis of the cases might have been hopeful.

In the cases of acute diarrhœa plasmon answered well. One of them was an old lady, aged 92 years, suffering from bronchitis at the time and whose case seemed hopeless. She was kept for several weeks upon it and is now as well as she has been for the last three years, getting up daily in her bedroom.

It seems particularly good in neurasthenic cases and builds up the nervous system. Two of the cases of gastric neurasthenia had been for years under treatment, one under my care for four years and the other for two years and prior to that constantly under the care of other medical men, and for some months now the patients have been off my list and have had no medicine at all.

Personally I have used plasmon considerably, chiefly in the form of the chocolate and the biscuits, which I carried the whole of last winter on hunting days, as did several hunting friends, also on long days' shooting on the moors in Scotland and fishing in Yorkshire; and I have always found that I could stand the longest day with less fatigue for the moment and less feeling of exhaustion afterwards than formerly. One hunting friend, who has also a pack of beagles which he hunts himself on foot, told me that he always carries the chocolate now and that constant consignments of the chocolate have been sent out to three of his brothers who are at present serving in South Africa.

When at Aldershot this Whitsuntide I thought it would be a good opportunity of trying its sustaining properties and I had some sent down for the officers' mess. On the unfortunate Monday which will always be remembered at Aldershot as "Black Monday" all our officers, 23 in number, carried three sticks of plasmon chocolate; none of us suffered the slightest either from the heat or from the fatigue, and although we had breakfast at 5.30 A.M. and did not mess until 8 P.M., one of the senior captains told me that, with the exception of the chocolate and a drink of lime-juice and soda, he had absolutely nothing between times, that he felt quite fresh, and had no feeling of exhaustion.

So far I have not found a single patient object to it and being practically tasteless it can be added to other foods without destroying their natural flavour, thus allowing it to be given without detection—a property of material advantage when one has to deal with faddy patients.

What has struck me most in using plasmon is the ease with which it is digested and the variety of media in which it can be used; preferably in my own practice I use milk, animal broths, or barley-water. The majority of patients like it and express a feeling of comfort and well-being after taking it, and their rapid gain of weight is most marked. One of our nurses at the workhouse who was run down and anæmic, taking nothing in addition to her ordinary diet but a full teaspoonful of plasmon dissolved in half a pint of milk twice daily, gained three pounds in weight in a fortnight.

Since compiling these notes I have seen Captain —, who has returned from South Africa, one of the three brothers previously alluded to; his statement as to the use of plasmon chocolate I give in his own words: "It was splendid stuff—quite the best thing we had out there. I sent home for some more."

Otley, Yorks.

ESTIMATION OF IRON IN ANIMAL ORGANS.

BY PERCY A. E. RICHARDS, F.I.C.,
ASSISTANT LECTURER ON CHEMISTRY AND PHYSICS, CHARING-CROSS HOSPITAL MEDICAL SCHOOL, AND PUBLIC ANALYST TO THE PARISH OF ST. MARTIN-IN-THE-FIELDS.

THE amount of iron in human viscera is often a matter of considerable importance to the pathologist, but although that metal can be easily and accurately estimated, when present in any distinct quantity, by ordinary gravimetric methods, yet in the particular cases under consideration such a process frequently fails to give concordant results. This is due primarily to the small proportion of iron usually found in animal organs and also indirectly to the insoluble phosphates that are invariably present. A gravimetric method necessitates careful elimination of these during the process of estimation and it also entails the employment of a large amount of the organ for each operation. With a view to meeting these objections as far as possible the following process has been devised and has given most satisfactory results in practice.

From 50 grammes to 100 grammes of the moist organ are weighed in a platinum dish and heated over a Bünsen burner until all moisture is driven off, the organic matter is burnt, and only a black, charred mass remains. This is carefully moistened throughout with strong nitric acid, avoiding a large excess, and is then incinerated gently to prevent loss during deflagration. The great bulk of the carbon may thus be removed, the mass being treated a second time with acid if required and again incinerated thoroughly. It is, perhaps, hardly necessary to point out that the nitric acid should be previously tested to ensure its freedom from iron. The metal is now left behind with the other mineral matter and a small amount of carbon. This is treated with pure hydrochloric acid, is allowed to stand for five minutes, and is then warmed and transferred to a beaker. The basin is washed out with warm hydrochloric acid, the washings are added to the bulk, and the whole is boiled after the addition of a few drops of strong nitric acid. This ensures thorough oxidation, and neglect of this precaution involves possible inaccuracy due to the presence of ferrous, with the bulk of ferric, iron. The solution after boiling is diluted with an equal volume of water and is filtered, the residue is washed with hot water, and the filtrate is made up to 50 or 100 cubic centimetres. This forms the stock solution and from it a measured portion (from one to 20 cubic centimetres, according to the strength of the solution) is taken with the pipette and is transferred to a Nessler glass. To this is added one cubic centimetre of a freshly-prepared solution of potassium ferrocyanide (1 per cent.) and the mixture is at once made up to 50 cubic centimetres. If precipitation occurs or if the colour is too intense the portion should be rejected and a smaller quantity of the stock solution taken. The colour so obtained is matched against that given by a known quantity of a standard iron solution and the weight of the metal is thence found by calculation. A suitable iron standard is one containing 0·1 gramme of metal per litre, each cubic centimetre being then equivalent to 0·0001 Fe. Such a standard is

best prepared by accurately weighing out 0·1 gramme of the purest "flower" wire, dissolving this in the minimum amount of hydrochloric acid, oxidising the hot solution with nitric acid, added drop by drop, boiling off the excess of the latter, and finally making up with distilled water to one litre.

If desired the estimation as detailed above may be repeated, using sulphocyanide of potash in place of ferrocyanide, the red ferric sulphocyanide being formed in place of the blue ferric ferrocyanide. In this case greater care must be taken to prevent the presence of much nitric acid, which itself gives a red colour with the sulphocyanide and would hopelessly vitiate the results.

Another matter of considerable practical importance is the accurate estimation of the moisture, as the results obtained above should be expressed in terms of dry viscera. Any attempt at removing the whole of the moisture from the weight necessary for the iron determination is both tedious and imperfect. It is therefore best to cut off a small piece of the organ at the time that a larger amount is taken, to place this in a separate dish, to divide it into small, thin slices with a sharp knife, to weigh, and to dry thoroughly in a water oven, and weigh again. The percentage of moisture can thus be accurately found.

The organs chiefly examined consisted of the liver, the kidney, and the spleen, and with all these the process has given good and concordant results.

Chemical Laboratory, Charing-cross Hospital.

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. *Procemium.*

MILLER HOSPITAL, GREENWICH.

A CASE OF PERFORATING GASTRIC ULCER.

(Under the care of the late Mr. T. MOORE.)

THE fact that there was a thick layer of lymph on the surface of the stomach, together with the escape of much gas on opening the peritoneal cavity, prove fairly conclusively that in this case a perforation must have occurred, though it is probable that very little extravasation took place, and that the opening was rapidly closed by effused lymph. For the notes of the case we are indebted to Mr. R. S. C. Edleston, late house surgeon.

A woman, aged 22 years, a general servant, was admitted into the Miller Hospital at 10 P.M. on Oct. 19th, 1899, with symptoms of perforation of gastric ulcer. Six months previously the patient was treated by Dr. W. Groome for anæmia and apparently completely recovered and returned to work. She admitted having been rather breathless on
exertion, but she had never suffered from pain after takicompare
food or at any time until the evening of Oct 18th early exploration
was suddenly seized with violent pain sequestrotomy. This, the
pain continued throughout the nise treatment of hip-joint disease,
following morning th A E. J. Barker, who in 1888 showed
tha and bread-ag could be obtained after aseptic exploration
of thdmoni by a sufficiently ample anterior incision to enable, as far as may be, the products of disease to be evacuated with the aid of a gouge and irrigation. The great value of this method is that it reveals the exact nature of the disease, the condition of the synovial membrane and bones, and especially the presence of sequestra. It is more successful if performed early and before matter has escaped from the joint cavity and burrowed in the planes of fascia. Occasionally at this stage, if deemed necessary, a formal excision may be performed, but usually judicious gouging will prove much less severe and quite radical enough. The anterior incision, although preferable, is not essential, but asepsis is. Of course such operations must be followed by prolonged rest. In fact, after the wound is healed, the cases are treated like those more favourable ones which are cured by rest alone. The best results are obtained where the disease is synovial.

gastric ulcer and it was decided to open the abdomen without delay.

An incision was made under chloroform from the ensiform cartilage to the umbilicus. On opening the abdominal cavity (which was reached with considerable difficulty owing to the distension and matting together of the tissues) gas escaped freely. A layer of organised lymph having been turned up the anterior surface of the stomach was exposed, and just below the lesser curvature midway between the cardiac and pyloric ends three elevated and dusky spots were seen lying close together, and each of about the size of a sixpenny-piece; the layer of lymph immediately covering them was almost as thick as the palm of the hand. There was no evidence of perforation, the peritoneal fluid, though plentiful, being quite clear. The stomach was firmly fixed by adhesions and consequently its under surface could not be examined. The abdominal cavity was thoroughly washed out with a weak solution of boric acid in boiled water and the layer of lymph was carefully replaced over the affected area. Owing to the peritoneal adhesions the whole length of the peritoneal wound could not be accurately united by continuous suture and several fine interrupted silk sutures had to be put in. The abdominal wall was united by stout salmon-gut sutures, no drainage-tube being used. The patient made an effort to vomit at the completion of the suturing of the abdominal wound.

On Oct. 20th no vomiting had occurred since the operation. The pulse was 98, the temperature was 101°, and the respirations were 34. One pint of water was given by the rectum; only teaspoonfuls of water were given by the mouth. On the 22nd four-ounce pancreatised nutrient enemata were given every four hours, and the rectum was washed out with one pint of warm water containing 20 grains of sodium bicarbonate half an hour before each nutrient enema. On the 23rd the patient complained of severe thirst, and milk and water, half an ounce of each, were given every three hours. On the 24th the milk and water were increased to two ounces every three hours. Nutrient enemata were given as before. The patient slept well and suffered no discomfort, but as the temperature was oscillating, though it was never high, the wound was dressed, and there was a slight purulent discharge from the suture wounds at the upper and lower end of the wound; the lowest suture was removed. On the 25th the diet was altered, two ounces of mutton-broth being given alternately with two ounces of milk and water every three hours. On the 28th the wound was dressed and a large quantity of purulent discharge occurred from both points above mentioned. The lower part of the wound was freely opened and a drainage-tube was put in, the wound being gently syringed out with boric lotion. On the 30th the wound was dressed twice daily. On Nov. 1st there was less discharge and the upper part of the wound was healed. The diet consisted of three ounces each of beef-tea or mutton-broth alternately with three ounces of milk and one ounce of lime-water. The enemata were discontinued. On the 5th the wound was firmly healed except where the tube was put in. The food was the same as on Nov. 1st, but was increased to six ounces at a time. On the 8th one drachm of virol was given three times a day after food. The food was the same as above but was increased to eight ounces every three hours
On the 10th two eggs daily were added to the diet, one
parts of the caseous liver tissue ding. On the 13th
areas a definite organism was found drainage-tube
low power of the microscope the same concentric arrangement of rings as the bodies found in actinomyces. With high magnification these rings were seen to be composed entirely of delicate threads of cocci presenting little or no dichotomy and far more delicate in size than true actinomyces. Dr. Habershon and Dr Hichens detailed some of the literature of anomalous cases of oösporon and bacillary forms of actinomycosis, and came to the conclusion that though the case presented clinical and pathological features closely simulating actinomycosis it must be regarded rather as a variety of streptothrix infection. Macroscopic and microscopic specimens from this case were exhibited, and a specimen of true actinomycosis of the liver was also shown by Dr. Habershon by way of contrast.—Professor JOHN MCFADYEAN congratulated Dr. Habershon and Dr. Hichens on the interest of the case. His first impression on looking at the microscopic specimens exhibited was one of surprise, because he had in his possession many specimens resembling these which he had always regarded as true actinomycosis

CASHEL UNION HOSPITAL.

A CASE OF TRAUMATIC RUPTURE OF THE GALL-BLADDER; PERITONITIS; LAPAROTOMY; RECOVERY.

(Under the care of Mr. T. LAFFAN.)

FROM *a priori* considerations it might have been expected that the presence of bile in the cavity of the peritoneum would have resulted in a severe inflammation of that membrane, but experience shows that healthy bile may be extravasated for days or even for weeks in the peritoneal cavity without exciting any great degree of peritonitis. Thiersch removed[1] over 40 pints of bile from the abdominal cavity and the patient recovered. It is essential, however, that the bile must be aseptic, therefore the history of survival for many days after rupture of one or other part of the biliary tract can only have occurred in cases where the rupture has resulted from traumatism, for in most of these the bile will have been normal. In cases where the rupture has followed the presence of a gall-stone, or an ulcer, or some other pathological condition, the bile is nearly always infected with micro-organisms, and in such cases peritonitis rapidly follows. That healthy bile when extravasated can be absorbed to some extent has been proved by the experiments of Schuppel and Bosbrom, but *this power of absorption is probably only limited*, and sooner or later peritonitis results which ultimately proves fatal. A specimen in the museum of St. Bartholomew's Hospital shows a rupture of the gall-bladder from traumatism in which death resulted from peritonitis five weeks after the bile was first extravasated. Since these cases of traumatic *rupture of the gall-bladder or bile-duct survive several days* or even longer it is obvious that surgical interference would be likely to be followed by success. The first recorded case of operation for rupture of a bile duct was under the care of Mr. W. H. Battle[2]; the operation was performed on the eighth day, but the boy died on the following day. A very similar case under the care of Mr. W. G. Spencer[3] was reported in which death resulted on the thirty-third day.

A married woman, aged 50 years, was trodden on by a cow while in the act of milking it. She felt something give way inside, and after suffering for some time from all the symptoms of acute inflammation was admitted to Cashel Union Hospital on Sept. 15th, 1898.

On admission the patient was in an alarming state, being almost moribund. She was deeply jaundiced and all the symptoms of peritonitis were present. The effusion was, however, circumscribed, presenting the appearance of a considerable *tumour in the epigastric and adjacent* regions. The patient was put under chloroform and with the assistance of Dr. T. O'Connell, Dr. G. Cook, and others laparotomy was performed. A large quantity of bile, pus, and some liquid fæcal matter were evacuated. The cavity was washed out with antiseptic solution, a drainage-tube was inserted, and the wound was sutured, with the exception of the opening for the tube. The patient was so weak and the parts being so matted as to require a regular dissection to unravel the point of rupture, it was deemed more prudent to make it an operation *de deux temps* if necessary. The necessity for a second operation, however, did not arise, as after an uneventful period the wound had been [illegible] glandular enlarge- ceased, and the [illegible] referred to the rarity of the tumour

Remarks [illegible] possible origin from fœtal rests in the deeper parts of the raphe of the tongue.

Dr. WILLIAM HUNTER narrated a case of Acute Yellow Atrophy occurring in a woman, aged 47 years, who was admitted into hospital with a history of two weeks' illness. On admission she was delirious and there was intense jaundice. She became comatose and died 24 hours later. It was thought to be a case of cirrhosis of the liver, but at the necropsy the liver showed the usual signs of acute yellow atrophy. It weighed only 30 ounces. There were purpuric hæmorrhages in the skin and hæmorrhages into the peritoneum and intestines. There was slight ascites, but there were no lesions in any other organs excepting the kidneys. On section the liver presented a deep orange-yellow colour. Microscopically, there were three different kinds of change to note. First, the deep red parts showed intense bacterial necrosis. Under a low power there appeared to be a fine-celled infiltration, but under a high power this cellular material was seen to consist of a necrosed disintegration of the liver cells. It was not atrophy but complete dissolution. Secondly, in the

tion of the cases, though many died from hectic fever and exhaustion after prolonged suppuration. The introduction of excision led to more rapid healing and was a great advance in *so far as it demonstrated that it was possible to remove* all the diseased tissue from the joint; but in many cases excision leaves a limb which is of no value to the patient, for it is not rarely quite incapable of sustaining any portion of the weight of the body. The present diminution in the frequency of excision is to be partly credited to this, and in part *to the fact that prolonged rest with or without less* drastic operative treatment in a large proportion of cases suffices to bring about recovery with a useful limb. Mr. Neve's cases recorded below demonstrate clearly the valuable results of early judicious treatment of disease of the hip.

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Such cases demonstrate the great advantage of closing the wound and obtaining primary union. The real advance consists chiefly in earlier interference, more thorough removal *of diseased tissue, and the abolition of the drainage*-tube. The last is a mechanical irritant and is only too apt [illegible] the occurrence of sepsis, especially in little children [illegible] the dressings of the hip are exposed to great [illegible] If this be avoided, then excellent [illegible] with drainage.

Exhibiti[illegible] was admitted into th[illegible] 24th,

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Dr F. J. SMITH showed a case of Cirrhotic Kidney showing well-marked Albuminuric Retinitis. The patient was a labouring man, aged 40 years, who came under Dr. Smith's observation in March 1900 complaining of headache and shortness of breath. Inquiry revealed that there was also considerable amblyopia, and ophthalmoscopic examination at once showed very marked retinitis albuminurica. He was admitted into the London Hospital and improved with the rest in hospital without any special medicinal treatment, and was discharged at the end of May to the out-patient department. During the summer he complained principally of vomiting and of bad sight, with attacks of shortness of breath, and in October became so bad that Dr Smith again admitted him into the hospital. Dr. Smith remarked that the patient's symptoms were principally those of [illegible]

best prepared by accurately weighing out 0·1 gramme of the purest "flower" wire, dissolving this in the minimum amount of hydrochloric acid, oxidising the hot solution with nitric acid, added drop by drop, boiling off the excess of the latter, and finally making up with distilled water to one litre.

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The organs chiefly examined consisted of the liver, the kidney, and the spleen, and with all these the process has given good and concordant results.

Chemical Laboratory, Charing-cross Hospital.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

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MILLER HOSPITAL, GREENWICH.

A CASE OF PERFORATING GASTRIC ULCER.

(Under the care of the late Mr. T. MOORE.)

THE fact that there was a thick
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symptoms of perforation
previously the patient w
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to work. She admitte
exertion, but she had
food or at any time ur
was suddenly seized
pain continued thro
the following n
and bre
that most
of the
as far as may be,
the aid of a gouge an
method is that it reveals the
condition of the synovial membr
the presence of sequestra. It is more
early and before matter has escaped from
burrowed in the planes of fascia. Occasiona
if deemed necessary, a formal excision may be
but usually judicious gouging will prove much le
and quite radical enough. The anterior incision, altu
preferable, is not essential, but asepsis is. Of course such
operations must be followed by prolonged rest In fact,
after the wound is healed, the cases are treated like those
more favourable ones which are cured by rest alone. The
best results are obtained where the disease is synovial.

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gastric ulcer and it was decided to open the abdomen without delay.

An incision was made under chloroform from the ensiform cartilage to the umbilicus. On opening the abdominal cavity (which was reached with considerable difficulty owing to the distension and matting together of the tissues) gas escaped freely. A layer of organised lymph having been turned up the anterior surface of the stomach was exposed, and just below the lesser curvature midway between the cardiac and pyloric ends three elevated and dusky spots were seen lying close together, and each of about the size of a sixpenny-piece; the layer of lymph immediately covering them was almost as thick as the palm of the hand. There was no evidence of perforation, the peritoneal fluid, though plentiful, being quite clear. The stomach was firmly fixed by adhesions and consequently its under surface could not be examined. The abdominal cavity was thoroughly washed out with a weak solution of boric acid in boiled water and the layer of lymph was carefully replaced over the affected area. Owing to the peritoneal adhesions the whole length of the peritoneal wound could not be accurately united by continuous suture and several fine interrupted silk sutures had to be put in. The abdominal wall was united by stout salmon-gut sutures, no drainage-tube being used. The patient made an effort to vomit at the completion of the suturing of the abdominal wound.

On Oct. 20th no vomiting had occurred since the operation. The pulse was 98, the temperature was 101°, and the respirations were 34. One pint of water was given by the rectum; only teaspoonfuls of water were given by the mouth. On the 22nd four-ounce pancreatised nutrient enemata were given every four hours, and the rectum was washed out with one pint of warm water containing 20 grains of sodium bicarbonate half an hour before each nutrient enema. On the 23rd the patient complained of severe thirst, and milk and water, half an ounce of each, were given every three hours. On the 24th the milk and water were increased to two ounces every three hours. Nutrient enemata were given as before. The patient slept well and suffered no discomfort, but as the temperature was oscillating, though it was never high, the wound was dressed, and there was a slight purulent discharge from the suture wounds at the upper and lower end of the wound; the lowest suture was removed. On the 25th the diet was altered, two ounces of mutton-broth being given alternately with two ounces of milk and water every three hours. On the 28th the wound was dressed and a large quantity of purulent discharge occurred from both points above mentioned. The lower part of the wound was freely opened and a drainage-tube was put in, the wound being gently syringed out with boric lotion. On the 30th the wound was dressed twice daily. On Nov. 1st there was less discharge and the upper part of the wound was healed. The diet consisted of three ounces each of beef-tea or mutton-broth alternately with three ounces of milk and one ounce of lime-water. The enemata were discontinued. On the 5th the wound was firmly healed except where the tube was put in. The food was the same as on Nov. 1st, but was increased to
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CASHEL UNION HOSPITAL.

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FROM *a priori* considerations it might have been expected that the presence of bile in the cavity of the peritoneum would have resulted in a severe inflammation of that membrane, but experience shows that healthy bile may be extravasated for days or even for weeks in the peritoneal cavity without exciting any great degree of peritonitis. Thiersch removed[1] over 40 pints of bile from the abdominal cavity and the patient recovered. It is essential, however, that the bile must be aseptic, therefore the history of survival for many days after rupture of one or other part of the biliary tract can only have occurred in cases where the rupture has resulted from traumatism, for in most of these the bile will have been normal. In cases where the rupture has followed the presence of a gall-stone, or an ulcer, or some other pathological condition, the bile is nearly always infected with micro-organisms, and in such cases peritonitis rapidly follows. That healthy bile when extravasated can be absorbed to some extent has been proved by the experiments of Schuppel and Bosbrom, but this power of absorption is probably only limited, and sooner or later peritonitis results which ultimately proves fatal. A specimen in the museum of St. Bartholomew's Hospital shows a rupture of the gall-bladder from traumatism in which death resulted from peritonitis five weeks after the bile was first extravasated. Since these cases of traumatic rupture of the gall-bladder or bile-duct survive several days or even longer it is obvious that surgical interference would be likely to be followed by success The first recorded case of operation for rupture of a bile duct was under the care of Mr. W. H Battle[2]; the operation was performed on the eighth day, but the boy died on the following day. A very similar case under the care of Mr. W G. Spencer[3] was reported in which death resulted on the thirty-third day.

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Dr. T. R BRADSHAW read a note on the preparation of Crystallised Albumins by G Hopkins's Method and showed well-formed crystals obtained from the white of eggs and horse's serum. The latter were 0 5 millimetre in length and formed hexagonal prisms, terminated by a hexagonal pyramid at one end and a plane base at the other. With polarised light they were seen to be biaxial and with crossed Nicoll's prisms they showed straight extinction Elementary analysis of the egg albumen crystals washed free from ammonium sulphate by means of a strong solution of sodium chloride and dried at 110° C. showed percentage of C. as 51 66 and of H. as 6·71.

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Mr F. A. SOUTHAM made some remarks upon the conditions met with in a series of 50 cases of Recurrent Appendicitis treated by Operation; and a number of preparations were shown which illustrated the changes produced in the appendix as the result of repeated attacks of inflammation

Dr. A. HILL GRIFFITH mentioned two cases of Rodent

Dr. Robert Fleig Library

best prepared by accurately weighing out 0·1 gramme of the purest "flower" wire, dissolving this in the minimum amount of hydrochloric acid, oxidising the hot solution with nitric acid, added drop by drop, boiling off the excess of the latter, and finally making up with distilled water to one litre.

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MILLER HOSPITAL, GREENWICH.

A CASE OF PERFORATING GASTRIC ULCER.

(Under the care of the late Mr. T. MOORE.)

THE fact that there was a thick layer of lymph on the surface of the stomach, together with the escape of much gas on opening the peritoneal cavity, prove fairly conclusively that in this case a perforation must have occurred, though it is probable that very little extravasation took place, and that the opening was rapidly closed by effused lymph. For the notes of the case we are indebted to Mr. R. S. C. Edleston, late house surgeon.

A woman, aged 22 years, a general servant, was admitted into the Miller Hospital at 10 P.M. on Oct. 19th, 1899, with symptoms of perforation of gastric ulcer. Six months previously the patient was treated by Dr. W. Groome for anæmia and apparently completely recovered and returned to work. She admitted having been rather breathless on exertion, but she had never suffered from pain after takin compare
food or at any time until the evening of Oct. 18th early exploration
was suddenly seized with violent pain ir sequestrotomy. This, the
pain continued throughout the nigh treatment of hip-joint disease,
the following morning the r . A. E. J. Barker, who in 1888 showed
not and bread-and- g could be obtained after aseptic exploration
child almost ir by a sufficiently ample anterior incision to enable,
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only now erupting. She had no control over the passage of urine and fæces and gave no signs of hunger except some peculiar lip sounds, well known now to the mother, and she would take nothing except boiled bread-and-milk. The circumference of the head was very small and there was a reversal of the normal relation of size between the face and the skull. As regards operation in such a case no one would *a priori* expect any benefit to follow.—Dr. R. HINGSTON FOX and the PRESIDENT said that they had known of improvement after craniotomy.—Dr. J. H. SEQUEIRA was not in favour of the operation of craniotomy, believing that the condition of the skull was secondary to the deficient development of the brain.

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parts of the caseous liver tissu dding. On the 13th
areas a definite organism was found pr rainage-tube
low power of the microscope the same concent
ment of rings as the bodies found in actinomyces. With high magnification these rings were seen to be composed entirely of delicate threads of cocci presenting little or no dichotomy and far more delicate in size than true actinomyces. Dr. Habershon and Dr. Hichens detailed some of the literature of anomalous cases of
coccoron and bacillary forms of actinomycosis, and came
unless they admitted the though they presented clinical
lesions such as those found on the husband's tongue. osis
result of treatment seemed, however, to confirm the syphilitic diagnosis.—Dr. W. H. KELSON instanced a case of syphilitic infection by means of the guillotine.

Dr. T. GLOVER LYON showed a case of Obscure Condition of the Chest in which the diagnosis was aided by means of the x rays. The patient was a boy, aged 15 years. There was no family history of phthisis. He had been quite well up to six months before when he had begun to suffer from general weakness, slight cough without expectoration, and some shortness of breath. On admission there was some emaciation present. The only abnormal chest sign was a very

CASHEL UNION HOSPITAL.

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FROM *a priori* considerations it might have been expected that the presence of bile in the cavity of the peritoneum would have resulted in a severe inflammation of that membrane, but experience shows that healthy bile may be extravasated for days or even for weeks in the peritoneal cavity without exciting any great degree of peritonitis. Thiersch removed[1] over 40 pints of bile from the abdominal cavity and the patient recovered. It is essential, however, that the bile must be aseptic, therefore the history of survival for many days after rupture of one or other part of the biliary tract can only have occurred in cases where the rupture has resulted from traumatism, for in most of these the bile will have been normal. In cases where the rupture has followed the presence of a gall-stone, or an ulcer, or some other pathological condition, the bile is nearly always infected with micro-organisms, and in such cases peritonitis rapidly follows. That healthy bile when extravasated can be absorbed to some extent has been proved by the experiments of Schuppel and Bosbrom, but this power of absorption is probably only limited, and sooner or later peritonitis results which ultimately proves fatal. A specimen in the museum of St. Bartholomew's Hospital shows a rupture of the gall-bladder from traumatism in which death resulted from peritonitis five weeks after the bile was first extravasated. Since these cases of traumatic rupture of the gall-bladder or bile-duct survive several days or even longer it is obvious that surgical interference would be likely to be followed by success. The first recorded case of operation for rupture of a bile-duct was under the care of Mr. W. H. Battle[2]; the operation was performed on the eighth day, but the boy died on the following day. A very similar case under the care of Mr. W. G. Spencer[3] was reported in which death resulted on the thirty-third day.

A married woman, aged 50 years, was trodden on by a cow while in the act of milking it. She felt something give way inside, and after suffering for some time from all the symptoms of acute inflammation was admitted to Cashel Union Hospital on Sept. 15th, 1898.

On admission the patient was in an alarming state, being almost moribund. She was deeply jaundiced and all the symptoms of peritonitis were present. The effusion was, however, circumscribed, presenting the appearance of a considerable tumour in the epigastric and adjacent regions. The patient was put under chloroform and with the assistance of Dr. T. O'Connell, Dr. G. Cook, and others laparotomy was performed. A large quantity of bile, pus, and some liquid fæcal matter were evacuated. The cavity was washed out with antiseptic solution, a drainage-tube was inserted, and the wound was sutured, with the exception of the opening for the tube. The patient was so weak and the parts being so matted as to require a regular dissection to unravel the point of rupture, it was deemed more prudent to make it an operation *de deux temps* if necessary. The necessity for a second operation, however, did not arise, as after an uneventful period the wound had been no glandular enlarge-ceased, and the pencer referred to the rarity of the tumour *Remarks* possible origin from fœtal rests in the deeper parts of the raphe of the tongue.

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Dr. T. R. BRADSHAW read a note on the preparation of Crystallised Albumins by G. Hopkins's Method and showed well-formed crystals obtained from the white of eggs and horse's serum. The latter were 0·5 millimetre in length and formed hexagonal prisms, terminated by a hexagonal pyramid at one end and a plane base at the other. With polarised light they were seen to be biaxial and with crossed Nicoll's prisms they showed straight extinction. Elementary analysis of the egg albumen crystals washed free from ammonium sulphate by means of a strong solution of sodium chloride and dried at 110° C. showed percentage of C. as 51·66 and of H. as 6·71.

tion of the cases, though many died from hectic fever and exhaustion after prolonged suppuration. The introduction of excision led to more rapid healing and was a great advance in so far as it demonstrated that it was possible to remove all the diseased tissue from the joint; but in many cases excision leaves a limb which is of no value to the patient, for it is not rarely quite incapable of sustaining any portion of the weight of the body. The present diminution in the frequency of excision is to be partly credited to this, and in part to the fact that prolonged rest with or without less drastic operative treatment in a large proportion of cases suffices to bring about recovery with a useful limb. Mr. Neve's cases recorded below demonstrate clearly the valuable results of early judicious treatment of disease of the hip.

CASE 1.—A child, aged eight years, was admitted into the Kashmir Mission Hospital on May 4th, 1896, suffering from hip-joint disease with dislocation backwards of the head of the femur. The joint was opened by a posterior incision three and a half inches long and some ounces of thin pus were evacuated. The acetabulum was filled by a globular mass of tuberculous synovial membrane of the size of a walnut. After this had been removed the joint was cleansed with the irrigation gouge and hot flushing, the dislocation was reduced, the cavity was dried, iodoform was introduced, and the wound was completely closed. On the 16th the wound was soundly healed. On June 8th the patient was dismissed with instructions to continue rest. The limb was in good position and the joint was moveable without pain.

Even where there is caries satisfactory results may be obtained by similar treatment.

CASE 2.—A boy, aged 14 years, was admitted into the Kashmir Mission Hospital with much tenderness and thickening of the hip, which was flexed and rigid. On July 23rd, 1896, Mr. Arthur Neve opened the joint by an anterior incision. The head of the bone had disappeared by absorption. The remaining carious surface having been gouged and the joint cavity having been cleansed and dried iodoform was inserted and the wound was closed. Union occurred by first intention. The limb was one and a half inches shorter than the other. The patient was discharged on August 20th.

Where, as sometimes happens, a sequestrum is lying loose in the joint its removal by operation is especially indicated.

CASE 3.—A little girl, aged six years, was admitted into the Kashmir Mission Hospital on April 28th, 1896, suffering from great pain in the hip. All the classical signs of disease of the joint were present and there was marked swelling behind the great trochanter with fluctuation. By a posterior incision about eight ounces of sero-purulent fluid were evacuated and a sequestrum was found consisting of the entire head of the femur. After the carious inner aspect of the neck had been dealt with by means of gouge forceps and the joint had been thoroughly cleansed and dried iodoform was inserted and the wound was completely closed. This healed by first intention. Progress was uninterrupted and on May 15th the patient was allowed to go home.

Such cases demonstrate the great advantage of closing the wound and obtaining primary union. The real advance consists chiefly in earlier interference, more thorough removal of diseased tissue, and the abolition of the drainage-tube. The last is a mechanical irritant and is only too apt [illegible] the occurrence of sepsis, especially in little children [illegible] ptic dressings of the hip are exposed to great [illegible] if this be avoided, then excellent [illegible] with drainage.

Exhibition [illegible] was admitted into the

A CLINICAL meeting of this society [illegible] 1891, with a lastly Dr. J. DUNDAS GRANT, the President, being [illegible] however,

Dr. F. J. SMITH showed a case of Cirrhosis [illegible] was in showing well-marked Albuminuric Retinitis. The p[illegible] a labouring man, aged 40 years, who came under the infirmary, [illegible] from the chest. The post-mortem examination showed very marked necrosis of the pleura at various parts and the pulsating air sac had been formed in the subcutaneous tissue of the chest wall. Dr. Harris referred to the great rarity of so-called pulsating empyema, and he had been unable to find any record of a pyo-pneumothorax where the air sac pulsated.

Mr. F. A. SOUTHAM made some remarks upon the conditions met with in a series of 50 cases of Recurrent Appendicitis treated by Operation; and a number of preparations were shown which illustrated the change produced in the appendix as the result of repeated attacks of inflammation.

Dr. A. HILL GRIFFITH mentioned two cases of Rodent had healed by first intention, but on August 5th a little clear serous discharge came away. This recurred at intervals until Sept 9th when the patient was allowed to go home. There was still well-marked thickening round the joint and the limb was flexed and rotated inwards. This case ran much the same course as if treatment by drainage had been intentionally employed.

Where, however, the wound becomes septic healing is apt to be greatly delayed. This is illustrated by the following case.

CASE 6.—A girl, aged three years, was admitted into the Kashmir Mission Hospital on June 16th, 1891, with well-marked hip joint disease associated with great pain. The joint was opened by a posterior incision some thin pus was evacuated, and a sequestrum of the size of a filbert was found consisting of part of the head of the femur. The joint was cleansed, iodoform glycerine emulsion was injected, and the wound was closed. On the 21st the joint appeared to be swollen and on the removal of stitches there was a discharge of pus. This continued until Sept. 16th, gradually diminishing in amount The progress of this case stands in marked contrast to that of Case 3, in which the pathological condition was almost identical.

Remarks by Dr. ERNEST NEVE.—That the tendency is strong for hip joint disease to terminate in a natural cure is shown by the large number of cases which recover under favourable conditions of rest Other cases, of a severer type, call for operative interference. Much confusion has been caused by statistical comparisons of the results of these two methods of treatment. The one class merges into the other, but typical cases are very different. Those lesions cured by rest alone include many early, subacute, mild, and otherwise favourable cases; while those treated by operation are apt to embrace cases of chronic, intractable, complicated, and progressively destructive disease which are also only too often associated with grave malposition. For it is in cases which, in spite of rest, are doing badly, that the surgeon is compelled to step in.

In the absence of treatment such cases usually go on from bad to worse. Sooner or later pent-up matter finds an outlet, sepsis ensues, and other evils follow in its train. Many patients come for the first time to the surgeon when this stage has been reached. I have notes of 10 cases, all of which had become septic when first seen; all had one or more sinuses and in most there were also extra-articular abscesses and the joint was more or less ankylosed in bad position. Five of these were treated by drainage alone and in five the head of the femur was also excised. Of those treated by drainage, one patient left the hospital after 48 days not improved, the discharge still being copious. The other four cases improved under treatment, but in three of them the hip, which was contracted on admission, remained so and it was deemed inadvisable to rectify this by excision or section of the neck of the femur. One of the patients was 60 years of age and the disease had been going on since childhood; another patient, aged 30 years, had a similar history. In the five cases in which excision was performed two of the patients left, not improved, after two months' treatment. One patient was healed in 44 days with a straight limb and
very little shorteni as healed in 67 days with the
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In progressive hip-joint disease, especially where tension and pain are on the increase, the case for early operation is very strong. Where asepsis is secured and the operative treatment is judicious and adequate, the immediate results may be ideal. The completion and permanence of the cure will, of course, depend upon the maintenance of rest for a sufficiently prolonged period, until, in fact, the tissues of the joint area are sufficiently consolidated to bear the weight and strain of the body without injury.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Pseudo-actinomycosis of the Liver.—Carcinoma commencing in Supernumerary Nipples.—Fibroma of the Tongue.—Acute Yellow Atrophy of the Liver.

A MEETING of this society was held on Nov. 20th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Dr. S. H. HABERSHON and Dr. P. S. HICHENS communicated a paper on a case of Pseudo-actinomycosis of the Liver occurring in a lad, aged 17 years, admitted into Brompton Hospital in November, 1897. The symptoms on admission were those of cough with a little expectoration and pain in the right side of the chest. The liver was found to be enlarged. The physical signs observed were those of consolidation or condensation of the base of the right lung. No tubercle bacilli were found. The temperature remained at from 101° to 102° F. with some fluctuations. In December the boy coughed up a collar stud and this was followed by an improvement in the physical condition though not in the pulmonary physical signs. An exploratory puncture was made at the right base without results. The condition remained stationary for some time, but in February, 1898, an abscess formed over the sixth rib in the right nipple line which was incised by Mr. J. Rickman Godlee. The temperature began to assume a remittent type, and while suppuration continued the liver became more enlarged. More than one exploratory operation was made in the hope of finding a collection of pus, but without relieving the patient, who eventually became weaker and died. At the post-mortem examination the disease was found to consist of a collection of caseous masses in the liver, some of which near the upper surface of the right lobe had softened so as to form abscess cavities. The external operation wound communicated with the space between the liver and diaphragm, which was filled with caseous material. The right lung was condensed at the base and collapsed, evidently from old obstruction of the bronchi. The pus from the hepatic abscesses was found to contain pale-yellow or cream-coloured granules differing in colour, but of the same size as actinomycotic bodies, and on preparing cover-slips and stains with Weigert's modification of Gram's solution a fine mycelium was found, more delicate than that of true actinomyces and composed largely of strings of cocci. A description was given by Dr. Habershon and Dr Hichens of the appearances of the various parts of the caseous liver tissue. In the central caseous areas a definite organism was found presenting under a low power of the microscope the same concentric arrangement of rings as the bodies found in actinomyces. With high magnification these rings were seen to be
omposed entirely of delicate threads of cocci presenting
tle or no dichotomy and far more delicate in size
true actinomyces. Dr. Habershon and Dr. Hichens
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and bacillary forms of actinomycosis, and came
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as those found on the husband's tongue. osis
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r. W. H. KELSON instanced a case of syphilitic
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phthisis. He had been quite well up to
n he had begun to suffer from general
h without expectoration, and some
On admission there was some
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He was not quite clear as to the distinction between actinomycosis and pseudo-actinomycosis. Presence of these fine threads which tended to take on sporulation might be a *point of distinction, but* he was not quite satisfied on that point. In the absence of cultures it was difficult to decide. He did not feel sure that these specimens deserved the name of pseudo-actinomycosis.—Mr. S. G. SHATTOCK agreed with Professor McFadyean in thinking that one could not rightly draw any conclusion as to the nature of the organism without making cultures. *He would like to ask Dr. Habershon* why he thought that this case was one of primary disease of the liver? In cases of actinomycosis there was always some lesion of the intestine, and he suggested that there might have been a healed lesion in this case.—Mr. A. G. R. FOULERTON also thought that without making cultures it was difficult to *decide as to* whether this was actinomycosis or some other streptothrix organism. When stained most of these organisms resembled each other and chain sporulation was common to them all. He remarked that the streptothrix actinomycotica lately isolated from cases of human infection had been a strictly anaerobic organism, and *therefore he would not* have expected to get cultures unless they were grown anaerobically. He did not like the term "pseudo actinomycosis."—Dr. HABERSHON, in reply, said that he had brought the case forward because he wanted help in the identification of the organism. In the recorded cases so few of the organisms were illustrated that it was difficult *to identify them. The prefix "pseudo" was undoubtedly* a resource of those who felt uncertain about the actual nature of a certain lesion. He confessed that his case might be a *variety of true actinomycosis, but he wished to mention* that all the six cases which had occurred at the Brompton Hospital had presented different features, and it was *the absence of these in the present case* which had weighed with him most in regarding it as a pseudo-actinomycosis.

Mr. W. G. SPENCER narrated a case of Spheroidal-celled Carcinoma having the characters of a rodent ulcer growing from sweat glands arising in a so-called super*numerary nipple. The growth originated in* a pigmented mole on the outer part of the breast of a woman, aged 58 years, 18 months before removal. The primary growth consisted of spheroidal cells covered by an ulcerating surface, *resembling the type of rodent ulcer believed to arise in sweat* glands. Mr. Spencer pointed out the interest of the case in that *malignant disease commenced in one* mole, whilst another unaltered one showed a similar structure; the former representing the actual, and the latter the potential, origin of malignant disease from fœtal rests. Previously recorded cases were referred to.

Mr. SPENCER also narrated a case of Fibroma of the Tongue, the specimen being exhibited. The growth previously to removal occupied the anterior fourth of a tongue, and it proved on microscopical examination to be composed of pure fibrous tissue. The patient was a man, aged 68 years. He had noticed the tumour for five weeks and it had continued to grow in spite of the administration of iodide. It formed a hard white tumour embedded in the muscular substance of the tongue, projecting a little from the under surface and being about three-quarters of an inch in diameter. It was well defined but not separated from the muscular substance by a capsule. It was taken to be an ordinary epithelioma before removal, but there had been no glandular enlargement. Mr. Spencer *referred to the rarity of the* tumour and its possible origin from fœtal rests in the deeper parts of the raphe of the tongue.

Dr. WILLIAM HUNTER narrated a case of Acute Yellow Atrophy occurring in a woman, aged 47 years, who was admitted into hospital with a history of two weeks' illness. On admission she was delirious and there was intense jaundice. She became comatose and died 24 hours later. It was thought to be a case of cirrhosis of the liver, but at the necropsy the liver showed [illegible] and Mr. [illegible]

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yellow portions there were *fatty* degeneration and infiltration of the liver cells. Thirdly, here and there there was an inflammatory infiltration of certain parts, of a semi-necrotic character, representing the inflammatory reaction around the necrosed areas. As regards the bile ducts the larger ones were quite patent, but the smaller hepatic ducts were blocked with desquamating epithelium. Cultures had been made *from* the liver, spleen, and gall-bladder. The spleen was sterile, but the gall-bladder and liver contained the bacillus coli. No other organisms were detected. Microscopical examination of the kidney showed that the renal epithelium was in a state of complete degeneration and necrosis, somewhat resembling the hepatic cells. Dr. Hunter had collected records of cases of the disease and found that the average of the first stage in which there was slight jaundice lasted between two or three weeks. In his case it had been two weeks. The second stage, consisting of delirium passing into coma, lasted on an average from two to three days. In his case it was 48 hours. Many of the cases had not been recognised until the necropsy. Turning to the nature of the change in the liver he regarded it essentially as an acute bacterial toxic necrosis. The nature of the organism was doubtful. It was doubtful whether it could be the bacillus coli. The jaundice was probably due to the blocking of the intra-hepatic ducts. He referred to a case of acute yellow atrophy occurring in a child, aged eight years, under the care of Dr. Dawson Williams, who died after an illness of three or four weeks.—*Dr. H. MORLEY FLETCHER referred to the question whether* the changes of acute yellow atrophy occurred in a liver previously healthy or a liver which had already undergone some pathological *change. He* thought that in the specimens that were shown there was evidence of some antecedent fibrosis. He had had the opportunity *of seeing the case of the child to whom Dr. Hunter had* referred and of examining the liver after death. It showed distinct cellular and multi-lobular cirrhosis. Probably there was some infection on the top of this change. Two other cases to which he also referred presented some previous change in the liver. One was a man who was in the hospital *for some time with cardiac disease and the usual enlargement* of the liver. He was suddenly seized with symptoms of acute yellow atrophy and died. At the necropsy the cardiac liver was confirmed with the acute yellow atrophic changes supervening. Another case was that of a man in whom the changes of acute yellow atrophy were *found in the right lobe of the liver, to which they were* limited, the left lobe presenting old fibrotic changes.—Dr. A. G. AULD asked whether the nuclei were of inflammatory origin or whether they were the nuclei of the hepatic cells.—Dr. HUNTER, in reply, said that in the degenerated parts there were no nuclei at all left. *They were entirely destroyed.* In the inflammatory portions there were leucocytes and fibrous tissue-cells. Referring to the nomenclature he could not agree with the term "icterus gravis." It was a legitimate term to use but was open to this objection that it only connoted a severe jaundice, whereas there was a series of cases constituting a group of diseases, some of which died with large swollen livers, others with yellow atrophic livers, yet they all presented severe jaundice. The term "acute yellow atrophy" connoted all the distinctive features of the disease under notice.

HUNTERIAN SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held on Oct. [illegible] Dr. J. DUNDAS GRANT, the President, being in the c[illegible]

Dr. F. J. SMITH showed a case of Cirrhot[illegible] showing well-marked *Albuminuric Retinitis.* The [illegible] a labouring man, aged 40 years, who came und[illegible] the infirmary, died when the p[illegible] was being [illegible] out from the chest. The post-mortem examination showed very marked necrosis of the pleura at various parts and the pulsating air sac had been formed in the subcutaneous tissue of the chest wall. Dr. Harris referred to the great rarity of so-called pulsating empyema, and he had been unable to find any record of a pyo-pneumothorax where the air sac pulsated.

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Dr. A. HILL GRIFFITH mentioned *two cases of Rodent*

Ulcer of the Eyelid and showed Microscopical Sections of the same.

Dr. C. POWELL WHITE showed two specimens of so-called Infective Sarcoma of the Vagina of Bitches. The specimens resembled those described by Washbourn and Bellingham Smith. In one of the bitches there was a growth in the mamma having the same structure as the growth in the vagina. Yet the animal recovered after both growths had been removed Both bitches were infected by the same dog, which also infected several other bitches and finally died as a result of the growths.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Aphasia.—Micro-organisms in Pus.—Heart Disease.

A MEETING of this section was held on Nov. 2nd, Professor A. C. O'SULLIVAN, the President, being in the chair.

Dr. H. T. BEWLEY exhibited the Brain from a case of Aphasia. The patient was a woman, aged 33 years, who in May, 1897, had an apoplectic seizure. When, after several days, consciousness returned it was found that there were (1) slight paralysis of the lower half of the right side of her face, which soon passed off, and (2) inability to speak This inability gradually lessened to some extent, but improvement soon ceased, and for the remainder of her life (she died from phthisis in February, 1898, nine months after the apoplectic attack) she was aphasic. The characters of her aphasia were as follows: 1. She was unable to recall the names of familiar objects shown to her, of flavours given her to taste, &c.; she, however, recognised their nature and understood their uses. 2 She understood simple sentences spoken to her—e g., the request, "Hold up your hand," but not more complicated or abstruse sentences 3. She could read written or printed words, but she did this slowly and with many mistakes, and the words when read did not bring any idea to her mind. She did not attempt to carry out any directions in writing, although she read the words. 4. She had very little power of voluntary speech; she usually communicated with the nurses by signs and was fully aware of the mistakes she made when trying to speak. She was never able to repeat a word deliberately, although she might have just used the word in a sentence. 5. She could copy words a little. 6 She could not write correctly, except her own name; if told to write some certain word she often wrote down some entirely different words. A hæmorrhage was found to have taken place in the neighbourhood of the left island of Reil, which had destroyed the grey matter of the convolutions of the insula and some of the adjacent white matter. A small cavity occupied the place of these convolutions, and around it was a quantity of yellowish substance containing many granules of hæmatoidin.—Dr. W. R DAWSON remarked that the island of Reil was fixed upon by Flechsig as his association-centre—a centre in connexion with that of hearing, of the motor organs of speech, and various other centres If this view were correct the physical element of speech would be damaged in the case of a lesion of this kind.

The PRESIDENT gave particulars of the Bacteriology of a case of Abscess involving the Frontal, Parietal, and Temporal Bones He isolated from the pus the streptococcus pyogenes and the staphylococcus pyogenes, albus and aureus. The streptococcus proved very virulent, one cubic centimetre of a broth culture injected intra-peritoneally into a rabbit and subcutaneously into a guinea-pig at about 2 P.M. causing death during the same night Neither variety of the staphylococcus produced any effect when inoculated into guinea-pigs or mice. —Professor E H BENNETT said that the patient was a child and the case was an illustration of what was not commonly seen—namely, a combination of tuberculosis with rickets Long ago, in 1858 or thereabouts, Sir William Jenner wrote the best account of these diatheses, as he called them, and one of the strong points of his description was the rarity of tuberculosis and rickets crossing each other. This child had rickets without doubt, his femora and shin bones bearing evidence of it. He was six or seven years old when tuberculosis supervened on the rickets and attacked him in many places. Over his left temporal fossa there was an abscess like the other tuberculous ones all over his body.—Professor E. J. MCWEENEY said that it was an interesting thing to find all the various pus cocci in the one specimen.

Dr. BEWLEY exhibited a Heart, the subject of Mitral Narrowing and Aortic Regurgitation. It was taken from the body of a female aged 20 years, who, while apparently in perfect health and without having complained of any symptom of disease, suddenly fell down dead while walking across a yard.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY —A general meeting of this society was held at 20, Hanover-square, W., on Oct. 31st, Dr. Douglas Kerr (Bath) being in the chair. The treasurer's balance-sheet for the year ending Sept. 30th, which showed that the financial position of the society was satisfactory, was presented and passed. Votes of thanks to the retiring President (Dr. Ivor Murray of Scarborough), the Council, and the officials of the society were passed.—Dr. Douglas Kerr then introduced the President-elect, Dr. Frederic Bagshawe (St Leonards). 26 new candidates were nominated and the President then gave an address on Some Points in the Development of Seaside Towns, an abstract of which follows. Dr. Bagshawe traced the early history and development of watering-places, specially dwelling upon the steps to be taken for the sanitation and water supply of such growing towns. Alluding first to the elementary methods adopted in early days and the dangers arising therefrom he showed what system of drainage had come to be employed in various seaside places, and pointed out that while nearly all discharged their sewage into the sea some had direct outfalls and some intercepting drains and tanks, making use of the ebb and flow of the tide to disperse the sewage at suitable times. He further showed that "the close aggregation of towns" around the coasts in certain parts must lead before long to considerable difficulty in the disposal of sewage; and that there was reason to fear lest the sewage discharged from one town might cause nuisance by being carried by the set of the tide and deposited along the shore of a neighbouring town. To remedy this, either some joint scheme must be hit upon by contiguous towns, by which this danger should be obviated, or some means must be adopted by which the solid parts of the sewage could be reduced and the effluent rendered innocuous. Of the various plans of sewage treatment hitherto in vogue a large number aimed at the precipitation of the solid matter in suspension by the addition of chemicals, the resultant sludge being then submitted to pressure and when dry disposed of as manure. This was, however, a costly and unsatisfactory process. Admirably adapted as sewage farms might be to many inland towns, they must remain an impossibility for most seaside resorts, owing to low levels and the want of available lands. The bacterial system seemed to have established itself firmly in the valleys of the Thames and the Exe and in other parts, and to be receiving recognition financially and otherwise from the Local Government Board. The great principle had been evolved that the rapid splitting up of the organic compounds in the sewage matters passing through the filters was due to the activity of the large number of micro organisms therein contained. The change was no longer accounted for as being a purely chemical or mechanical process. Bacteria worked their ends under two conditions—(1) in the closed or anaerobic beds, and (2) in the open or aerobic beds. The dangers arising from the discharge of sewage in the proximity of oyster beds had been demonstrated in the recent report of the Local Government Board the shell-fish therein gathered being capable of retaining the specific organisms of enteric fever in an active state for a month at a time. This might be counteracted by the use of the bacterial system, for it had been shown by Lawes and Andrewes that some liquefying organisms had a germicidal effect upon typhoid bacilli, so that their sojourn in a septic tank or their arrest in an anaerobic filter with such organisms diminished their chance of survival. This conclusion had been confirmed experimentally by Dr. R. Pickard of Exeter, who found that 90 per cent. of typhoid bacilli introduced into a septic tank were rapidly removed by bacterial agency. This system had been recently introduced at Morecambe in Lancashire and might prove very valuable where similar conditions prevailed or where seaside towns were closely aggregated. After alluding to the water-supply and other hygienic conditions of health resorts Dr. Bagshawe concluded by insisting on the importance of the presence of medical men on boards of health and sanitary committees, showing the power which they possessed of furthering the efforts of the medical officer of health in the cause of sanitation by the direct personal influence which they could bring to bear upon these bodies —Dr Robert Lee (London) proposed and Mr Ward Humphreys (London) seconded, a vote of thanks to Dr Bagshawe who briefly replied

Forfarshire Medical Association —This *society met in the University College Dundee, on Nov 1st,* Mr C S Young, Vice President, being in the chair —Professor J A C Kynoch showed a specimen of an Ovarian Tumour removed by operation per vaginam from a patient from whom he had removed a similar but larger tumour by the abdominal route He gave the reasons for his change in operation and discussed the relative merits of the two operations preferring the latter should it be at all possible —A number of pathological specimens were sent to the meeting by *Professor L R Sutherland* from the pathological museum, some of which had been presented by Sir William Gairdner —Dr A McGillivray read a paper on Advancement *versus* Tenotomy in the Surgical Treatment of Concomitant Strabismus and its Treatment by Optic and Orthoptic Means The merits of the two methods of surgical interference were discussed, convergent strabismus being taken as an example Advancement was shown to be more rational, being based on etiology and having for its object the strengthening of the disused and therefore weakened, external recti instead of the weakening of the unimpaired internal recti by tenotomy Both external recti should be advanced at the same time, as the condition was a bilateral one Cases were shown to demonstrate the above points —Professor A M Stalker gave an account of a case of Visceral Syphilis The patient a man, aged 47 years, was admitted into the hospital suffering from steady emaciation with a *history of hæmatemesis four months previously but without* the symptoms or physical signs of gastric disease There was no indication of syphilis He died and at the post-mortem examination the fatal lesion was found to be a stricture of the jejunum four feet from the pylorus due to a cicatrised ulcer In addition there was a healed ulcer of the stomach and extensive fibrosis of the heart associated with arterio-sclerosis and blockage of the coronary arteries —Dr C Kerr confirmed the diagnosis from his attendance and *treatment of the members of the same household —Dr* W E Foggie described the Nervous Sequelæ found in a man five months after he had been injured by a fall from a height of 40 feet which had apparently resulted in unconsciousness, retention of urine, and severe bruising but no evident fracture His present condition showed partial rectal and genital paralyses, symmetrical areas of thermoanæsthesia and analgesia over both heels enclosing much smaller areas of tactile anæsthesia, numbness and impaired sensation around the anus, increased *knee jerks, and pain in the bladder* and urethra as well as over each side of the small of the back These phenomena pointed to a hæmorrhage into the cord involving to some extent the sacral segments *from the* second to the fifth, and probably also their roots, unless the irritative phenomena above mentioned were secondary to the cystitis still present —Dr J Mackie Whyte asked if there was any relation between the sensory supply of the anus and that of the heels that would explain the above case, which did not seem in harmony with *Head's diagrams —Dr Foggie* in reply, acknowledged the difficulty and could only suggest that the cord had been injured in more than one place and at different levels —Dr Mackie Whyte gave an account of a case of a quarryman who had had during the last year and a half frequent attacks of dyspnœa with some cough and slight expectoration The physical signs were those of chronic pneumonia The patient died during an attack of dyspnœa These frequent attacks were characterised by their sudden cessation The post mortem examination showed the lungs to be those of a case of pneumokoniosis

British Laryngological, Rhinological, and Otological Association The annual general meeting of this society was held on Nov 9th Dr Barclay J Baron the President, being in the chair —The officers for the ensuing year were appointed Mr Mayo Collier being elected President —Mr Lennox Browne reported the case of a patient the subject of *Epithelioma of the Larynx* from which a (presumably) benign growth had been removed nine years previously Mr Browne remarked that although no microscopical examination had been made in the first instance it was not reasonable to suppose that recurrence would have been delayed so long had the case been one of squamous epithelioma as was revealed on the more recent occasion —Mr V H Wyatt Wingrave showed slides which illustrated the undoubtedly malignant nature of the removed tissue —Mr Lennox Browne also reported two cases of Epilepsy which had been benefited by removal, in the first case, of tonsils and adenoids from a child, aged five years, the subject of epilepsy in a grave form and with mental hebetude and in the second case by removal of adenoids from a female patient, aged 19 years, the subject of *petit mal.* It was a feature of note that in both cases bromide of potassium had been given in enormous doses without benefit before the operation, but it had proved most effective in very small doses (three grains) afterwards —Mr W J Chichele Nourse showed a middle aged man with Papillomatous Growths on the Left Vocal Cord —Mr E Dennis Vinrace showed a patient with extensive Ulceration of the Tongue —Dr J Dundas Grant considered the disease to be epithelioma engrafted upon tertiary syphilitic infiltration —Mr Mayo Collier said that the origin of the disease was no doubt syphilis; there were two ulcerating craters doubtless breaking down gummata —Mr Wyatt Wingrave Mr Lennox Browne, and Dr James Wilson (Liverpool) also spoke —Dr Dundas Grant read notes of a case of Nasal Synechia in a girl, aged 19 years There was no history of injury, but the prominent symptom pain across *the bridge of the nose had followed an attack* of influenza two years ago —Dr Dundas Grant also showed a case of Rapid Enlargement of the Cervical Glands in an elderly woman for which no peripheral cause was found The diagnosis lay rather between tubercle and some form of new growth —Mr Wyatt Wingrave showed a case of Congenital Syphilitic Ulceration of the Nose in a female, aged 20 years There was extensive scarring in the pharynx and widespread granulomatous ulceration in both nostrils *Marked improvement followed mercurial treatment —Dr* Dundas Grant said that he regarded the case as one of lupus —Dr F J Tresilian (Enfield) showed a case of Old-standing Tertiary Syphilis of the Nose, Pharynx, and Larynx in a man aged 40 years The larynx showed relics of extensive disease and there was a subglottic stenosis in the upper part of the trachea —Dr Tresilian also showed a girl aged 16 years, with a large new Growth in the Right Lobe of the Thyroid Gland and Abductor Paralysis of the Right Vocal Cord due to pressure on the recurrent *laryngeal* nerves —Mr *Dennis* Vinrace showed a case of Cleft Palate —Dr W H Kelson showed a man, aged 30 years with well marked Exostoses in both External Auditory Meatus —The newly elected President (Mr Mayo Collier) having taken the chair then delivered an address upon Mouth breathing and its Relation to Diseases of the Throat, Ear Nose, and Accessory Cavities This address will be found at page 1478

Society of Anæsthetists —An ordinary meeting of this society was held on Nov 2nd Dr J F W Silk the President, being in the chair —Mr Carter Braine communicated the particulars of a case in which Alarming Symptoms ensued when the patient was placed in the Trendelenburg Position The patient was a thin, feeble woman 28 years of age Anæsthesia was induced with gas and ether and the patient was placed in the Trendelenburg position After the incision in the abdominal wall had been *made chloroform was used instead of ether Mucus collected* with great rapidity in the pharynx, the breathing became laboured and there was marked cyanosis The symptoms were relieved when the patient was restored to the horizontal position but they immediately appeared again when the Trendelenburg position was used —*Dr Dudley Buxton* thought that the condition could be ascribed to some vaso-motor idiosyncrasy on the part of the patient —Mr A E Francis of University College read the notes of a case in which *the administration of Nitrous* Oxide *to a girl 10 years of age gave rise to* slow, shallow respirations great lividity, and enormous venous distension the heart on auscultation and percussion being found to be distinctly distended and a systolic murmur being heard over the displaced apex Both before and after the administration the heart was of normal size and there was no abnormal murmur The recovery was good and on a subsequent occasion when chloroform was used no trouble *followed —Mr H C Crouch, Dr R J Probyn* Williams Dr Dudley Buxton and Mr J K Foller discussed the case —Mr Francis replied —Dr G B Flux described a Valveless Stopcock for the administration of Nitrous Oxide by the Open System The instrument consisted practically of two tubes one rotating within the other, so as to open or to close the opening into the gas-bag. The inner tube was bevelled off so as to form an inclined plane by means of which the gas was directed into the face-piece, and there was always a large air-opening, the weight of the gas being relied upon to prevent undue admixture with air.—Dr. Probyn-Williams, Dr. H. Low, and the President took part in the discussion and Dr. Flux replied.—A communication from Mr. W. G. Copestake of Derby was read commenting on two recent deaths under chloroform.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society held on Nov. 7th a presidential address on Modern Sanitation was delivered by Mr. G. B. Wray, the President.—After referring to the sanitary enactments of the last 25 years and the difficulties experienced in getting rural district councils to adopt any of them he advocated the establishment of a Board of Health (detached from any connexion with Poor-law administration) to administer a new consolidated and amended Public Health Act, together with the Factory, Workshop, and Burial Ground Departments of the Home Office, and the Veterinary Department of the Privy Council, with an efficient staff of experts to act as inspectors, part of whose duty should be periodically to visit and to report on the sanitary condition of every district in the country. He also recommended the appointment of whole-time medical officers of health for every county, an increase in the powers of county councils, and the formation of combined districts for sanitary administration. After a lengthy description of experiments which he had been carrying out on the biological treatment of sewage, Mr. Wray laid special stress on the work done by the macroscopic agents of nature, such as worms and flies, and he urged a more vigorous enforcement of the Rivers Pollution Act to reclaim our dykes and streams and rivers from the opprobrium of being looked upon as open sewers. Attention was then drawn to the unsatisfactory condition of the houses of the working-classes and the many difficulties in the way of abating nuisances from overcrowding in rural districts, both of which were strong factors in fostering and propagating tuberculous diseases. A short allusion was made to the means which were being, and which might be, taken for the suppression and prevention of these diseases, and credit was given to the authorities who had done good work in this connexion by the registration and inspection of slaughter-houses, the inspection of meat, and the adoption and enforcement of regulations under the Dairies, Cowsheds, and Milkshops Orders.—A hearty and unanimous vote of thanks, which was proposed by Dr. H. Handford, seconded by Mr. T. Davies Pryce, and supported by Dr. W. B. Ransom, was accorded to Mr. Wray for his able and interesting address.

MANCHESTER THERAPEUTICAL SOCIETY.—The annual meeting of this society was held in Owens College on Nov. 7th. The following gentlemen were elected to be the officers for the session 1900–1901:—President: Professor J. Dreschfeld. Vice-Presidents: Professor Dixon Mann and Dr. A. T. Wilkinson. Honorary Treasurer: Dr. R. T. Williamson. Honorary Secretary: Dr. R. B. Wild. Committee: Dr. A. Brown, Dr. F. J. H. Coutts, Dr T. N. Kelynack, Dr. E. Vipont Brown, Dr. J. S. Bury, and Dr. E. S. Reynolds.—The President, after referring in feeling terms to the loss which the society had sustained in the death of Professor D. J. Leech—who, though already showing signs of his fatal illness, gave a communication on Saline Baths at the last meeting—delivered an address on Rectal Feeding. He stated that rectal feeding was an important and useful addition to the methods of treating disease, but in many cases it was ordered without careful thought and without proper directions to the nurse as to the quantity and kind of food to be thus administered. A sufficient amount of food to keep up the body-weight might not be given, but nutrient enemeta might aid by diminishing the rapid decrease of body-weight. The capacity of different parts of the bowel for the digestion and absorption of the different elements of food was then considered, and reference was made to the varying views which had been expressed on some of these points. He then gave details of the methods of compounding various nutritive enemata which had been found useful by clinicians, and spoke of his experience in their use. Next came the question of the indications for the employment of rectal feeding and then an exhaustive list of the conditions demanding this treatment either alone or supplementary to feeding by the mouth was brought forward.—Professor DIXON MANN pointed out that though egg albumen was absorbed from the rectum, albuminuria was sometimes found to occur, which would indicate that the albumen had not been retained by the tissues. Bacterial decomposition of nutrient enemata sometimes took place, as was shown by the presence of indican in the urine.—Dr. Bury, Dr. A. Hopkinson, and Dr. Wild also spoke.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The second meeting of the session of this society was held on Nov. 14th, Dr. D. S. Davies being in the chair. Before commencing the business of the evening the President in feeling terms referred to the death of a Past-President of the society—namely, Mr. S. H. Swayne, who had at all times been a most regular member.—Dr. J. Michell Clarke showed: (1) A case of Tumour in the Inter-peduncular Space; (2) a case of Tumour in the Motor Area of the Brain; (3) a case of Tumour of the Brain in a boy, aged eight years; and (4) a case of Progressive Muscular Atrophy commencing in the Shoulder Muscles.—Dr. E. H. E. Stack commented on the case of the cerebral tumour in the boy.—Mr. C. A. Morton showed: (1) A case of Diffuse Overgrowth of the Tissues of the Thigh; (2) a case of Congenital Varix of One Lower Limb, the Perineum, and the Penis; and (3) a case of Congenital Dislocation of the Hip, with Skiagram —Dr. A. Ogilvy showed patients with Congenital Anomalies of the Eyes.—Dr. T. Fisher showed a patient with Congenital Stenosis of the Pulmonary Artery, and Specimens of the Aorta and Pulmonary Artery arising from the Right Ventricle, and of the Aorta arising from the Right Ventricle, and the Pulmonary Artery from the Left Ventricle.—Dr. James Swain showed two sets of Multiple Calculi which he had removed by suprapubic cystotomy, and a Columnar Epithelioma removed by Colectomy, all from aged patients.—Mr. Morton, Mr J. Ewens, and Dr. Stack spoke on the subject.—Dr. A. B. Prowse showed a specimen of Cardiac Embolism.—Mr. G. Munro Smith showed a skiagram of a case of Stave of the Thumb, and a specimen from a child in which death was caused by the Impaction of a Piece of Walnut in the Larynx.—Dr. E. W. H. Groves read a paper on Eclampsia.—Dr. Aust Lawrence and Dr. W. C. Swayne discussed the paper —The reading of Mr. W. Roger Williams's paper on Medical Science in the Nineteenth Century, and of Mr. Paul Bush's paper on Hospital Treatment during the War in South Africa was postponed.—Mr. Paul Bush showed upwards of 200 lantern slides illustrating scenes during the Boer War.

BOURNEMOUTH MEDICAL SOCIETY.—The annual meeting of this society was held on Oct. 26th in the Hôtel Métropole, Dr. James Davison, the President, being in the chair.—The President referred to the loss which the society had sustained by the death of Dr. D. C. Embleton, a former President of the society, and he proposed, and the society passed, a vote of condolence with Mrs. Embleton and the family.—The report and financial statement for the year 1899–1900 were considered and adopted.—The President thanked the members of the society for the cordial support which they had given him during his year of office and he then introduced Dr. Arthur Ransome, F.R.S., the President-elect.—Dr. Ransome thanked the members for electing him as President and said that he would do whatever he could for the welfare of the society. He then proposed a very hearty vote of thanks to the retiring President for the way in which he had discharged his duties.—This was carried by acclamation.—On the nomination of the outgoing committee Mr. A. H. Vernon, Dr. D. M. Ross, and Dr. W. H. L. Marriner were elected treasurer, secretary, and librarian respectively.—The following members were elected on the committee for the year 1900–1901:—Dr. A. C. Coles, Dr. James Davison, Mr. T. Fred. Gardner, Dr. Marriner, and Mr. J. R. Philpots.—The business of the meeting having concluded 35 members and six visitors dined together. It was mentioned by one of the founders of the society that this meeting was the silver jubilee of the society, which was founded in 1875 and, therefore, a notable occasion.

WATER SUPPLY OF WELLS.—At a meeting held at Wells, Somerset, on Nov. 13th, under the presidency of the Mayor, it was resolved that it was expedient for the city council to acquire the undertaking of the Wells Water Company. It was stated that the water company had not kept their promise of giving a better supply and that the medical officer of health had also complained of the existing state of affairs.

Reviews and Notices of Books.

Occasional Lectures on the Practice of Medicine By W B CHEADLE, M D Cantab., F R C P Lond, Senior Physician to St Mary's Hospital, and Lecturer on Medicine in St Mary's Hospital Medical School, Consulting Physician to the Hospital for Sick Children, Great Ormond street, London · Smith, Elder, and Co 1900 Pp 324 Price 7s 6d

THIS volume consists of lectures addressed chiefly to the students of St Mary's Hospital Medical School, to which are appended Dr Cheadle's well known Harveian Lectures on the Rheumatism of Childhood which have been "revised and corrected up to-date" "These lectures were designed," says the author in his preface, "for the assistance of students in the everyday work of their profession by directing attention to some common errors in medical practice and by setting forth the importance of certain points in relation to the diagnosis and treatment of disease which are not dealt with in detail in the text books, are rarely treated adequately in clinical teaching, and which are therefore apt to be neglected or overlooked in actual practice" Dr Cheadle has succeeded admirably in his task. Each lecture is replete with information and contains numerous valuable hints, the result of prolonged experience and careful observation

The first lecture is entitled "The Use and Abuse of Tonics" The subject is certainly one which merits attention as numerous fallacies are prevalent with regard to it The laity are strongly imbued with the idea of "strengthening medicine," and yet a physician would be puzzled to give a definition of such Dr Cheadle draws attention to the general want of discrimination in giving tonics, or rather the lack of suitable preliminary treatment before the administration of such drugs as strychnia iron, or arsenic The sense of debility experienced by patients is frequently caused by the accumulation of waste products in the body and these must be eliminated before the ordinary "tonics" can exert their beneficial effects

The lecture on the Clinical Uses of Opium will also be found instructive, the indications for and against its employment being clearly laid down

Two lectures are occupied with the discussion of Some Practical Points in the Treatment of Diseases of the Lungs and Air-passages We can cordially recommend a perusal of Dr Cheadle's remarks to young practitioners The methodical treatment of bronchitis is of the greatest importance, whilst the routine method of prescribing "ipecacuanha, squill, and ammonia" in all cases of bronchitis and in all stages of the disease cannot be productive of successful results and certainly cannot be regarded as a high form of medical art The author therefore details the various therapeutical measures which should be adopted in treating a case of bronchitis from the commencement of the attack Equally good are the remarks on the treatment of pneumonia and pleurisy.

Twenty years ago Dr Cheadle first drew attention in this country to the occurrence of scurvy in infants in sporadic form In Chapter IX he gives the results of his large clinical experience on this condition He remarks that the earlier observers in Germany regarded and described infantile scurvy as an acute form of rickets, but the essential independence of scurvy has been generally accepted by the leading authorities in Europe and America He enters fully into the considerations which led him to adopt this view. An interesting table is given of 61 cases of infantile scurvy showing the age at which the disease appeared, the exact diet of artificial food on which the scorbutic state followed in each instance, and the result of treatment by anti scorbutic diet

The lectures on the Rheumatism of Childhood are too well known to need any further remarks from us in order to indicate their object and scope

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Thomas Sydenham By J F PAYNE, M D Oxon London · T Fisher Unwin With a Frontispiece Large crown 8vo 1900 Pp xvi-264 "Masters of Medicine" Series Price 3s 6d

IN the Oxford Museum—an allegory in building invented by Acland and Ruskin, which forms part of a plan to represent the whole orderly creation, the Kosmos, in such a way as to make it intelligible to the student—the history of medicine is represented by five statues Sydenham, the typical practitioner among the moderns, stands in the centre On his right is John Hunter, who for the interpretation of disease, its causes, its prevention, and its cure searched through every form of life in the great Book of Nature On the other side of Sydenham stands Harvey, who solved the problem that had been unsolved from all time These three built on the foundations reared by Aristotle and Hippocrates, who complete the story

Dr Payne in his account of Sydenham has shown how he brought back the exponents and students of physic to observation and its conclusions and removed them from speculations without data and from misinterpreted authority No living physician is better fitted for this task than is Dr Payne, the Harveian Orator who spoke of Harvey and Galen, and the author of the introduction to Linacre's translation of Galen's "De Temperamentis" Dr Payne, too, is the Harveian Librarian at the Royal College of Physicians of London and was formerly a Fellow of Magdalen College, Oxford, and Sydenham was intimately connected both with London and with Oxford Dr Payne has been at much trouble to construct his biography from original sources and he has been so successful that he has produced one of the most readable, as it is certainly one of the most scholarly, volumes which have as yet appeared in the series of "Masters in Medicine" He traces out the early and adventurous history of his hero with the greatest care and adds innumerable fresh incidents in Sydenham's career

Thomas Sydenham was baptized on Sept 10th, 1624, and died on Dec 29th, 1689 He came of an old Dorsetshire family, being the fifth son of William and Mary Sydenham of Wynford Eagle, a hamlet lying about eight miles from Dorchester From the beginning of the Civil War the father and his sons fought against the King and in the summer of 1644 Mrs Sydenham, the mother, was killed by Royalist soldiers In the following February Francis, a major in the Parliamentary army, was killed in battle William, the eldest brother, was a well known Cromwellian colonel, at one time in command of all the Parliamentary forces in Dorsetshire and afterwards of sufficient importance to be specially exempted from the Act of Indemnity passed when Charles II came to his own again Thomas bore arms under his brother in the campaign in the west and again in 1651, when he was a captain of horse and rendered important services to the Council of State, though, fortunately perhaps, he was absent from England at the time of the Restoration In the Scotch campaign John, another brother, was killed, and Thomas petitioned the Protector for the arrears of his brother's pay At Cromwell's special desire £600 were ordered to be paid to Sydenham out of certain moneys belonging to the Commonwealth in the hands of the commissioners for coal dues in the port of Newcastle The £600 served Sydenham for a marriage portion, as Dr Payne very acutely suggests, and he shortly after settled down to the practice of physic as a means of livelihood So stirring an introduction to life was not without its effects upon the character of Sydenham, and Dr. Payne is careful to point out that "if tales of fighting and bloodshed should seem to be of little moment in the life of a physician we should remember that this rough school of warfare formed a part of Sydenham's education. It was essentially a school of revolt, good or bad as we may choose to think it, and must have had a share in forming the character of one who brought into matters of thought and science the courage of a soldier and the independence of a rebel."

Sydenham received a broken education at Oxford, first at Magdalen Hall and then at Wadham, the home of those who founded the "Invisible College"—as the Royal Society was called at the beginning of its career—and afterwards he became a Fellow and Bursar of All Souls. He was created a Bachelor of Physic in the University on April 14th, 1648, by command of the Earl of Pembroke, when he was still at the commencement of his medical studies, and it was not until June 25th, 1663 that he obtained a licence to practise from the Royal College of Physicians of London. In the interval he had been a candidate for a seat in Parliament; he had filled the office of Controller of the Pipe, or Registrar of Leases granted by the Crown, and, more than all, he had visited Montpellier and learnt his business at the feet of Barbeyrac

The Great Plague of 1665, by enforcing a holiday, led Sydenham to write his first book, a small octavo of 156 pages, which would make two longish articles in a modern medical journal. It was a treatise on Fevers the outcome of his own observations, and he dedicated it to Robert Boyle. Several shorter contributions followed from time to time, though Sydenham was not fond of writing and ill-health and want of leisure made composition difficult to him. From these shorter writings comes his classical account of gout, to which he was a martyr for many years, and we learn that he gave steel filings as a chalybeate and introduced a fluid laudanum—still known as Sydenham's laudanum and analogous to the wine of opium—in preference to the solid laudanum which had been hitherto prescribed. All the writings are in Latin, and Dr. Payne again examines the vexed question of the language in which Sydenham wrote. He arrives at the conclusion that it was terse English translated and amplified for the press by Dr. Mapletoft, one of his medical friends, and by Mr Gilbert Havers, a non-medical graduate of Trinity College, Cambridge.

Whilst Dr. Payne gives Sydenham every credit for the great advances he made in the study of medicine he is quite impartial and shows the points wherein he was ignorant He failed entirely to perceive the importance of anatomy and physiology He spoke with great contempt of morbid anatomy, saying that "others have more pompously and speciously prosecuted the promotion of this art [medicine] by searching into the bowels of dead and living creatures, as well sound as diseased, to find out the seeds of disease destroying them, but with how little success such endeavours have been and are likely to be attended, I shall in some measure make appear." It was the especial merit of Sydenham to proclaim the great truth that science was, is, and always must be incomplete, and that danger lurks in the natural tendency to act upon it as if it were complete. Dr. Payne, therefore, well says that whilst Harvey was the master of science Sydenham was the master of practice

Dr. Payne introduces many interesting incidents into his work He gives an account of the condition of Oxford and of the origin of the Royal Society, he paints a picture of the physician's practice in the seventeenth century, and he tells many good stories. Amongst others he says that Sydenham was one day sitting at his open window in Pall Mall overlooking the Mall in St. James's-park (for the south side of the street had not yet been built) "with his pipe in his mouth and a silver tankard before him, when a fellow made a snatch at the tankard and ran off with it. Nor was he overtaken before he got among the bushes in Bond-street, and there they lost him."

The portrait placed as a frontispiece is from a direct photograph of the painting in the possession of the Royal College of Physicians of London, which is, according to the highest authorities, the work of Mrs Mary Beale, whose son, Bartholomew, was one of Sydenham's pupils.

The biography is dedicated to Sir Samuel Wilks, and the author expresses his indebtedness to Dr. J. B Nias for placing at his disposal some notes on the Sydenham family. As in the other volumes of the series the book is provided with an excellent index.

Kurzgefasstes Lehrbuch der Kinderheilkunde fur Aerzte und Studierende. (A Concise Text-book of the Therapeutics of Children's Diseases for Practitioners and Students.) By Dr. CARL SEITZ. Second edition, enlarged and revised. Berlin: S Krager. 1901. Super royal 8vo. Pp. 499 Price 11s. net.

WHEN the author was invited by the publisher to write a compendium of children's diseases his original idea was to produce for the benefit of students and practitioners a guide in which, firstly, the clinical aspects of these maladies should be portrayed fully and yet concisely, and in which, secondly, special attention should be paid to the physiological peculiarities, hygiene, and dietetics of childhood, and to the methods of examination. It was found that even by discussing these subjects with extreme brevity the limits of a compendium were exceeded and the book had to be written on a larger scale. In this, the second edition, it has widened its borders still further in order to keep pace with recent advances in our knowledge of the complaints of childhood. The chapters on diphtheria, tubercle, rickets, and morbid changes in the blood have been revised and enlarged; additions have been made to the sections on cerebro-spinal meningitis, diseases of the nose, throat, and larynx; while the paragraphs on general defective vitality, chondrodystrophia and osteomalacia are altogether new. The size of the book remains unaltered owing to the employment in several places of smaller type.

We have found the book as a whole disappointing, the result probably of the conditions under which it has been written. The author, we think, has fallen between two stools. His book has ceased to be a compendium and has not yet become precisely anything else. It has, at all events, deviated from the somewhat narrow path on which it appears to have set out and shows a decided tendency to become a systematic text-book of children's diseases. Of this altered inclination the title-page seems to be unaware for it continues to assert that the subject of the volume is the therapeutics of children's diseases. The result of this discrepancy is to render the task of criticism a somewhat difficult one. Do we criticise the author's pathology and symptomatology? The title-page reminds us that the book only professes to be a text-book of therapeutics. A consideration of the amount of space devoted to systematic description, however, shows this position to be untenable—for example, of seven pages devoted to tuberculous meningitis only one is occupied with treatment. Of nine pages on scarlet fever two are concerned with prophylaxis and treatment. Of some 18 pages given to diphtheria only seven deal with these points. Do we ignore the pathology and symptomatology? In a volume of 499 royal octavo pages devoted principally to the therapeutics of children's diseases we have a right to demand a fuller treatment of this subject than obtains in this volume. No student, however, need be deterred from reading Dr. Seitz's book by the suspicion that it is written on too elaborate a scale, for, as a matter of fact, the author's directions as to treatment are quite simple and straightforward. So far, indeed, from being too elaborate, they even share the defects of the systematic portion—that is to say, they are marred by a certain superficiality reminiscent, perhaps, of the origin of the work. The trail of the compendium, if we may be allowed the expression, is over them all.

The book is divided into two parts, the first of which is distinctly the better of the two. It treats: 1. Of the physiological and anatomical peculiarities of childhood. This section is perhaps the most satisfactory in the book. 2. Of the rules according to which children should be fed and clothed. Here some useful tables will be found. One gives an analysis of 35 infants' foods; another of 70 common articles of diet in reference particularly to the proteids, fats, and carbohydrates which they contain In this section we find no fewer than 16 ways of preparing food for bottle-fed infants, and apparently the practitioner is supposed to try the various recipes in turn till he happens to light on one which suits his patient Compared with the scientific yet simple methods advocated by Rotch and other Americans Dr Seitz's plan seems somewhat crude 3 Of methods of examination which are also well described. 4. Of the general principles of treatment. Here the author rightly emphasises the value of hydrotherapeutic and other non-medicinal remedies in infancy.

Part II. is devoted to the consideration of individual diseases in detail, and it is here that the superficiality which we have referred to becomes most apparent Only half a page is devoted to the etiology of rickets, and it is nowhere suggested that an insufficiency of fat in the food may have anything to do with the causation of the disease. While other factors, such as unhygienic surroundings and wasting maladies, play their part, a theory as to the pathogenesis of rickets which is supported by much evidence should not have been entirely ignored. In the treatment of ordinary cases besides phosphorus, adrenal substance and thyroidin are recommended. Under "General Defective Vitality" Dr. Seitz groups those children who without discoverable organic defect are congenitally unfitted to assimilate sufficient nourishment—cases, in fact, of atrophy which are not the result of dyspepsia, a convenient distinction.

We think that the author could make a fine text-book of this volume. We have pointed out its defects, and in its next edition we hope to see them removed.

On Diabetes Mellitus and Glycosuria. By EMIL KLEEN, Ph.D , M.D. London · Baillière, Tindall, and Cox. 1900. Pp. 313. Price 10*s*. 6*d*.

DR. KLEEN'S experience as a physician in Carlsbad has given him exceptional opportunities to study the occurrence, symptoms, pathology, and treatment of diabetes and the present volume is the result of his observations and experiments.

The author very rightly takes a broad view of the subject and he is to be congratulated on the way in which he has set forth the conclusions at which he has arrived. We note particularly the stress which he lays on glycosuria as a condition apart from true diabetes mellitus. Under the latter condition are usually included different pathological conditions which are imperfectly understood but which are characterised by a faulty metabolism as a result of which, under ordinary diet, there takes place the excretion in the urine of an abnormally large amount of sugar. Thus diabetes mellitus is not a clinical unit but a syndrome, the chief and most constant symptom of which is glycosuria, which is represented by very varying clinical types As Dr. Kleen points out in his first chapter, there are numerous cases attended with the excretion in the urine of minute yet distinctly pathological amounts of sugar, which cases differ widely in clinical aspect and in prognosis from the diabetic type, and which should not be included in the designation "diabetes mellitus," and it is more particularly from the point of view of prognosis that the practitioner will do well to carefully observe and classify all cases which yield proofs of the presence of sugar in the urine When the power of consuming the ingested and digested carbohydrates is but little, or momentarily, impaired, and when the pathological excretion of sugar under ordinary mixed diet only slightly exceeds the traces of sugar found in normal urine, or is but transitory, the condition must not be considered one of diabetes mellitus, but of simple glycosuria. When, however, the excretion of sugar becomes considerable and more persistent but disappears when the carbohydrates are decreased or withdrawn from the food, the condition then prevailing, and which generally is accompanied by other more or less well-defined symptoms, Dr. Kleen suggests should be known as the "mild stage of diabetes," whilst he considers that the severe stage of diabetes is characterised by the occurrence of glycosuria even when the carbohydrates are withdrawn from the food. We quite endorse this classification, although the limits thus fixed are far more distinct on paper than in the reality of clinical experience.

The chapter on the Geographical Distribution of Diabetes Mellitus contains much interesting information. Of all races, the Hindu is most susceptible to diabetes. One authority (Bose) estimates the number of deaths from diabetes in Calcutta at 10 per cent. of the entire mortality. Next to the Hindus the Jews are highest in the scale of diabetic frequency. Dr. Kleen has come to the conclusion, from the researches of Abeles, Meritz, and others, and also from his own investigations, that there is a trace of glucose in normal urine and that the amount in 24 hours scarcely exceeds one-thousandth of 1 per cent. Some slight or occasional increase beyond this may often occur without noteworthy significance, but as soon as hundredths or tenths per cent. are reached the condition must be considered pathological.

Dr. Kleen further points out that although simple glycosuria often shows a decided tendency to remain unaltered for decades in spite of all sorts of pernicious influences, yet mild diabetes certainly not infrequently develops gradually from simple glycosuria, but it usually remains of the mild form.

The chapter on the Symptoms and Complications of Diabetes Mellitus is well written. The descriptions are full and complete and the illustrative cases are printed in a different type to that of the general letterpress—a plan which has obvious advantages There is also a short, but interesting, chapter on "Diabetes Infantilis."

The theory and pathogeny of diabetes are discussed under the heading of "Metabolism and Nutritive Needs." The amount of work required in preparing material for this chapter must have been immense and we can strongly recommend a perusal of it to those who wish for a thorough knowledge of the subject

Some useful hints are given in Chapter VIII., entitled "Investigation of a Case of Diabetes," the first and most important rule being never to use for a test a specimen of urine passed when the patient's stomach is empty before the first meal of the day. This is a point which is frequently forgotten, with the result that a false impression of the case is received.

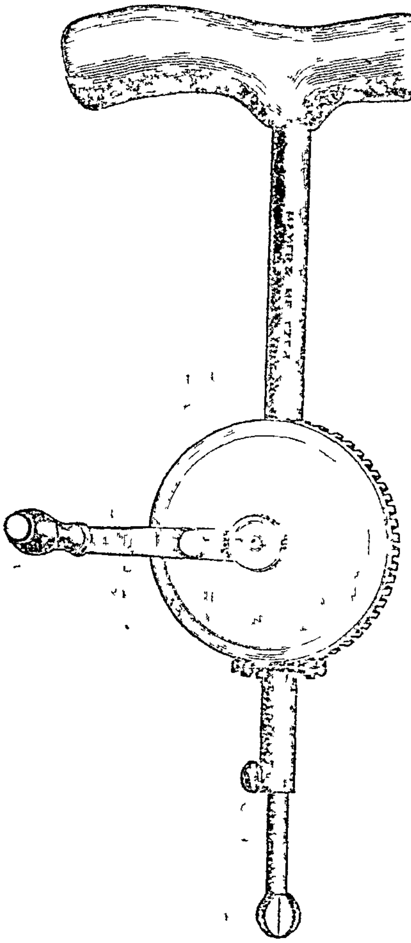
In the last chapter the principles of the trea
diabetes mellitus are clearly and succinctly lai
rational diet must be followed, rather than
By the latter term the author means a di
with the strictest possible exclusion
difficulty is to decide in which ca ... such
periods carbohydrates must ... ation the
in moderate and strictly ... aragraph of the
allowed. Herein lies ... olute discretion of the

successful treatment of diabetes. Dr. Kleen's directions will well repay study, and we can recommend this volume to those who seek information on all matters connected with glycosuria and diabetes.

New Inventions.

DRILL FOR MASTOID CASES.

MESSRS MEYER and MELTZER have made for me a modified form of drill for mastoid cases shown in the annexed diagram. By the arrangement of toothed wheels I find it quite easy to rotate the burr at 1000 revolutions per minute. The length of the shaft and the shape of the handle enable one to give very accurate directing power and



The burrs fit into a square socket, so that
s may be used. While not to be compared, of
dental engine, my drill will be found very
ngine is not available or, as in operations in
is difficult to take the engine with one.
he drill does not exceed 10 inches, so
to the ordinary surgical bag. It
ade quite aseptic.

SNELL, M.D., B S. Lond.

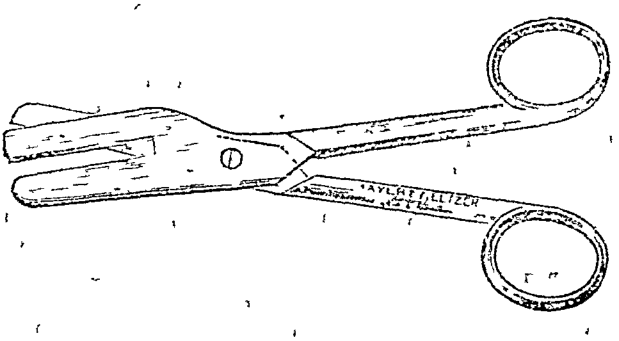
RESSINGS.

dressings which we
Son, Limited, of
5, Fann-street,
packed for
erilised by

steam and packed in cases all sterilised in the following manner. The dressings are cut and folded to the size required and then inclosed in the patent container which consists of an inner wrapper of parchment paper. Outside this is a wrapper of grey waterproof wool and outside this, again, is an outer wrapper of glazed paper. The whole is sterilised by means of steam under pressure In order to avoid the contents getting moist the apparatus with the dressings inclosed is heated, after shutting off the steam, in a vacuum The packets are then taken out and sealed under strict aseptic precautions. This step of obviating the appropriation of moisture during the process of sterilisation by steam is of course important, as all surgical dressings are much more effective when used quite dry. We have received two typical samples of cases thus prepared, but amongst the series provided by this firm are an amputation set large and small, a breast cases set, an excision of glands set, a minor operation set, a skin-grafting set, a hernia set, a trephining and mastoid set, and an abdominal section set. Most of these comprise, of course, absorbent sponges, absorbent wool, gauze, and bandages. This method of packing aseptic dressings is fully in accordance with surgical requirements.

NEW FRÆNUM SCISSORS.

THESE scissors, which I have designed and which Messrs. Mayer and Meltzer have kindly made for me, consist of upper and lower blades. The upper one is fashioned in the ordinary way; the lower blade is much broader and is divided nearly up to the pivot-joint into two portions, with a slight interval between them The left portion, together with the right, form a director and guide, whilst the right portion alone opposes the upper blade and forms the cutting surface. By this means the operation of severing the frænum linguæ can be performed with one hand, whilst there is no danger of wounding the lingual vessels.



E. R. HAINES CORY, M.R.C.S. Eng., L R.C.P. Lond.
Bournemouth

THE "CLARATMOS" PATENT VENTILATING SCREEN.

THIS screen effects two things: firstly, it filters the air, and, secondly, it disperses a draught so that the current of incoming air is diffused and no unpleasant cold currents are experienced. It consists simply of a frame containing two sheets of metal gauze of a certain mesh which is easily attached to the ordinary window fittings. Between the pieces of metal gauze is placed, also, a gauze of fabric like Gamgee tissue. If desired this may be impregnated with some antiseptic. In order to place the screen in position the lower sash is raised and the frame is introduced into the grooves provided for the upper sash. The screen is secured by means of wedges at each end The window can be opened or closed as usual by gently pressing the sash past the rubber flange provided. The screen is so devised as not to interfere with the free passage of incoming air, whilst it filters it from suspended impurities, as is evident from the accumulation of dirt upon it. Again, the screen acts as a resistance *and* thus prevents a draught. The patentees are Messrs. F W. Warren and Co., of 340, Harrow-road, London, W.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 24, 1900.

THE Local Government Board recently issued a new General Order on workhouse regulation with special reference to dietaries to take effect from and after March 25th, 1901, or, at the option of the guardians, from and after Dec. 25th, 1900. The Order is worth the close attention of all our readers. Dietaries are difficult things to devise where large numbers are concerned and where economy is a consideration, and the dietaries in the schedules of this Order must be tested ultimately by experience. But it seems not premature to say that the Order and the circular accompanying it show that the Local Government Board have taken into due consideration all the points involved in the fitting solution of such a problem as the proper feeding of the poor in workhouses, whether able-bodied or otherwise. The Board have, of course, acted under the advice of a committee appointed for the purpose and of their medical inspectors, Dr. A. H. DOWNES and Mr. A. FULLER.

The first points in devising such dietaries is the sufficiency of any dietary to meet the necessities of nutrition of the inmates, and the provision of sufficient variety in it from day to day. If there may not be luxury in workhouse fare there is at any rate no excuse for a sickening uniformity *to intensify the monotony of existence in workhouse conditions.* To judge from the experiences of inmates of public institutions generally there seems to be extraordinary difficulty in giving interest and variety to meals. We suspect that this often arises from apathy or want of imagination or liberality in those who have to provide the food. It is, *at any rate so far as* the complaint is well founded, inexcusable, for the greater the number that have to be provided for the easier it should be to provide cheaply or reasonably a sufficient variety of good food. The next point is that there shall be no waste. The fourth point is that the medical officer shall have a general authority over the dietaries and a special one in favour of several classes which naturally fall to be protected by him, notably the sick, the very young, the insane, the feeble, the pregnant, and also those unfortunate individuals who have idiosyncrasies of appetite and to whom the ordinary fare is unsuited. Finally, there is that great question in diet—the use of alcohol. These are the principal points to be faced in any Government regulation of workhouse dietaries, and they have been met in the new Order and disposed of in a way fair to the poor and to those at whose expense the poor are fed; the discretion of the medical officer in regard to the dietary of his patients has been practically uninterfered with.

While there is no justification in a workhouse for excess or for luxuries there is no reason why the food should not be pleasant and acceptable and sufficient. We think that this is provided for in the dietary of the able-bodied and in that of the sick also in the new Order. Medical men and experienced matrons who have knowledge of the food-supply of their own houses would say that the rations and the ingredients of the rations are satisfactory and are certainly superior to anything that the class of persons usually found in a workhouse would be able to command at home. In the breakfast and supper rations of a plain diet for able-bodied men and women, whether at work or not at work—of which 11 varieties are given—it is specially provided that the rations are to be so selected that the breakfast and supper shall not be alike on any one day. For an able-bodied inmate at work an additional meal in the form of lunch is provided. It seems to us to be a defect that in the breakfast of the able-bodied no coffee, tea, or cocoa is provided. A very large proportion of the inmates of workhouses are reluctantly obliged to do without alcohol and it seems to us a little severe that they should not be provided with the nearest substitute in the shape of non-alcoholic stimulants. On Sundays only, with *bread-and-butter, or margarine,* a pint of tea or coffee is provided. In the corresponding meals for children the liberal proportion of milk in coffee, tea, or cocoa is a good feature. The list of rations for dinner in the plain diets for able-bodied men and women, whether at work or not at work, contains no less than 39 varieties. It includes dinners of roast or boiled beef, mutton, and pork with bread and vegetables; boiled beef with suet pudding, bread, potatoes, and other vegetables; tinned meat, bacon, hashed meat, fish, soup, Irish stew, hotch-potch, meat pie, and potato pie. The large range of possible menus thus suggested gives a pleasant impression of thoughtfulness in those who have constructed the formulæ. And this impression is confirmed by a study of the various dinners, 24 or 25 in all, supplied to the infirmaries. Here the meat course is supplemented by 13 puddings, roley-poley, golden pudding, bread pudding, batter pudding, and the like, names which suggest the disposition to supply the infirm with convenient and even enticing food. The dietaries for children are equally satisfactory. In this connexion it is to be noted that children are not to be served slavishly by weight but according to their appetite, and that in regard to children under three years of age *and in infirmaries or* sick wards the medical officer has authority to empower the nurse to make modifications.

One of the most important points in the dietary of workhouses is the use of alcohol by the inmates. The authority of the medical officer with regard to all questions arising here has to be defined. The matter is carefully handled in the General Order and on the whole is dealt with in a way of which the profession cannot complain. The classes which go to make up a workhouse population are much addicted to the abuse of alcohol and the habitual use of it in workhouses is now discontinued. Article VIII. of the Order says that the guardians shall not allow to any inmate any fermented or spirituous liquors unless in pursuance of a written recommendation of the medical officer for the workhouse, to be entered in a book termed "the alcohol book" and to be accompanied by a statement of his reasons for such recommendation. We approve of this regulation the more entirely because the next paragraph of the article maintains intact the absolute discretion of the medical officer in respect of the prescription of alcohol for the sick, while other articles give a large power to him to vary the diet of inmates of the workhouse temporarily for sufficient reasons. Some intemperate teetotalers would wrest from the medical man the power of prescribing alcohol even for the sick; but such views receive no sanction from ordinary sensible people. We see in Article VIII. a proper recognition of the exceptional place of alcohol in diet and therapeutics. This it is which throws a great responsibility on those who prescribe it.

To speak generally, the thoughtfulness shown in preparation of the new General Order is obvious. It finds a further illustration in Article V., which empowers the master of a workhouse when satisfied that the inmate, though not ill enough to need medical attendance, is unable to take the ordinary ration to order him a lighter meal, the occurrence to be reported to the medical officer at the next visit for his confirmation and comments. We have nothing but approval for the constantly reiterated instructions in this Order against waste. The food that is not consumed after any given meal has to be kept for early future use, while daily and weekly accounts by the master of the workhouse relating to provisions issued from, and returned to, the stores have to be prepared. The master is also to keep a careful record of the diets ordered by the medical officer under Article VII. in the special cases already enumerated. The General Order, in fact, emphasises the responsibility of the medical officer in the matter of dietaries. It imposes on him the duty of advising the guardians in the adoption of the tables of ordinary diet as well as the duty of giving special heed to the diet of the sick and the young.

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THE autumn session of the General Medical Council will commence on Tuesday next, Nov. 27th, at 2 P.M. There will be several differences in the *personnel* of the Council. Changes have taken place in the representation of the Victoria University and of the Royal College of Surgeons in Ireland. The late Dr. D. J. LEECH, a most valuable member of the Council, is now replaced by Professor A. H. YOUNG, and Sir PHILIP SMYLY yields his seat to Dr. C. B. BALL The absence of Sir PHILIP SMYLY at the time when questions in which he was personally interested, deeply involving the interests of the Branch Council of Ireland, have to be discussed, is unfortunate. But the most startling novelty in the composition of the Council will be the appearance at its deliberations of a representative of a new University, one which has not yet any medical graduates and which can only have them for five years by retrospective action. The situation must appear to many open to criticism, but it is not likely to be the subject of any serious discussion at the Council table. There will be some indirect advantages in the presence *ab initio* of a representative of the University of Birmingham. He will become the sooner acquainted with the educational views of the Council and with its general business, and will be the readier to introduce into the Council's methods that energy and practical spirit which, when kept within bounds, we all admire in the Midland metropolis.

It is possible that the session may be a short one compared with its immediate predecessors, both of which have extended over eight days. A vigorous effort should be made by the Council to curtail its proceedings. It would gain credit by greater dispatch in the conduct of business and would save money—an object which for urgent reasons should be kept in the front. Without attempting to mention all the subjects which must engage the attention of the Council we can form a pretty fair estimate of the principal of these. Three or four matters will certainly call for careful handling. They have already occupied much of the time of the Council and should be disposed of in such a way as not to be troublesome again. One of these matters is the dispute between the Royal College of Physicians of London and the Royal College of Surgeons of England on the one part and the Council on the other, touching the registration of medical students and the recognition of science teaching. The teaching given in certain schools is recognised as being up to the standard required for the medical curriculum by the Colleges but not by the General Medical Council which does not regard the schools as being universities, or schools of medicine, or scientific institutions. There is something to be said on both sides, but the dispute has lasted too long and should be closed. It is the perpetual carrying over of contentious business from session to session that is responsible for so much waste of time and money. At the last meeting of the Council the President, acting on the suggestion of the Education Committee, undertook to get an opinion from Mr. MUIR MACKENZIE on the legal points raised. It is a pity that such guidance was not obtained at the outset, but it is understood that Mr. MUIR MACKENZIE's opinion has now been received and the Council will doubtless be guided by it as to any further controversy with the Colleges. The Colleges are very tenacious of what they believe to be their rights, but they will be more likely to be influenced by the Council if it acts strictly within the lines of its legal powers.

The most important subject to be considered by the Council at its approaching meeting is its own financial position, which last session was referred for further investigation to a special committee. The report of this committee cannot fail to be of much interest, for the particulars of the exact financial position of the Council at the present moment will there be given. The figures cannot differ materially from those contained in the last report of the Financial Committee in June, which showed the tendency of the expenditure of the Council to grow, while its income for the moment tended to diminish. The excess of expenditure over income, which amounts on the average of the last seven years to £677 a year, is easily explained. The range of work done by the Council has largely increased; the sessions have grown longer; every committee makes its reports and expects them to be published; the inspection of the examinations of the Apothecaries' Hall of Ireland has been costly; the premises of the Council have been enlarged and a sinking fund has been established for the extinction of the debt. Much legitimate progress is implied in most of these items of expense. But it is unsatisfactory that the capital of the Council should be drawn on to the extent of over £600 a year and some scheme of economy must be devised. The impecunious condition of the Irish Branch Council is very unsatisfactory and the dole out from the General Medical Council for temporary relief is more so The Irish Branch Council should cut its coat according to its cloth as the English and the Scotch Branch *Councils do, and contrive to have a balance on the right* side It may, however, be necessary to bring the Branch Councils under a common and central financial arrangement

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DR JOHN CLARK of Cleator Moor, Cumberland, has written to us on the subject of additional fees for adjourned inquests alluded to in our second leading article of Nov 3rd He reminds us of a letter which he published in THE LANCET of Feb 12th, 1898, p 480, signed "M D," to which, and to our reply to it, he refers us Briefly the facts are these On Jan 28th, 1898, Dr CLARK was asked to attend a coroner's inquest *on the body of a woman who died under peculiar* circumstances, he attended and gave his evidence, but the jury *not* being satisfied unanimously demanded a post mortem examination, which Dr CLARK duly made *after receiving formal request from the coroner to do so* and to give evidence thereon On the coroner paying the usual fees of two guineas one for making the post-mortem examination and one for giving evidence, Dr CLARK claimed *three guineas, basing his claim on the statement* in Wellcome's Medical Diary (1898), page 211 He considered himself entitled to one guinea for attending the inquest in the first instance and giving evidence and to two guineas in addition *for* making the necropsy and giving evidence thereon The coroner declined to pay more than two guineas, which Dr CLARK accepted without prejudice, telling the coroner that he (Dr CLARK) would look further into the matter *In reply to the question as to whether he was entitled* to three guineas we felt obliged to reply in the negative and to express our belief that the coroner was right We now learn from him that he subsequently succeeded in getting the extra guinea on applying to the county council, who decided in his favour But as the coroner pointed out, "the Act is not without doubt,' and he required a promise from Dr CLARK that he would return the fee should the auditor surcharge him Subsequently he received an order from the same coroner to make a post-mortem examination and to attend to give evidence He did so, the inquest was adjourned and he was required to attend again, being detained six hours He again claimed an extra fee from the county council, but this time without success On applying, however, to the Home Office he received a reply that his letter would be attended to, and after the lapse of a few months he received a cheque from the coroner for one guinea *He also* informs us that another practitioner in his neighbourhood was equally successful Dr CLARK truly observes that we are unaware of such extra fees having been paid to medical men and he justly *considers* that the *profession* ought to know of such demands and concessions While perfectly agreeing with him and giving him and his friend, as our readers will, every credit for the stand which *they successfully made*, we must remark that the county councillors were exceptionally generous in the first instance Why did they not repeat this generosity in the second case? It is more than probable that they had discovered that the Coroners Act of 1887 allows a *fee* of two guineas only, and that their functions as county councillors were limited to being just rather than generous The Home Secretary is in a different position, he having power to order additional or *special fees* to medical witnesses But would many medical men undergo such worry and such delay for a claim even when they considered it just? We think it preferable to get the Act amended

The section of the Coroners Act, 1887, which fixes the amount of fees is as follows A legally qualified medical practitioner who has attended at a coroner's inquest in obedience to a summons of the coroner under this Act shall be entitled to receive such remuneration as *follows* that is to say, (*a*) for attending to give evidence at any inquest whereat no post mortem examination has been made by such practitioner, one guinea, and (*b*) for making a post mortem examination of the body of the deceased with or without an analysis of the contents of the stomach or intestines and for attending to give evidence thereon, two guineas It is perfectly clear that the coroner possesses no power whatever *to pay any fee for a second attendance upon an* adjourned inquest, and, knowing this, the general practice of coroners in cases of murder, manslaughter, and others, where an adjournment is inevitable, is to take evidence of *identification of the body only at the opening of the inquest*, the medical witness not attending till the adjournment In a large proportion of adjourned inquests one attendance only is required, but it not unfrequently happens when there are many witnesses that a second or even third adjournment becomes necessary, and as the evidence of the medical witness is always taken last he must be present at the end We have already condemned the half-guinea police court fee as a paltry one to offer to a professional gentleman, and the same remark applies to the coroner's court Sir MATTHEW WHITE RIDLEY having *resigned the office of Home Secretary* he has been succeeded by the Right Hon C T RITCHIE to whom we hope an earnest and successful application will be made for a revisal of fees to medical witnesses in all courts of law

Annotations.

"Ne quid nimis."

THE ANNUAL MEETING OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

It cannot be said that the proceedings at the annual meetings of the Royal College of Surgeons of England are remarkable either for interest or importance The only motion of any real moment at the last meeting was that in which an appeal was made to the Council to confer representation *on the Members* With this appeal we need hardly say that we cordially agree, for we have ever maintained that the Member of the College has an inherent moral right to a share in the government of the corporation of which he is a part, although by the Charter of 1842 he was deprived of the franchise The motion was carried without a dissentient vote but if we may judge by precedent it will be of no effect At present the real obstacle to any further progress in this direction is the adverse vote recorded by the Fellows in 1896 The time has now, however, arrived when another that it should be given throughout the whole of the City We are glad, however, to note that the correspondent of the *Times* asserts that "in all the streets and public ways of the City the New River Company have constantly charged mains to which at short intervals the public fire hydrants are fixed." The statement would have been even more satisfactory had it been directly given by the New River Company. A small part of the City is supplied by the East London Waterworks Company and if, as it is asserted (by the correspondent of the *Times*), the New River Company supply water for fire extinction in the area supplied by the East London Company they deserve the thanks of the citizens who dwell there. Is it possible that the *Times* correspondent was mistaken in this particular?

FIGHTING AGAINST TUBERCULOSIS.

THE French Society of Preservation against Tuberculosis caused handbills to be distributed at the doors of the Paris Exhibition. In these handbills it is stated that in the course of the year 150,000 persons died from tuberculosis in France. The loss due to this disease alone is therefore equal to all the inhabitants of such a town as Toulouse. More than plague or cholera, more than all the epidemic diseases put together, is tuberculosis fatal to the population. Then advice is given as to the prophylactic measures that should be taken, and the handbill urges that spittoons should be placed everywhere—in factories, workshops, offices, shops, barracks, hotel rooms, theatres, schools, railway stations, and the like—and that those who are obliged to expectorate constantly should carry pocket spittoons with them. This advice is being adopted to some extent. In the Paris omnibuses and other places of public resort there are notices requesting the passengers not to spit on the floor and the number of spittoons at the disposal of the public is daily increasing.

THE HARVEIAN LECTURES OF THE HARVEIAN SOCIETY.

THE series of three Harveian Lectures delivered by Dr. Robert Maguire will be published in full in THE LANCET. Without anticipating what our readers will find in the full account (delayed in publication by the advancement of date of the lectures) we may at once call attention to the matter of the third lecture, which deals especially with the Treatment of Pulmonary Tuberculosis. Dr. Maguire gave an account of the experiments which he had made upon animals and upon himself as to the effects of remedies administered intravenously. The pulmonary circulation lends itself, as he showed, to the treatment of this disorder, for whatever can be injected into the veins must first find its course through the lungs by way of the pulmonary artery. Therefore remedies which might be injected by this method would have a more pronounced effect upon the lungs than those administered by the skin, by the mouth, by inhalation, or by direct injection into the tissues of the lungs, as Dr. Maguire discussed. The dilution of the remedies as administered by such previous methods must be obvious. But it is not asy to find a germicide, of whatever nature, which can be safely injected into the veins and in such strength as to be fatal to the germs contained in the lungs. Dr. Maguire tried cyanide of mercury and potassic iodide of mercury, but with no good results. He also tried solutions of diastase and of nuclein, but with no result which would encourage further procedure. At last, however, he attempted the use of tricresol and finally of formic aldehyde. The latter re-agent he first used in a strength of 1 in 250,000, but after repeated trials found that he could use it in a strength of 1 in 2000, and by special apparatus could inject with safety 50 cubic centimetres of this solution daily. The technique requires care. Dr. Maguire had calculated the strength of the solution which would reach the lungs, on such a solution being injected into the veins, and showed that it was likely to be an efficient germicide He had found on his own person that greater strength of solution, or a greater amount of the solution named, was dangerous He described the effects of such injections, as practised by himself and others on some 70 patients, and mentioned that the patients so treated had greatly improved, and that many of them had shown disappearance of tubercle bacilli from the sputum. One of such patients, apparently cured, was brought before the meeting of the society at which the lecture was delivered. Also Dr. Maguire said that similarly good results had been obtained in putrid bronchiectasis and the treatment was likely to be of use in acute pneumonia

THE BATTLE OF THE CLUBS: A SUCCESSFUL PRECEDENT.

THE medical men of Eastbourne were among the first to show the practicability of organising the profession so as to secure effective action against companies catering for medical work and employing canvassing and other objectionable methods. It is satisfactory to know, from the report read at the fifth annual meeting, that after five years the profession is still loyal to itself and is making a successful resistance through the Eastbourne Provident Medical Association to low forms of medical service. Much of the credit of this state of matters is due to Dr. Alexander Harper He is honorary secretary to the association and is not himself on the working medical staff. The association is now worked with one collector and otherwise expenses are being reduced. The thorny question of wage-limit is not disposed of on any hard-and-fast line, but is left to the absolute discretion of the committee which by the rules must contain two or more representatives of the Eastbourne Medical Society. Practically the unanimity of the profession at Eastbourne is complete and there is a good prospect of their being able to solve the problems connected with medical attendance on the working-classes so as to give little chance to stray companies of the commercial sort and their medical agents.

THE HOUSING OF THE POOR IN LONDON.

THE amendments passed on August 8th last on the Housing of the Working Classes Act of 1890 are so feeble that this important question cannot remain as it is. The recent outbreaks of Hooliganism clearly indicate the development in our midst of a semi-savage population which is a serious menace to the peaceful and lawful citizen. From the social, the political, the military, as well as from the sanitary point of view every endeavour must be made to check the growth of a degenerate and degraded population. The medical officer of the London County Council, Mr. Shirley Murphy, has put the facts plainly before us. Some 400,000 Londoners are living to-day in one-room tenements. Of these 9000 are living seven in one room and 3000 eight in one room. As many as 17 persons have been found *in one room, sometimes* three in a bed and two under the bed. The death-rates in the different parts of London correspond with the overcrowding. In St. George's in the west where 10 per cent of the population are overcrowded the death-rate is 13 2 per 1000; in St. George-in-the-East where 40 per cent. of the population are overcrowded the death-rate is 26 4 per 1000. Improvements have been effected to the advantage of the better class of workmen and of shop assistants and other sections of the community who were in no urgent need of such assistance, but the condition of the extreme poor is, if anything, even worse than it used to be. Mr. Steadman, as a representative of labour in the House of Commons, stated that the London County Council in 10 years had spent £2,000,000 to re-house 42,000 people. But he pointed out that Part I. of this scheme had cost £851,456, and, "out of that sum no less than £282,405 had gone into the pockets of men who, instead of being compensated for their rotten property, should have been prosecuted." Then he inquired why butchers, milkmen, and others who sold unwholesome food should be punished while landlords who let unwholesome dwellings should be allowed to go free. But it is not so much the insanitary character of the dwellings as their overcrowding which does the mischief. The London County Council use the best material and construct substantial dwellings which will probably last from 200 to 300 years and they pay exorbitant compensation to the former owners, and all this very great outlay has to be refunded in 60 years. As a natural result they are obliged to charge high rents, and therefore their re-housing schemes do not bring any relief to the extreme poor. It is true that the new Amendment Act will now enable the London County Council to purchase land and to build houses outside the metropolitan boundaries. There the rents will be lower, but from this advantage must be deducted the cost of travelling and the loss of time which it involves. As a remedy Mr. Steadman proposed that the Government should give facilities for borrowing money at a cheaper rate of interest and that the repayment should be spread over a period of 100 instead of 60 years. But the great stumbling-block is the exaggerated compensation paid to the owners of slum property. Nothing is more profitable than the letting of houses to the extreme poor. The poorer the tenant the higher the rent he pays in proportion to the space which he occupies; but the fact that a large income is obtained by allowing the overcrowding of tenements is not a sufficient reason for paying to the owner a proportionate compensation. In any case the present state of affairs can only be allowed to continue at the peril of the community. As Lord Rosebery truly said: "There is not a close in the darkest quarters of Glasgow or a crofter's cabin in the Hebrides which is not a matter of imperial concern," and he added: "In the great cities, in the rookeries and the slums which still survive, an imperial race cannot be reared."

CHOLERA IN KOHAT.

LAST July a serious outbreak of cholera occurred among the native troops comprising the garrison of Kohat in the Punjab. This has formed the subject of a report by Major R. H. Firth, R.A.M.C., sanitary officer of the Rawal Pindi district. The first cases showed themselves on July 3rd, and from that day up to and including July 19th there were 314 cases and 151 deaths. By far the greater number, both of attacks and deaths, took place between July 3rd and July 13th, after which date the disease rapidly declined. Of the 314 cases 209 were in soldiers, either horse or foot, the remaining 105 cases being among followers. Of the 151 deaths 106 were of soldiers and 45 were of followers. This was the severest outbreak of cholera in any garrison of India which had occurred for many years and it presented three notable features—viz., (1) that although during the period under review there were some 60 Europeans resident in Kohat no single one of these was attacked by cholera; (2) that in one unit—the Punjab Garrison Battery—only one case occurred; and (3) that in another unit—the 19th Punjab Infantry—no less than 126 attacks with 56 deaths were reported. Major Firth and the medical officers of the garrison united in attributing the outbreak to choleraic pollution of the irrigation water which flows freely through Kohat. There was no reported case of cholera either in the city or district of Kohat before July 3rd, but it was well known that cholera existed all over the Punjab in June, and Kohat is the great centre to which the roads lead. The 19th Punjab Infantry suffered most heavily of all. This regiment arrived in Kohat on July 6th and camped on a grass farm near which irrigation water ran. They were free from cholera on arrival, but 26 cases with 11 deaths occurred on July 8th, and 61 cases with 18 deaths on July 9th. It was found that the men had consumed large quantities of the irrigation water. The removal of the corps to a camp away from all irrigation and to a water above suspicion rapidly checked the outbreak. The Punjab Garrison Battery used exclusively water from the fort well and escaped with only one case of cholera, a man who was known to have had close domestic relations with the city. Among the recommendations made by Major Firth with a view to the prevention of similar mishaps is one to the effect that British officers of native corps might show more energy than they do in disseminating ideas of personal hygiene among their men.

GENERAL HOSPITALS AND MENTAL DISEASES.

OUT-PATIENTS suffering from mental disorders have been for long treated at St. Thomas's Hospital and elsewhere. The results of experience have shown that good work has been done in relieving many sufferers and in avoiding the necessity for asylum care in not a few cases. The quarterly court of governors of the Newcastle Infirmary has decided to institute such a department, as reported by the *Newcastle Evening Chronicle* of Nov. 1st. Dr. G. H. Hume, in bringing forward the motion, pleaded for the fundamental ideas of prevention and cure, and it has been decided that a physician, qualified as the rules require and occupying an appointment in a public asylum in Northumberland or Durham, should attend at the infirmary one day in each week and prescribe for the out-patients placed under his care.

MEMORIAL TO THE LATE PROFESSOR JOSEPH COATS.

AT a meeting held in the Hall of the Faculty of Physicians and Surgeons of Glasgow on Feb. 7th, 1899, it was resolved to raise a memorial to the late Dr. Joseph Coats, who first occupied the position of professor of pathology in the University of Glasgow, and it was agreed that this memorial should take the form of an endowment connected with his name for the purpose of encouraging research in pathology. Intimation was sent to his colleagues, assistants, pupils, and friends that this opportunity was afforded of testifying to their appreciation of his character and services, and of at the same time forwarding the work to which so much of his life had been devoted. A fund has now been raised amounting to £1243 and the committee representing the subscribers have arranged with the University Court that the University of Glasgow shall found a scholarship therewith. This endowment will be known as the "Joseph Coats Memorial Scholarship in Pathology, founded by the friends of the late Professor Coats as a memorial of his distinguished services to pathological science, and in recognition of the ability and enthusiasm which he devoted to advance the teaching of the subject in Glasgow." The scholarship will be for the encouragement of original research in pathology and will be tenable for one year. It will be of the value of the free income of £1200 for the two preceding years and will be awarded biennially. Candidates must be graduates of medicine in the University of Glasgow of not more than three years' standing, and the scholarship will be awarded by the Senate on the results of a practical examination in pathology conducted in the beginning of October of every second year. The successful candidate must, for not less than six months following the award, pursue research in pathology in the Pathological Institute at the Western Infirmary or in a laboratory elsewhere approved of by the Faculty of Medicine, and shall not engage in medical or surgical practice during this period. In accordance with the above conditions the sum of £1200 has been handed over to the University Court, and in accepting this sum the Court instructed its secretary "to tender to the donors the very cordial thanks of the University for the endowment they have so liberally provided, and to assure them of their keen appreciation of the interest they have manifested in the welfare of the University." There remains in the hands of the honorary treasurer, after the disbursements for printing, advertising, postage, and other small expenses, have been defrayed, the sum of £18 9*s.* 1*d.* With this sum the committee propose to purchase a brass tablet to be placed in the pathological rooms at the Western Infirmary.

THE SCHOOL BOARD ELECTION IN BRADFORD.

WE are glad to see that a medical man is standing as a candidate for the Bradford School Board and also that the medical man in question is Dr. T. W. Hime who was chosen to stand by a largely attended meeting of medical men as well as by a number of laymen. The presence of a medical man upon a School Board is very necessary to curb the zeal of fanatical "educationists" who look upon children merely as grant-earning machines, who fill them with smatterings of some five-and-twenty different kinds of knowledge instead of teaching a few subjects well, and who consider that if a child is well enough to be out of bed it is also well enough to go to school. Dr. Hime's remarks in his address upon over-pressure and the dangers of infection are excellent and we hope that he will be returned. Over-pressure and infection are the chief matters with which we are concerned as regards School Boards, for they affect the community at large With regard to the relations between medical men and School Boards they are also of no small importance to us, and from time to time we have had to say very plainly what we thought upon the matter. Dr. Hime, too, has done good work for Bradford practitioners on the question of payment for certificates and the like, and we are sure that, whether elected or not, he will continue to do so; but if elected he would be in a more satisfactory position than if acting merely as a private citizen.

OPTIC NEURITIS IN MUMPS.

IN the October number of the *American Journal of Ophthalmology* is published a translation of a very important paper on this rare condition which was read at the Section of Ophthalmology at the Thirteenth International Medical Congress by Dr. H. Dor of Lyons. A man, aged 25 years, consulted him on Feb 14th, 1900, for gradual loss of vision which began in April, 1899. In June optic atrophy was first diagnosed. Both optic nerves showed post-neuritic atrophy. Under the application of a constant current of five milliampères and injections of five milligrammes of strychnine vision improved and the patient could count the fingers at two and a half metres with the left eye and at one metre with the right eye. But no further improvement could be obtained. Formerly he was an excellent shot. The most careful investigation brought to light no other cause than an attack of mumps from which he had suffered in April, 1899, during his military service, and which confined him to hospital for 27 days. Optic neuritis in mumps appears to be well known to French military surgeons Thus Surgeon-Major Hatry, who first described it, says[1]: "A soldier came to hospital on account of mumps of both parotid glands. He saw as if in a mist and the white *cornet* of the sister of charity appeared to him blue." The ophthalmoscope revealed changes which were afterwards seen in nine other cases of mumps—hyperæmia of the discs, dilatation of the vessels, and infiltration covering the papillæ. The prognosis in Surgeon-Major Hatry's cases was usually good and vision became normal in about two or at most three weeks. In the milder forms of optic neuritis vision was not much diminished, in the more severe forms it was, and the colour perception was altered.

DOES AN ADVERTISEMENT CONSTITUTE A WARRANTY?

IN the Westminster County Court on Tuesday last, before Judge Lumley Smith, Messrs. Pulvermacher, Limited, electric belt makers, of Regent-street, W., brought an action for four guineas, the balance of the purchase money of an electric belt supplied to Mr. H. Mott of Oxford. Mr. Mott was led to write to Messrs. Pulvermacher by advertisement, and paid one guinea on account of a five-guinea belt described as "doubly concentrated." The belt in no way relieved his symptoms of migraine and irritability but rather, in his opinion, made him worse. So he returned it. Judge Lumley Smith held that the advertisement of their belt issued by Messrs Pulvermacher was a warranty to cure "all the ills that flesh is heir to" As the defendant was not benefited by the belt he found in his favour, but did not give him costs. This is a judgment which may be of considerable importance. Many well-advertised quack remedies promise to heal everything. Can the public recover its money when it discovers as it always does, that the remedies are useless?

DIPHTHERIA IN CAMBRIDGE AND CHESTERTON: THE VALUE OF PREVENTIVE INOCULATIONS.

AN outbreak of diphtheria recently occurred in the above-mentioned districts which have a population of about 50,000. The first case was notified on Oct. 14th and the last up to the present time, on Nov. 15th, and in all there were 60 cases notified during the five weeks. Up to and including Oct. 24th there were 12 cases notified, out of which number four ended fatally. Nine of the cases occurred in children attending a higher grade school, two were members of the family of a scholar and one was a nurse in the hospital. The school was closed and on Oct. 24th Dr. B. Anningson, the medical officer of health, asked for the assistance of the Pathological School of the University. Professor Sims Woodhead was accordingly appointed consulting bacteriologist and Dr. L. F. Cobbett undertook the work of bacteriological examination and the duty of providing prophylactic injections of antitoxin where no medical man was in attendance. The method of procedure was as follows The infants attending the school were visited in their own homes by a staff of willing helpers; a bacteriological examination was made, and a prophylactic injection of antitoxin was offered to all these. This was accepted in the majority of cases. An offer of antitoxin and bacteriological examination was put at the disposal of all medical practitioners for their poorer patients, and this was notified to them in a circular by the medical officer of health. Four cases, the first of which could be directly traced to the above mentioned school, having occurred in three other schools these were closed, and the children attending them and their young brothers and sisters were examined bacteriologically and offered a preventive injection. Circulars were sent to the superintendents of the Sunday-schools throughout the town, recommending the closure of their schools. A home was opened for those children in whose mouths suspicious bacilli had been found but who had shown no symptoms of the disease. To this home about 30 children who could not be satisfactorily isolated in their own homes were sent. Circulars were sent to parents whose children had suffered from diphtheria, pointing out how to aid in dealing with disinfection under the supervision of the medical officer of health. A letter inclosing the circular just mentioned was sent to the medical practitioners asking them to keep their patients and suspects under supervision until three consecutive bacteriological examinations giving negative results had been carried out Immediately following the preventive use of antitoxin and the commencement of bacteriological examinations there was an increase in the daily number of notifications largely caused, no doubt, by the recognition of mild cases which might otherwise have escaped notification The largest number of daily notifications (nine) was reached on Oct 30th, after which date they fell rapidly, 10 cases only having been notified in November The value of the preventive injections has been shown by the fact that only one slight case of diphtheria has occurred among those treated, many of whom were found to be harbouring the diphtheria bacillus at the time, while among the elder members of their families who had not been injected several cases occurred No complaints of rashes or of other complications have been heard from the parents of the children who were injected

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[1] Mémoires de Médecine et Chirurgie Militaires, 1876, p. 305.

THE CORONER AND THE DEATHS OF LUNATICS IN POOR-LAW INSTITUTIONS

THE Local Government Board have issued an Order directing that within 48 hours after the death of a lunatic in any Poor law institution notice of such death shall be sent by the superintending officer of the institution to the coroner of the district in which the institution is situated The notice is to be accompanied by a statement signed by the medical officer, or the medical superintendent, or the medical man who attended the lunatic in his last illness, and containing certain prescribed particulars The Order will come into operation from and after Dec 1st, and it is in our opinion an excellent innovation as tending to reassure the public in a very real and practical manner that everything that is possible is being done for a sadly afflicted class We print it in full on p 1528 of this issue, and congratulate the Coroners' Society upon the success of their efforts A thousand lurid but unsupported tales, with an occasional case or two, like the terrible one of recent occurrence at Crumpsall, have bred in the public mind suspicion that the cause of death of lunatics in Poor law institutions would not always bear scrutiny The full publicity of a coroner's inquest will remove this suspicion

THE SEXUAL LIFE AND THE OFFSPRING OF EPILEPTICS

Dr Bourneville and Dr Poulard have published in the *Progrès Médical* of Sept 29th the concluding part of a series of three articles dealing with the sexual life, marriage, and descendants of an epileptic, which presents in an interesting way an epitome of the question of hereditary transmission The case which embodies the facts is that of a young man who began to have epileptic seizures in his thirtieth year He was possessed of great sexual vigour and he married and begat several children The epilepsy was of the idiopathic type and ran its usual course At present the patient is intellectually weak and suffers from loss of memory and diminished sexual power He begat eight children, two of whom died from athrepsia while a third died from intestinal catarrh (cholera infantum) A fourth child is alive and is the subject of convulsive attacks with twitchings of the eyes (*petit mal*) and violent outbreaks of temper Another child has epileptic seizures (*haut mal*) and suffers from hallucinations of sight and disturbances of sleep A sixth child is very nervous and has night-terrors Thus of eight children six are the subject of grave neurotic troubles inherited from an epileptic father Dr Bourneville and Dr Poulard discuss at some length the question of the marriage of epileptics and conclude that the marriages of those who are the subjects of epilepsy *petit mal* and *haut mal*) and epileptoid psychoses and neuroses (epileptic imbecility, epileptic insanity, and hystero epilepsy) should be forbidden or strongly discouraged

THE ASSOCIATION OF PORT SANITARY AUTHORITIES

A MEETING of the Association of Port Sanitary Authorities will take place to-day (Friday) in the Guildhall at 10 30 A M The special business before the meeting will be to consider the recent reply to the association from the Local Government Board relating to the resolution passed at the last annual meeting *re* the notification of the existence of infectious diseases at foreign ports Three discussions that promise to be interesting are announced Mr G J. Woodman will open a discussion on the "Exemption of Government Vessels from the Provisions of the Public Health Act with Regard to Infectious Diseases" Mr Councillor T Clarke (Liverpool) will open a discussion on "The Precautionary Measures Adopted in Regard to Plague," when delegates will be invited to narrate briefly the measures adopted at their respective ports Mr Alderman T Walton (Southampton) will open a discussion on "Port Sanitary Administration as it Exists, and the Further Powers Required"

FUNCTION OF THE PROSTATE GLAND

IN the October number of the *Bulletin of the Johns Hopkins Hospital* Dr George Walker of Baltimore describes a number of experiments which have led him to the conclusion that the function of the prostate gland is to furnish a fluid in which the spermatozoa can move freely He found that there was no movement of the spermatozoa in semen from the testicle itself or from the globus major Semen from the globus minor and vas *deferens* showed slight movement where the fluid was thin, but there was no movement in the portions of thick consistence which formed the bulk of the sample. On the other hand, in a mixture of prostatic juice and semen from the substance of the testicle there was *distinct* but *not lively motion*, while *semen out of the* epididymis with prostatic juice showed lively motion which continued unabated for some hours Semen from the epididymis with normal salt solution also gave lively movement in the places where a mixture had occurred In other areas where the liquid was thick no motility was apparent For the continued motility more is necessary than the mere thinning, for in the salt solution all movement ceases after three hours, whereas in the prostatic juice it continues for over 20 hours

CONVICTION OF AN ABORTIONIST.

ON Nov. 20th Ernestine Katz, a midwife, was tried at the Central Criminal Court, before Mr Justice Darling, on a charge of having murdered a young woman named Kate Kennedy The prisoner, a German, resided in Whitechapel, and it was alleged that on June 30th she performed an illegal operation upon the deceased by means of "an instrument" The case for the prosecution was that the deceased woman's death was occasioned by the operation which the prisoner was alleged to have performed upon her Much legal interest was attached to the manner in which the depositions had been taken and a long argument ensued, but the main question for the jury was as to whether the prisoner was guilty of murder or of manslaughter, the facts of the case being perfectly simple. Mr Arthur Hutton for the defence *denied* that *the prisoner had performed* an illegal operation, and he urged that what she did was for a perfectly lawful object If, however, the jury did not take that view, he argued that they ought to find only a verdict of manslaughter Mr Justice

Darling directed the jury upon the law applicable to the case, and a verdict of "Manslaughter" was returned. It then appeared that when the prisoner was arrested a number of documents were found upon her which showed that in 1897, at Berlin, she was charged with an offence of this very same nature, and that she absconded from her bail to this country. Mr. Justice Darling is reported as saying that the jury had found the prisoner not guilty of murder but guilty of manslaughter, having been informed that that verdict was hardly possible if they were of opinion that she, in doing what they found that she had done, did not know that she was performing an act which was likely to have fatal results. In their opinion, apparently, the prisoner was an extraordinarily ignorant person in the practice of the business which she carried on. The judge plainly intimated that he did not share the opinion of the jury, and we entirely endorse his view. It would seem impossible that the prisoner did not know that she was performing an illegal, and possibly a dangerous, act. If a person knowingly inflicts an injury upon another a felonious act has been committed, and the assailant is liable for any result which may occur; if death ensues he or she can be tried for murder. In the case of Ernestine Katz we consider that "Murder" ought to have been the verdict of the jury, and that the sentence of ten years' penal servitude passed upon the prisoner cannot be considered a severe one.

THE DANGERS OF ELECTRIC LIGHTING.

THE notion was at one time current that an electric installation secured the householder from many of the risks attendant upon a gas installation or the use of oil and candles. It is very doubtful if this is so, at any rate under the present methods of laying cables and of "wiring" our houses. Recent events which have come to our knowledge call very seriously for a fresh inquiry as to the methods adopted for supplying electricity to our houses. It is common knowledge now that an otherwise innocent current—that is, one of low voltage—may through certain defects become an exceedingly dangerous current of enormous voltage. "Earthing" is, of course, the main source of trouble and the generally offered excuse, but if electric lighting is to be our mode of obtaining artificial light "earthing" must be overcome and it seems to us that "earthing" has not been overcome—it is happening on all sides and in several instances with most alarming results. Leakage has led to outbreaks of what have proved to be serious fires. Last week, for example, a serious outbreak of fire took place at some photographic studios in Regent street and the fire brigade attributed the cause to the fusing of the cables at the switchboard. It is even said that the electric [illegible] used in these studios for the purpose [illegible] majority of cases [illegible]

a very high and dangerous current may be tapped by telephone wires, gas-pipes, or ordinary voltage electric cables. No wonder, then, that public electricity is becoming a serious cause of outbreaks of fire. Just upon a year ago we reported an instance in which a drawing-room floor was ignited either by the overheating of wires or by the production of sparks through a defective system of insulation. The system of wiring must sooner or later be reformed, and the sooner the better, or otherwise disasters are certain to arise. The subject was ventilated in the press, including our own columns, some months ago, and on the face of it there was then some promise that something definite would be [illegible] As a matter of fact nothing or very little has been done, [illegible] all those who use the electric light are still at the [illegible] of defective fittings and under the risks of tapping a powerful and dangerous current intended only perhaps for arc installation on a large scale. These possibilities are [illegible] alarming and the Board of Trade should be [illegible] with a view to enforcing by very definite [illegible] safer method of installation of domestic electric [illegible] than appears to be in vogue now. Until this [illegible] we may only too surely expect a crop of [illegible] and no confidence, it seems to us, can be placed [illegible] electric installation until cables and wires are [illegible] separate tubes and "return" wires are provided. [illegible] of doing something in this direction is all [illegible] emphasised by the fact that our streets are [illegible] a close network of all sorts and conditions of [illegible] and mains.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION [illegible] GREAT BRITAIN AND IRELAND

THE Medico-Psychological Association of [illegible] and Ireland held a general meeting on Nov. [illegible] Chandos-street, W., which was presided over by Dr. [illegible] Beach and was numerously attended. The [illegible] at four and lasted for nearly three hours, [illegible] with interesting discussions on each, being [illegible] time. The first paper was on Mental Disorders [illegible] on Toxæmias, by Sir Dyce Duckworth, and [illegible] printed in full at p. 1475 of this issue of [illegible] Our report of the discussions and of the other [illegible] appear later. Sir Dyce Duckworth was followed [illegible] F. W. Mott, who spoke at some length on [illegible] Inherited Tendency. After Dr. G. H. Savage [illegible] tributed a spirited criticism Dr. E. Goodall [illegible] Mercier continued the discuss[illegible] man; Travel. [illegible] Use in Mental [illegible]cedure was as follo[illegible] subject [illegible] addre[illegible] school were visited in their ov[illegible] val[illegible] willing helpers; a bacteriologic[illegible] [illegible]de, and a prophylactic injection of anti[illegible] to all these. This was accepted in the [illegible] latitude for a homœopathic practitioner. He said that mortality from blackwater fever under "allopathic medication" was appalling, and that chronic malaria would be extremely rare under homœopathic treatment. Mr. A. L. Jones thereupon promised to get "*a qualified homœopathic medical man*" a post on the West Coast. Mr. Jones is, in our opinion, doing a very imprudent thing in thus countenancing homœopathy. He will probably consider our view to be based upon narrow selfishness whatever we say, but such have been the services of Liverpool to scientific medicine that we cannot let these services be endangered without protest. Homœopathy is based upon theories exactly contradictory to medical knowledge, so that there can never be any common ground upon which a medical man and a homœopath can discuss a medical subject. Now, as medical men cannot work with homœopaths, and as all the men of any scientific position in the country are with the medical men, had not the Liverpool Chamber of Commerce better stick to the side whence it can always obtain a supply of sound assistance? By the way, there is not such a thing as a qualified homœopathic medical man, so that Mr. Jones has not committed himself to anything. A man can qualify in medicine and become a homœopath; but he cannot qualify in homœopathy, for the General Council of Medical Education and Registration does not recognise homœopathy.

PNEUMOCOCCIC OTITIS MEDIA.

OTITIS media is now well recognised as one of the manifold consequences of pneumococcic infection. It may be primary or secondary to pneumonia. At the meeting of the Société Médicale des Hôpitaux of Paris on Oct. 26th Dr. Hirtz related the following interesting case, the first on record in which otitis media was apparently contracted by contact with a patient suffering from pneumonia. A man, aged 65 years, had pneumonia of the right lung, which terminated favourably by crisis on the ninth day. His wife nursed him day and night and emptied and cleansed the spittoon. On the fourth day she had a purulent discharge from both ears. The pus was whitish and grumous and without odour. The discharge lasted about 12 days. She did not suffer in any way and under antiseptic treatment rapidly recovered. Both tympanic membranes were perforated. The appearance of this double otitis without antecedents in a person in contact with a patient suffering from pneumonia caused Dr. Hirtz to suspect that it was due to contagion. In the pus numerous pneumococci and small bacilli, the nature of which was not determined, were found. Contagion may have taken place through the auditory meatus or through the nose, possibly from the patient's hands soiled by contact with the spittoon. According to Zaufal the pneumococcus is the ordinary cause of primary otitis media or of otitis media ascribed to cold, but pyogenic microbes are usually found in secondary otitis. This case shows that those who attend on pneumonic patients should observe the same precautions as in cases of tuberculosis

DANGEROUS LUCIFER MATCHES.

has been a matter of frequent observation during the month or so that many of the wax vestas supplied to public have to a large extent had no ignition tip upon or that if they had the head immediately flew off upon ding, scattering sparks in all directions. In short, for some on which we do not presume to supply, an epidemic of ctive wax matches appears to have set in. We approach subject only from the point of view of its very obvious ggers. We have seen narrow escapes of very serious ry being done by particles of fired phosphorus shooting ously near the eye in this way. In the smoking carriages ailway trains the danger is more obvious perhaps than anywhere else. A passenger strikes one of these matches and the flaming head flies off in the direction of a fellow passenger. In the house the flaming head may bury itself in a carpet or rug and there continue to glow until it ignites the material. We understand from a very responsible person connected with the subduing of outbreaks of fire in the metropolis that "unknown causes" are probably largely due to the lost glowing head of a wax vesta. Cheapness, we fear, is largely responsible for this nasty dangerous match. Matches are made at a tremendous speed, and we doubt if they are ever examined or tested before they are packed in boxes. We have counted as many as 30 per cent. of matches in one box without heads at all, while the majority of those with heads lighted viciously and in the dangerous manner which we have described. It is to be wished that the public would give up using wax vestas altogether or, at all events, those matches which contain yellow phosphorus. The burns from phosphorus are exceedingly painful and difficult to heal, while cases have been known in which death has followed through blood-poisoning set up by a wound caused by a scintillating match-head. Again, in discarding matches made with yellow phosphorus the public would be taking a decisive step towards banishing from our match factories that dreadful disease known as necrosis or "phossy jaw."

THE Queen in Council has granted to the Great Northern Central Hospital Letters Patent under the Great Seal incorporating the hospital by Royal Charter under the title of "the President, Vice-presidents, and Governors of the Great Northern Central Hospital."

DR. THOMAS BUZZARD, a Fellow and member of the Council of King's College, London, has been appointed one of the representatives of the College upon the Senate of the University of London in succession to Lord Lister who has resigned.

THE Executive Committee of the Prince of Wales's Hospital Fund have issued another appeal for subscriptions, the falling off in the financial support which the Fund has received this year being serious.

THE IRISH POOR-LAW MEDICAL SERVICE.

IT is not unusual to hear in the political world such cries as "Another Irish grievance" and "Justice to Ireland" when questions relating specially to the Green Isle are being discussed; but we think that those who are conversant with the working of the Irish Poor law Medical Service will freely admit that it is oppressed with grievances which common justice demands should be redressed. We propose to lay before our readers a few of these grievances, and to suggest some ways by which they may be remedied.

Method of appointment of medical officers in the Irish Poor-law Service.—Up to the date of the passing of the Local Government (Ireland) Act, 1898, the dispensary medical officers were appointed by committees, among whom there were some members (*ex officio*) of position and education. That Act, however, delegated the power of election to the guardians, who are in country districts almost all small farmers and shopkeepers. As a result it is too often a candidate's religion, politics, or local connexions which determine his selection, his professional standing being regarded as of little import. Further, there is no promotion. The dispensary medical officer remains, as a rule, in the original district to which he was first appointed; he has no stimulus to work, his salary does not steadily rise, and he finds there is no chance of advance. With such prospects the able men coming from the medical schools will not enter the service and in the end it will be the poor who will suffer most. To remedy such a state of affairs the Irish Medical Association have recommended the

PROFESSOR CALMETTE ON PREVENTIVE MEASURES AGAINST PLAGUE.

PROFESSOR CALMETTE, Director of the Pasteur Institute at Lille, in delivering the third Harben Lecture at the Examination Hall of the Royal Colleges of Physicians of London and Surgeons of England on Nov. 21st, said it was now impossible to deny that the use of anti-plague serum as a preventive measure was an excellent means of preventing propagation of plague in an infected centre, as by its means persons exposed to the contagion could be rendered absolutely and immediately immune. Unfortunately the immunity thus obtained was of short duration, lasting only from 12 to 15 days, and it was therefore necessary during an epidemic to repeat the injection every second week. This was a serious inconvenience, to which must be added the difficulty of procuring a sufficient quantity of serum to vaccinate and revaccinate a large number of individuals. It had been proved by experiment on small animals that after repeated injections under the skin or into the veins of cultures of plague bacilli killed by an hour's exposure to a heat of 65° or 70° C., it was possible to inject after a sufficient interval into these same animals without ill-effects virulent cultures which would otherwise have been fatal in from three to five days. Haffkine, in India, having observed that these cultures vaccinated more effectually because they were richer in microbic bodies killed by the heat, added butter or cocoanut oil to his bouillons. These fatty substances floating on the surface enabled the plague bacilli to develop and form stalactites. A slight shake to the vessel containing the culture caused the fall of these stalactites; they were not long in re-forming, and thus in three or four weeks a liquid rich in microbic elements could be obtained. Haffkine then warmed these cultures, added a small quantity of phenic acid as a preservative, and injected them in average doses of from two to three cubic centimetres. If the injection of dead cultures was carefully repeated even twice or three times after seven or eight days' interval a more durable immunity could be obtained which would extend to three or four months in a monkey or guinea-pig and six months in a rat. It was therefore possible that, as Haffkine believed, a single inoculation with cultures killed by exposure to heat would suffice in many cases to render a man sufficiently immune to pass through a plague epidemic. This method was, however, open to some objections. Leumann had already called attention to the different degrees of virulence in the cultures employed and the variability in the composition of the mediums used for the preparation of the vaccine, thereby rendering them very uncertain. Further, he had proved with Salimbeni that during the period of immunisation with the heated cultures animals were extremely susceptible even to minute doses of plague virus. It followed, therefore, that if anyone during the incubating period of a slight attack of plague were to undergo the Haffkine inoculation the attack would be greatly aggravated—it would probably be fatal. But despite all this, it was incontestable that vaccination by heated cultures was capable of rendering very great service in times of epidemic. Many efforts had been made towards greater efficacy and practicability. In Italy, Terni and Baudi proposed to prepare anti-plague vaccine from the peritoneal secretions of rabbits inoculated with the plague bacilli in the peritoneum. This secretion, laden with leucocytic elements, was diluted in chemical solutions of sea-salts, placed for a few hours in a stove and heated to 60° C. In this way a liquid possessed of a fair amount of toxicity was obtained which, administered in weak doses, produced in animals a vaccinal immunity more lasting, according to its discoverers, than a single inoculation of the Haffkinian cultures. Yersin proposed to vaccinate with a species of slightly virulent plague bacilli by inoculating living microbes by means of the lancet. He (Professor Calmette) had studied the question in his laboratory during the past year. To prepare his vaccine cultures he employed a plain virus which originated in Oporto and which had never passed through any kind of animal; he kept it up by culture on gelose, re-fertilising every eight or 10 days, the culture being raised each time to a temperature of 36° C. for 24 hours. The cultures were placed, still on gelose, in large flat bottles in which there was produced after 48 hours an enormous microbic development. 20 cubic centimetres of sterilised water were then put into the flat bottle, the cultures were scraped with a thin glass rod, and the emulsion thus obtained was poured into a filter upon fine sterilised linen to retain the fragments of gelose. The liquid containing the microbes was poured on to a paper filter and the microbes left on the paper were washed in sterilised water. They were then placed in a small quantity of water, heated for an hour up to 70° C., and afterwards dried in a vacuum. Thus bodies of dried plague bacilli free from every trace of toxin were obtained. These were kept in sealed tubes until required. For use they were suspended in sterilised salt water and injected under the skin or into the veins. Now that the comparative value as preventives of the anti-plague serum and of vaccine injections prepared by bacilli killed by heat had been considered prophylactic rules could be laid down. This prophylaxis must be based entirely on the knowledge recently acquired concerning the way in which the disease was propagated. The researches of Simond, Yersin, and Hankin had demonstrated that the malady was spread chiefly by fleas and rats. It was, therefore, necessary to seek the best methods of destroying the largest possible number of parasitical insects and rats wherever there was an outbreak of plague. The best way for a town to avoid plague epidemics was to exterminate as completely as possible the rats and mice which populate houses, shops, and sewers; and it was desirable on the first appearance of a case of plague that a confidential note should be distributed to medical practitioners detailing the principal symptoms of the bubonic and pneumonic forms of plague, with the precautions to be taken to avoid contagion, and giving every necessary information respecting diagnosis and preventive vaccination.

Obituary.

DENNIS EMBLETON, M.D. DURH., M.D. PISA, F.R.C.S. ENG. F.R.C.P. LOND., L.S.A.

EARLY on the morning of Monday, Nov. 12th, there died at his residence, Newcastle-upon-Tyne, Dennis Embleton, the "grand old man" of the medical profession in the north of England. He was born at Newcastle-upon-Tyne on Oct. 1st, 1810, and consequently had completed his ninetieth year. He commenced the study of medicine in the year 1827 by apprenticeship to Mr. T. Leighton, at that time senior surgeon at the infirmary, to whom he paid, as was usual in those days, a fee of £500. He also studied at Guy's and St. Thomas's Hospitals and at Grainger's and, we believe, at Pilcher's Schools of Anatomy in London. In June, 1834, he became a Member of the Royal College of Surgeons of England. In the following year he was admitted a Licentiate of the Society of Apothecaries of London. In 1843 the Royal College of Surgeons of England instituted its Fellowship and on Dec. 7th of that year Embleton was one of the distinguished members of the profession upon whom the honour was conferred. Of the other original Fellows only two, Carsten Holthouse and Henry Spencer Smith, now remain amongst us. In 1836 the University of Pisa admitted him after the usual examination to the degree of Doctor of Medicine. Ten years afterwards he became a Licentiate of the Royal College of Physicians of London *intra urbem*, as it is marked in his own note. In 1853 the University of Durham admitted him to its M.D. degree by diploma and in 1859 he became a Fellow of the Royal College of Physicians of London. Between the years 1834 and 1837, when he finally settled in practice as a physician in his native town, Dr. Embleton spent a great part of his time in the South of Europe, studying in Paris, Rome, Bologna, Pisa, and other places. He was a great pedestrian then and he wandered on foot over France, Spain, and Italy. He was never tired of talking of the adventures of those days—those halcyon days—of the beauties of the southern scenery, of the grandeur of the cities, and of the manners and habits of the people with whom his own kind and genial disposition rendered it easy for him to amalgamate. He spoke French and Italian well, and was familiar with the literature of France and of Italy and loved the warmth and brightness of their sunny

DENNIS EMBLETON, M.D. DURH. & PISA, F.R.C.P. LOND., F.R.C.S. ENG.

climate as much as if he had been a native To the end of his life he retained his affection for Frenchmen and Italians, who were always welcome to his hospitable board and to his almost open house In the year 1834 a school of medicine was established in Newcastle by Dr George Fife, Dr Knott, and Mr Frazer—Mr John Fife (afterwards Sir John) Mr Potter, and Mr McAllum joining later Five years after its establishment Dr Embleton joined as lecturer on anatomy and as registrar His connexion with the College was a long one, extending over a period of 33 years In 1838 he was lecturing on anatomy and physiology In 1852 he was appointed reader in medicine at the Durham University, and in 1870 he became, on the closer connexion of the medical school at Newcastle with the University of Durham, the first professor of medicine and of the practice of physic This office, however, he only held for a very short time, Dr Edward Charlton succeeding him in 1872 when Dr Embleton's connexion with the Newcastle Medical School and with the University of Durham ceased From 1858 to 1872 Dr Embleton was the representative of Durham University on the General Medical Council He was physician to the Newcastle-upon Tyne Infirmary from April 1853 to May, 1878, when he became consulting physician which position he occupied at his death From 1856 to 1873 he was physician to the Newcastle upon Tyne Dispensary and Fever House During the active portion of his long professional career Dr Embleton contributed a very large number of papers to current medical literature One on Tenderness and Pain of the Pneumogastric Nerves and the Importance of the Sign in Cases of Disease of the Stomach, Liver, and Heart attracted the attention of the late Sir Thomas Watson, who alluded to its importance in his classic lectures on the Practice of Physic—lectures which it is as great a delight to read to day as when they were written It was not, however, with medicine only that Dr Embleton was identified He took an active interest in science generally and in literature He was a good antiquarian and a first rate naturalist At different times he was vice president of the literary and philosophical, the natural history, and the antiquarian societies of Newcastle He was for years one of the best known educational leaders in the north of England, no *savant* ever visiting Newcastle without asking for, and making the acquaintance of, Dr Embleton He wrote papers on local folk lore, dialogues and poetry in Northumbrian vernacular, short histories of the Newcastle Medical School and of Featherstone Castle lives of his friends Joshua Alder, John and Albany Hancock, and W C Hewitson His contributions on natural history, of which he was particularly fond, were numerous The late Prince Consort at the request of the Queen, sent him a book on the natural history of Braemar in acknowledgment of a work published jointly by himself and Albany Hancock on the Anatomy of Doris He was an authority on the nudibranchiate molluscs and on eggs, birds, fishes and local fossils, writing many valuable and interesting papers, sometimes by himself, at others in connexion with Joshua Alder or Albany Hancock Dr Embleton married in 1847 Miss Turner, a lady herself devoted to natural history and scientific pursuits but he became a widower in 1869 He has left two daughters, one of whom—the elder—is married The other daughter who is unmarried, lived with her father and devoted her life to his comfort and welfare, nursing him through a long and trying illness with a care and affection which could not have been exceeded His only son Dr Dennis Cawood Embleton died at the early age of 46 years only a few months ago at Bournemouth, where for a number of years he had conducted a large practice and where he was much respected and beloved A grandson, Dennis Embleton, is an undergraduate studying medicine at Christ's College, Cambridge

Dr Embleton had outlived his generation and probably, with the exception of Lord Armstrong and Mr T Lightfoot (the oldest surgeon in Newcastle), none of his old friends or contemporaries remain The funeral took place on Thursday, Nov 15th, at St Andrews cemetery The coffin was covered with beautiful wreaths of flowers many of which had been sent from long distances and from various parts of England Sir George Hare Philipson and the members of the Durham University College of Medicine attended, and among the mourners, besides relatives were representatives of the institutions with which Dr Embleton had been connected and many well known citizens of Newcastle

RICHARD BENJAMIN ANDERSON, F R C S ENG

WE announced briefly last week the death of Mr R B Anderson, late of Tobago, whose name is well known in the medical profession first as the victim of a terrible miscarriage of justice, and second as a would be reformer of the most drastic sort in medical politics and honorary secretary of the Corporate and Medical Reform Association

Mr Anderson, who was 53 years of age at his death, was born in Lincolnshire, being the son of a medical man He received his medical education at St Mary's Hospital, and in 1869 became a Member of the Royal College of Surgeons of England He obtained several prizes and held appointments as house surgeon both in London and Plymouth In 1873 he became a Fellow of the College, and then joined his brother, Mr James G Anderson, in the West Indies, settling in Tobago, where he attained considerable success in practice and received the appointment of Colonial Surgeon This office, which, after he had held it for five years was discontinued, brought him a small pension by way of compensation By the year 1889 he had been 16 years in practice in the island, and was then a justice of the peace, a member of the legislative body, and a landowner. In that year he was consulted by a coloured woman named Marshall who suffered from a necrosis of the lower jaw, and Mr Anderson with the assistance of a medical friend cut down upon the sequestrum The sequestrum did not separate immediately and the patient and her friends, not understanding the pathology of the condition, were much disappointed at the delay in the cure, and finally became so objectionable in their manner that Mr Anderson refused to continue to treat the case. A fortnight later the sequestrum became loosened and was easily removed by another medical man with his finger Mr. Anderson's professional charges not being paid, he took proceedings in the Petty Debt Court, and after some inexplicable delay found that the Chief Justice, Sir John Gorrie, who was then in the island of Trinidad, had given special directions that this case was not to be tried until his (Sir John Gorrie's) arrival in Tobago In the meantime Mrs Marshall and her husband sued Mr Anderson *in forma pauperis* for £15 damages There was no shadow of proof that the female plaintiff had sustained any injury, and the principal charge alleged against the defendant was neglect, inasmuch as he had improperly ceased to attend the plaintiff and had retired from the case before recovery was complete In the result the Chief Justice, in the beginning of 1890, gave judgment for the plaintiff for the sum of £17 10s, with costs for breach of contract—for which the plaintiffs had not sued, neither had their plaint been amended to include it Sir John Gorrie further stated, without any reservation, that a medical man, as such, and merely by becoming qualified, was bound to attend all cases of illness to which he was summoned, and that no medical man had a right, without the consent of the patient, to abandon any case which he had begun to treat, even where other medical aid was available and where the patient was running no risk from such abandonment, and that by so doing he laid himself open to an action at law, civil or criminal He also stigmatised the making of contracts prior to attendance as an unprofessional and improper act on the part of the practitioner It is almost needless to add that Mr Anderson's claim for fees was disallowed by Sir John Gorrie About a year afterwards—viz, on Jan 20th, 1891—summonses were taken out against Mr Anderson by the Marshalls The plaintiffs sued *in forma pauperis*, no affidavit was made to shew that the claims were unpaid The total amount of the judgment debts, including costs, was £42 2s The case was tried in Tobago before Mr Justice Cook and Mr Anderson was on Jan 23rd ordered by this judge, upon adjournment of his examination to give his security in £500 and also to find bail in £500 for his appearance at the adjourned hearing of the summons, and in default of giving such security he was committed to prison where he remained until the adjourned hearing was resumed on Jan 30th On that day Mr Justice Cook again adjourned the hearing after some examination and required Mr Anderson to find security for his appearance, as before in two sums of £500 each Five well known residents three of whom were members of the Legislative Council perceiving that a grave injustice was being perpetrated, went in a body to the judge to offer the security Mr Anderson was then liberated, having been imprisoned for not finding £1000 bail as security for a debt of £42 2*s.* which had never been legally proved against him.

That the administration of justice in the West Indies by Gorrie and Cook was a disgraceful farce had long been the opinion of the European residents. Mr. Anderson, who had petitioned the Crown and been threatened with proceedings for contempt of court consequently, was sent to England in 1891 by public subscriptions raised in Trinidad, to lay his wrongs before the home authorities and the public. On Sept. 14th of that year he instituted his remarkable action in the Court of Queen's Bench against the Trinidad judges (Anderson *v.* Gorrie and others). The facts disclosed were too flagrant to be overlooked. In 1892 a Royal Commission, consisting of Sir William Markby and Sir Frederick Pollock, was appointed to inquire into the administration of justice in Trinidad and Tobago, and their report resulted in the removal of Mr. Justice Cook from office. Sir John Gorrie was also interdicted pending the formal bringing of charges against him, but the interdiction was soon followed by his death. Mr. Anderson's action against the judges only came on in April, 1894, and occupied seven days, before the late Lord Chief Justice Coleridge and a special jury of Middlesex. He appeared in person and successfully held his own against five counsel employed by the defendants. In the course of the trial Lord Coleridge stigmatised the imposition of the bail already mentioned as "a piece of unmitigated, unlawful tyranny," and in the course of his summing-up said:—"The proceedings for contempt of court against the plaintiff for having petitioned the Queen were quite unjustifiable. Then judgments having been obtained against Mr. Anderson for £42, Mr. Justice Cook held him to bail for £500. He confessed he could not understand how an English judge could have so acted." The verdict was as follows:—"The jury find that the defendant Cook oppressively and with malice overstrained his judicial powers to the prejudice of the plaintiff, and the wilful perversion of justice, and found a verdict for the plaintiff for £500." Lord Coleridge, however, entered judgment for the defendant on the ground that no action could lie against a judge for an act done in his judicial capacity, and this judgment was confirmed by the then Master of the Rolls (Lord Esher) and the Court of Appeal.

Mr. Anderson thus became the helpless victim of judicial persecution. Having been forced into heavy expenditure in defence of his personal rights he had the additional mortification of finding that the survivor of his persecutors was by a legal technicality superior to the ordinary operation of the law. Under the terrible strains and mortifications which he had courageously endured for several years Mr. Anderson, now completely ruined in purse, bore himself with unflinching courage. It would, perhaps, have been better for him—he certainly would have been a happier man—if he had ceased to struggle against the gross injustice of his fate. But this his courage and determination would not allow him to do, and he spent the remainder of a most unfortunate life in resenting the position to which the unjust and drunken colonial judges had reduced him. His efforts on behalf of general medical reform, though honestly undertaken for the sake of the rank-and-file of the medical profession, were all inspired by the abiding sense of his own wrongs. The General Medical Council, being unable to take cognisance of his case stood convicted in his eyes of ineptitude, while he was ready to maintain the illegality of its constitution and the necessity for its root and branch reform. The governing body of the Royal College of Surgeons of England, making no sustained effort to help him—a Fellow of the corporation—in his struggle, became in his eyes a body that required complete reconstruction, and his voice was among the loudest, if not among the clearest, of those who demanded for all Members of the College a proper representation on the Council. But, we regret to say, having that cause at heart, that the position of the Members lost by Mr. Anderson's advocacy. Protracted litigation, often personally conducted, had left him with a feeling concerning legal phraseology that was little short of superstition. He had found himself on many occasions opposed in his procedure by the wording rather than by the spirit of certain Acts of Parliament, certain verdicts, and certain charters. Consequently, in framing resolutions in support of various broad schemes of medical reform, he was wont to make his motions so elaborate in their provision against possible misconception that they became to the ordinary understanding mere involved verbiage. The medical profession cannot be blamed for withholding serious support from propositions so incoherent as those for which Mr. Anderson was wont to stand sponsor upon all public occasions.

But it would be an injustice to the memory of a brave and deeply wronged man if his character were to be finally judged by some of his later acts and utterances. Impelled, as no doubt he was, by his private wrongs to take up the rôle of public champion of the rights of his profession, from the time that the grievances which he desired to redress were public and not private ones he ceased to obtrude his personal wrongs; while as a reformer the line which he took was fairly correct, though his methods were more than occasionally wrong-headed. With his death is closed a lurid page in the constitutional history of this country. Mr. Anderson was ruined by unjust judges, and this not under some corrupt Oriental autocrat with a mediæval scheme of misrule, but less than a decade ago under the British Crown.

GEORGE CORDWENT, M.D. ST. AND., F.R.C.S. ENG., L.S.A.

DR. GEORGE CORDWENT died at his residence, Milverton, Somerset, on Nov. 12th in his eighty-sixth year. Dr. Cordwent received his medical education at St. George's Hospital and qualified as M.R.C.S. Eng. and L.S.A. in 1840 and in 1841 respectively. He graduated as M.D. at St. Andrews University in 1859 and three years later he was admitted F.R.C.S. Eng. Dr. Cordwent practised in Taunton for many years and was on the honorary staff of the Taunton and Somerset Hospital. He was a former president of the West Somerset Branch of the British Medical Association. About 25 years ago he retired from practice and settled at Milverton. Dr. Cordwent was a life-member of the council of St. Andrews University and also a Fellow of the Chemical Society. He took a great interest in archæological subjects. Dr. Cordwent married a Miss Mathias of Taunton who predeceased him many years ago and he leaves no children. The deceased was much respected in Milverton and the funeral, which took place there on Nov. 16th, was largely attended.

THE WAR IN SOUTH AFRICA.

THE IMPERIAL YEOMANRY FIELD HOSPITAL AND BEARER COMPANY.

BY CHARLES STONHAM, F.R.C.S. ENG.,

CHIEF SURGEON AND OFFICER COMMANDING THE IMPERIAL YEOMANRY FIELD HOSPITAL; SENIOR SURGEON, WESTMINSTER HOSPITAL, ETC.

IN my second letter,[1] sent to you from the Devil's Kantoor, I gave you some account of our marches east and north of Pretoria, to which place we returned from Warm Baths on August 26th, reaching Pretoria at 9.30 A.M. on the 28th after covering a distance of 64 miles. Sending our ambulances on to the Irish Hospital, which is established in the Palace of Justice, we proceeded to camp near the Racecourse, and spent the rest of the day with our five weeks' mails, which were brought into camp by the returning ambulances. We all looked forward to a few days' rest, which had been well earned by the men and transport animals of all units—of the latter, indeed, we had lost many, and those which were still alive were worn out with long marches and scanty rations. The forced march of 64 miles from Warm Baths, coming as it did at the end of a month's hard trekking, had played havoc with the mules; indeed, the field hospital and bearer company combined had to requisition for 70 fresh animals to make up for those dead or quite unfit to move. We were, however, only able to draw 10—60 being the total number allowed for the whole brigade; and when I tell you that all units were in this respect as badly off as ourselves, you will have some idea of the extreme difficulties of transport.

The day after our arrival in Pretoria (August 29th) Major Hale, D.S.O., R.A.M.C., and I went to No. 3 Model School Hospital (commanded by Major R. W. Ford, R.A.M.C.), to which we had lent our detachment for the time being We made all arrangements for the detachment which appeared necessary to us exchanging one or two sick men and providing for the sending home of most of the St John Ambulance men who were time expired We drew a few stores, and changed a couple of our carts so that we should be ready to march at once when orders arrived For these we had not long to wait for at about 12 o'clock we received marching orders for the following day I must say that these orders were received with some regret, as although we were all most anxious to go on yet the whole brigade had confidently looked forward to a little rest and time to refit

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[1] THE LANCET, Nov. 17th, 1900, p. 1453.

General Hamilton and his division (with the exception of Mahon's brigade) went east on August 29th by train Our brigade was to march On the 30th we struck camp at 7 A M and marched through Pretoria at 9 A M, passing the recently established Yeomanry Branch Hospital in the grounds of Beckett's house at Sunnyside It looked most business like with everything in full swing The orderlies and the nurses came to the railings to see us pass On the opposite side of the road was the Langman Hospital We camped at Donkerhoek at 5 30 P M On Sept 1 we arrived at Balmoral having camped the night before two miles south of Bronkhorst Spruit Our march on this day was by no means pleasant as we had to pass along the road where our animals had perished in such numbers during the storm of the night of July 25th The stench was abominable and nauseating and although we are pretty well used to this kind of thing now, it was so obtrusive that everyone was glad when this part of our journey was over On Sept 3rd we passed through Middelburg and sent our sick to the hospital there We camped at Wonderfontein on the 4th On the 5th as we were inspanning we heard heavy gun fire to the north west of us and after marching on our journey about three miles our artillery and mounted troops with two ambulances under Major Hale were ordered back The rest of the convoy, with the infantry outspanned until late in the afternoon, when the mounted troops beginning to return we moved on and camped after marching for two miles We found that our troops had arrived too late, and that the Boers under Commandant Trichardt, who had attacked a party of Canadians guarding the railway between Pan and Wonderfontein had been beaten off Our ambulances took five wounded men from the camp of the Canadians to Wonderfontein railway station to await a train for Middelburg

On the 6th we joined General French's division at Carolina and rested there till the 9th on which date the division marched into the hills in the direction of Barberton Major Hale and Dr Green with two ambulances followed Mahon's cavalry, the rest going with the main convoy About 10 30 A M our advanced guns engaged the enemy and the convoy parked at the foot of a hill on which two of our guns were placed The guns soon drove the enemy from the opposite hill and after lunch I rode forward to the advanced battery and watched the action for the rest of the afternoon It was most exciting especially at the finish when the mounted Boers broke cover and made up the hill which we had been shelling as hard as they could go under a perfect hail of shell fire from the battery The division now advanced, crossed the hill which we had been shelling, and encamped about 8 P M in the valley, some of the convoy not coming in till the following morning As the convoy was passing over the hill we had just been shelling the Boers sent two shells which passed just over our heads and fell on the other side fortunately without bursting Our casualties in this action were five wounded One man who was shot through the head died in our hospital on the 12th On the next morning we continued our march We were now fairly in the mountains The roads were very bad, and they may be best likened to a dissipated switchback They are broken by numerous drifts over the Komati river, which takes a very winding course through the valley On all sides of us were mountains—indeed, the country was such that had the Boers chosen to hold it at almost any point they might have defied us indefinitely On the 12th we camped at the foot of Roodeloogk an exceedingly steep pass about half a mile long Our guns shelled the Boers from their position here during the morning The remainder of the day and the two days next following were taken up in getting the troops and convoy over the pass—a by no means easy task, as each wagon required a minimum of 24 mules so that constant relays of animals had to be sent down the hill until the last wagon reached the top Our turn to ascend the hill came on the 14th General French had moved on with his cavalry the day before to make a forced march to Barberton, the 4th Cavalry Brigade being left to guard the pass and the next day the rest of us marched to the top of the Devil's Chute, which we descended the following morning The top of the Devil's Chute is about 7500 feet or 8000 feet above sea level and from it there is an extensive and beautiful view of the lower ground surrounded by mountain chains with Barberton about 20 miles distant The Devil's Chute is a winding road about three miles long descending about 2500 feet or 3000 feet to the lower, but still hilly and broken ground Many wagons and animals which had come to grief in the descent bore witness to its difficulties Our mules were now thoroughly done up, we had lost so many that even after inspanning our horses our teams were reduced to six animals, and we only just managed to creep into Barberton on the 17th when we sent our sick to the Boer hospital This march to Barberton will certainly rank as one of the great marches of the campaign, and some idea of its difficulties may be formed when I tell you that the Boers at Barberton—and, indeed, the English residents too—thought that it would be impossible for us to enter the town with our heavy guns and convoy When it was evident to the former that we not only could, but would, enter Barberton, the Boers made preparations to go but General French pushed on and arrived two days before he was expected This caused the Boers to beat a hasty retreat and they left large quantities of stores and over 40 engines I need not dwell upon our stay at Barberton, where we were detained for lack of transport till Oct 2nd We obtained supplies and a small supply of fresh vegetables which were very welcome, as we began to feel the absence of the latter severely—indeed this is one of the chief drawbacks to long marches through an absolutely barren country. Unfortunately there was absolutely no forage to be obtained and our transport animals had to pick up a living as best they could on the veldt Needless to say they died daily A few days before we left a small quantity of forage was issued, and had it not been for this most of the poor animals would have died On Sept 20th the 4th Cavalry Brigade which had been left to guard the pass, marched in followed by the Naval Brigade with their 4 7 gun

On Oct 1st we received orders to march on the following morning We were to proceed by the Devil's Kantoor and we were only to take such wagons as we could find full teams for All the others and the greater bulk of our stores, with the dismounted men, were sent to the station where they would be entrained as soon as the line was repaired We accordingly left two officers and 35 men with seven wagons who camped near the station These were sent on by train and we found them waiting our arrival when we got to Machadodorp On the 2nd Major Hale Dr Green, and I, with 28 men, moved off with 10 carts after passing a most disagreeable night in consequence of the very high wind and perpetual duststorms We marched for 18 miles and camped at the North de Kaap river, the rest of the column going four miles further on Mahon's brigade was now virtually broken up The Imperial Light Horse had been sent on on Oct 1st, and we understood that they went to Pretoria for disbandment M Battery, the ammunition column Lumsden's Horse, and a few details were now all that were left, the others either having been sent away by train or being left at Barberton as a garrison During the night a series of heavy thunderstorms commenced, which lasted practically without intermission, for 18 hours The lightning was extremely vivid and, I regret to say, was fatal to two men in the ammunition column, besides injuring some others and killing some mules Personally I have never experienced such terrible thunderstorms before

On the 3rd we commenced the ascent of the Kantoor by a very bad road, which was excessively steep in parts and wound up the mountain for about seven miles This day we did about four miles in pouring rain accompanied by heavy thunder and lightning The next two days were occupied in getting the wagons up This had to be done in detachments as each wagon required 26 mules The road was exceedingly picturesque and from the top of the Kantoor a magnificent view of the mountains surrounding the low ground in which Barberton lies was obtained On the 6th we reached Godwan River station, and before we proceeded further we had again to cut down our convoy as there was another hill to be ascended at Waterval Onder which, according to accounts we had received, was worse than anything we had yet passed. We left Dr. Green with all the baggage and what little stores we had, two carts, and all the men but eight, to go on to Machadodorp by train. Major Hale and I, with eight men and the rest of the wagons, quite empty except for kits, marched to Nooitgedacht, where I took the opportunity of going over the prisoners' quarters. Our march was through a beautiful valley, and had it not been for the wind and heavy duststorms would have been most enjoyable. On arriving at Waterval Onder about mid-day on the 8th we saw the hill of which we had received such terrible accounts and we were agreeably surprised to find that there was really nothing formidable about it; indeed, in the afternoon we marched up it without difficulty with our usual 10 spans of mules. The following day we reached Machadodorp, where we found the rest of our men and wagons who had preceded us by train. General French's division and some of Buller's troops were here and made a very big camp.

On the 11th we received orders to take part of the field hospital and bearer company and march on the next day with Mahon's brigade, which had been re-formed, the rest of our men being left behind to go to Pretoria by train as soon as possible. Late at night these orders were countermanded from Pretoria, and we were ordered to cross to the north of the line at daybreak and to take over the sick from the field hospital which was to take our place in Mahon's brigade. This, in view of the fact that the Yeomanry, volunteers, colonials, and reservists were being sent down, looked like an early return home, and although, as we had been with General Mahon for three months, we were sorry not to accompany him further, we were all delighted at the prospect before us. We remained at Machadodorp until the 21st, when we entrained for Pretoria, arriving there on the 22nd. During our stay at Machadodorp we had admitted nearly 100 patients, sending them down by sick convoy as opportunity offered.

I have now brought our wanderings up to date and I am afraid some of your readers may be inclined to say, "This is all very well, but he has said nothing about the medical and surgical work which the hospital has done." I have purposely refrained from doing so, as it seems to me injudicious to interlard my letters with professional details. However, when our work as a field hospital and bearer company is definitely terminated I hope to furnish you with such professional details as I think may prove interesting.

Pretoria, Oct. 23rd.

THE BATTLE OF THE CLUBS.

MIDLAND MEDICAL UNION.

THE inaugural meeting of the above union was held at Nottingham on Oct. 10th, Mr. J G. SHEA of Chesterfield being in the chair. There was a representative attendance of members from Nottingham, Derby, Belper, Mansfield, Chesterfield, and the neighbourhood. The Nottingham and District Medical Union were received *en bloc* as members and now constitute the Nottingham branch of the Midland Medical Union. Dr. E. Jepson, President of the Durham Medical Union, had kindly promised to deliver an address but was prevented from being present. His address has been printed and circulated amongst the members.

The following officers were elected:—President: Mr. J G. Shea (Chesterfield). Vice-President: Mr. T. Geraty (Nottingham). Treasurer: Dr. F. R Mutch (Nottingham). Honorary secretaries (*pro tem.*): Dr. E. H Houfton (Shirebrook) and Mr. C. J. Palmer (Mansfield-Woodhouse).

A representative council was also elected and a code of rules was adopted, the principal of which were as follows:—

1. Name of association - "Midland Medical Union"

2. Objects. (*a*) To protect the interests of members of this association in every respect, but more particularly from unfair competition, and from any attempts that may be made to induce or compel medical practitioners to accept insufficient remuneration for professional services; (*b*) to establish and maintain minimum rates of payment for medical contract work in relation to miners and all classes of workmen, members of friendly societies, sick and other clubs, lodges, insurance and other companies and societies.

3. Every registered medical practitioner residing in or near the counties of Nottingham and Derby shall be eligible for membership. Application to be the recognised form and election by a majority of the council.

4 The annual subscription for each member be 5*s*, payable in advance on Oct. 1st. A guarantee fund shall be formed limited to 21*s*. per member, to be called for in case of necessity only.

5 The officers of the union shall be elected annually and consist of president, vice-president, secretaries, treasurers, solicitors, and council. The council to consist of two or more members from each branch, four to form a quorum.

6. The annual meeting shall be held in October, at place to be decided on by council.

8. A special general meeting shall be called by the President at any time upon a requisition signed by six members, such special meeting to consider no other topic than that for which the meeting was called.

9. No member of the union shall oppose any practitioner in any course of action which he may take, with the previously expressed sanction of the council, for the general good of the profession

10. Any member acting, in the opinion of a special meeting called for the purpose, contrary to the laws and regulations of the union shall, upon a majority of at least three-fourths of the members present, be suspended or expelled, and without appeal, from the union

11. A special meeting, called for the purpose of considering the conduct of any member of the union, shall only be convened after 14 days' written notice has been sent to the last known address of each member, and such notice shall state clearly the purpose for which such meeting is convened.

14. No new law shall be adopted, and no existing law be altered or rescinded, except at the annual general meeting or at a special meeting called for the purpose, and 14 days' notice of such proposed alterations, signed by at least three members, shall be sent to every member of the union in the circular convening the meeting.

LOCAL ASSOCIATIONS.

15. That any existing local association of medical practitioners or groups of practitioners in districts where there are such local associations be empowered to form or become a local association of this union, and that each member of such local association having paid to this union the annual subscription for the time being, payable under the foregoing rules, such local association shall be allowed by this union reasonable expenses for carrying on the work of such local association in relation to this union, and also have full authority to direct and control their own local affairs, subject to all questions of special importance being referred to this union and governed by the rules thereof

It is hoped that all medical men in Nottinghamshire, Derbyshire, and the neighbourhood will become members so that something may be done to improve rates of pay for contract work and to deal with other matters of medico-political interest.

The honorary secretaries will be glad to give any information respecting the union and to receive the names of those wishing to become members

THE BIRMINGHAM AND DISTRICT GENERAL MEDICAL PRACTITIONERS' UNION.

In THE LANCET of Dec. 30th, 1899 (p. 1866), we announced the formation of this union. The report of the council of the union to the members for the first year of its existence has just been published. The area with which the union deals is that known as "Greater Birmingham"; it has a radius of some five miles from the centre of the city and it has been divided into 14 medical wards. The members of each ward elect representatives to serve on a central council. Members to the number of 202 have already been enrolled. We gather from the report that owing to the influence of the union five general practitioners have been elected on the council of the Birmingham Medical Institute. Inquiries have been instituted into the abuses of the club system, and though the council of the union do not consider the present time opportune for dealing with the question as a whole, yet they are prepared for action in the case of individual clubs if they are appealed to. We wish the union success, for it is only by organisations of this kind that the abuses affecting the medical profession will ever be remedied.

The officers for the ensuing year are the same as last year, all having been re-elected. They are as follows:—President: Dr. W. E. Parkes. Vice-Presidents: Mr. H. R. Leech and Mr. R. A. Newton. Treasurer: Dr. W. H. Line. Secretaries: Dr. E. D. Kirby, Mr. J. Neal, and Dr. C. Robertson.

THE CORONER AND THE DEATHS OF LUNATICS IN POOR-LAW INSTITUTIONS.

THE following General Order has been addressed by the Local Government Board to the guardians of the poor of the several Poor-law unions in England and Wales, to the boards of management of the several asylum districts formed under the Metropolitan Poor Act, 1867, and to others whom it may concern:—

Whereas it is expedient to provide for the notification of the death of every poor person of unsound mind in any workhouse or in any other building subject to the government of a board of guardians or joint committee of two or more boards of guardians or board of management to the coroner of the district in which such workhouse or other building is situated:

Now therefore we, the Local Government Board, in pursuance of the powers given to us by the statutes in that behalf hereby order as follows:—

Article I —In this Order:

The expression "*Poor law Institution*" means a workhouse a workhouse infirmary or other building subject to the government of a board of guardians or joint committee of two or more boards of guardians, or a district asylum subject to the government of the board of management of an asylum district.

The expression 'Superintending Officer' means in the case of a workhouse, the master, in the case of a workhouse infirmary, the superintendent, or where there is no superintendent the steward in the case of an asylum subject to the government of the board of management of an asylum district the medical superintendent or other head officer and in default of any such persons includes any other officer whose duties comprise the notification to the pauper's relatives of the death of any pauper in a Poor-law institution

The expression "Lunatic' means an idiot or person of unsound mind.

Article II —Within 48 hours after the death of a lunatic in a Poor-law institution notice of such death shall be sent by the superintending officer of such institution to the coroner of the district in which the institution is situated, and such notice shall be accompanied by a statement signed by the medical officer or the medical superintendent or the medical man who attended the lunatic in his last illness and containing the following particulars:—

1 The name sex, and age of the lunatic.
2. Whether married single, or widowed.
3 The apparent cause of death.
4 The time of and any unusual circumstances attending the death, also a description of any injuries known to exist at the time of death or found subsequently on the body of the deceased.
5 The duration of the disease of which the lunatic died.
6 The names and descriptions of any persons present at the death
7 Whether or not mechanical restraint was applied to the deceased within seven days previously to death, with its character and duration if so applied.

Article III —This Order shall come into operation from and after the first day of December, 1900

Given under the seal of office of the Local Government Board this 3rd day of November, 1900

HENRY CHAPLIN, President.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 33 of the largest English towns 6208 births and 3917 deaths were registered during the week ending Nov 17th The annual rate of mortality in these towns, which had been 17 6 and 16 9 per 1000 in the two preceding weeks, rose again to 17 6 last week In London the death rate was 17 1 per 1000 while it averaged 17 9 in the 32 provincial towns The lowest death rates in these towns were 9 5 in Norwich, 11 9 in Croydon, 12 1 in Cardiff, and 13 4 in West Ham, the highest rates were 20 5 in Liverpool 21 6 in Newcastle 21 9 in Manchester, and 24 8 in Salford The 3917 deaths in these towns included 353 which were referred to the principal zymotic diseases against 485 425, and 356 in the three preceding weeks, of these, 72 resulted from diarrhœa 71 from "fever (principally enteric), 70 from diphtheria, 62 from whooping cough, 47 from measles and 31 from scarlet fever The lowest death rates last week from these diseases occurred in Cardiff, Norwich, Huddersfield, Halifax, and Gateshead and the highest rates in Brighton, Wolverhampton Nottingham, Preston, and Sheffield The greatest mortality from measles occurred in Brighton, from whooping cough in Nottingham Derby Preston, and Sheffield, from 'fever' in Plymouth, Derby, and Sunderland, and from diarrhœa in Swansea Wolverhampton Nottingham and Bolton The mortality from scarlet fever showed no marked excess in any of the 33 large towns The 70 deaths from diphtheria included 32 in London, seven in Leicester, seven in Sheffield five in Liverpool, and four in Portsmouth No fatal case of small pox was registered last week either in London or in any of the 32 large provincial towns, and no case of small pox was under treatment in any of the Metropolitan Asylums hospitals on Saturday last, Nov 17th The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2728 against numbers increasing from 1703 to 2702 on the 11 preceding Saturdays, 281 new cases were admitted during the week against 320 336, and 289 in the three preceding weeks The deaths referred to diseases of the respiratory organs in London, which had risen from 164 to 307 in the six preceding weeks, further increased last week to 352 but were 60 below the corrected average The causes of 42, or 1 1 per cent, of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham, Bristol, Bradford, Newcastle, and 14 other smaller towns The largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, and Sheffield

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in the eight Scotch towns, which had been 19 6, 19 6, and 19 2 per 1000 in the three preceding weeks rose again to 19 9 during the week ending Nov 17th, and showed an excess of 2 3 per 1000 over the mean rate during the same period in the 33 large English towns The rates in the eight Scotch towns ranged from 14 9 in Dundee and 17 2 in Leith to 20 5 in Edinburgh and 21 2 in Glasgow The 614 deaths in these towns included 22 which were referred to whooping cough, 16 to diarrhœa, 13 to measles, 11 to diphtheria, seven to "fever," four to scarlet fever, and two to small pox In all, 75 deaths resulted from these principal zymotic diseases, against 77 and 62 in the two preceding weeks These 75 deaths were equal to an annual rate of 2 4 per 1000, which was 0 8 above the mean rate last week from the same diseases in the 33 large English towns The fatal cases of whooping cough which had increased from 13 to 22 in the five preceding weeks, were again 22 last week, and included 17 in Glasgow, two in Dundee, and two in Paisley The deaths from diarrhœa, which had decreased from 53 to 17 in the six preceding weeks, further declined last week to 16, of which seven occurred in Glasgow, four in Dundee, and three in Aberdeen The fatal cases of measles, which had been eight and five in the two preceding weeks rose again to 13 last week, and included eight in Edinburgh and four in Aberdeen The deaths from diphtheria which had been seven in each of the two preceding weeks, increased last week to 11, of which five were registered in Glasgow, three in Edinburgh, and two in Perth The seven fatal cases of "fever" corresponded with the number in the preceding week, and included six in Glasgow The deaths from scarlet fever, which had declined from eight to four in the three preceding weeks, were again four last week, and included two in Glasgow and two in Paisley The two fatal cases of small pox were both recorded in Glasgow The deaths referred to diseases of the respiratory organs in these towns, which had increased from 98 to 150 in the six preceding weeks, further rose last week to 163, and were 31 above the number in the corresponding period of last year The causes of 21, or more than 3 per cent, of the deaths in these eight towns last week were not certified

HEALTH OF DUBLIN.

The death rate in Dublin, which had been 20 0, 21 9, and 22 5 per 1000 in the three preceding weeks further rose to 26 0 during the week ending Nov 17th During the past four weeks the death rate in the city has averaged 22 6 per 1000, the rate during the same period being 16 7 in London and 17 3 in Edinburgh The 174 deaths belonging to Dublin registered during the week under notice were 23 above the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 13 and 11 in the two preceding weeks, of these, three resulted from "fever three from diarrhœa two from whooping cough one from measles one from scarlet fever, and one from diphtheria These 11 deaths were equal to an annual rate of 1 6 per 1000 the zymotic death rate during the same period being 1 2 in London and 2 6 in Edinburgh The deaths referred to different forms of "fever, which had been three and four in the two preceding weeks declined again to three last week The fatal cases of diarrhœa which had been five and six in the two preceding weeks declined last week to three The 174 deaths in Dublin last week included 25 of infants under one year of age and 61 of persons aged upwards of 60 years, the deaths of infants showed a decline, while those of elderly persons considerably exceeded the number in the preceding week Eight inquest cases and six deaths from violence were registered and 44 or more than one-fourth, of the deaths occurred in public institutions The causes of seven, or more than 4 per cent, of the deaths in the city last week were not certified

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon A. G. Delmege is granted the honorary rank of Deputy Inspector-General of Hospitals.

The following appointments are notified:—Fleet Surgeon A. McKinlay to the *Camperdown*. Staff Surgeons: R. F. Bowie to the *Hone*; J. H. Thomas to the *Cormorant* for Gibraltar Hospital; and G. T. Broatch to the *Devastation*. Surgeons: J. M. G. Swainson to the *Terrible*; A. J. Hewitt to the *Trafalgar*; E. Folliott to the *Assaye*; and R. St. G. S. Bond to the *Highflyer*.

IMPERIAL YEOMANRY.

Private Lewis Johnstone Weatherbe to be Medical Officer with the temporary rank of Captain.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Raglan Wykeham Barnes retires on retired pay. Lieutenant-Colonel John J. Falvey retires on retired pay.

Captain W. A. Ward joins the Home District for duty in London. Major J. H. Nicolas is selected for duty in the Southern District at Gosport. Lieutenant Carr is detailed as medical officer for the Royal Artillery Brigade Division at the new Ewshot Hut Barracks.

INDIA AND THE INDIAN MEDICAL SERVICES.

Colonel Davis, C.B., D.S.O., is appointed Principal Medical Officer, British Contingent, China Expeditionary Forces, vice Colonel Bookey, invalided.

VOLUNTEER CORPS.

Royal Engineers: 1st Cheshire: Surgeon-Lieutenant J. F. Blake-Campbell resigns his commission. *Rifle*: 1st Volunteer Battalion the Buffs (East Kent Regiment): Charles Mason Atkinson to be Surgeon-Lieutenant. 1st Volunteer Battalion the Hampshire Regiment: Douglas Lawson Thomson to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: Supernumerary Surgeon-Lieutenant J. W. Smith to be Surgeon-Lieutenant on the Establishment.

TRANSVAAL WAR NOTES.

Civil Surgeon J. B. Christopherson has returned to England.

Lieutenant W. Jagger, R.A.M.C., and Civil Surgeons W. L. Wainwright, L. V. Cargill, and W. C. Allan are returning home in the *Assaye*, which left for England on Nov. 17th. The following invalids are also on board:—Major T. Archer, R.A.M.C., Lieutenant F. S. Walker, R.A.M.C., and Civil Surgeon D. V. M. Adams.

Civil Surgeons R. Ward, A. Breslin, C. Gibbs, H. J. Scharlieb, and W. W. Wooliscroft left in the *Yorkshire* for England on Nov. 15th.

The hospital ship *Princess of Wales* sailed for England on Nov. 13th with 171 sick and wounded on board. She is due at Southampton on Dec. 5th or 6th.

The *Dilwara* arrived at Southampton on Nov. 20th with the following invalid officers on board:—Civil Surgeons F. D. Boyd, A. H. Watt, G. L. Chiene, J. Miller, J. McFarlane, G. S. Stoker, Coleman, and J. C. Ponder; Dressers A. C. Balfour, H. V. Fletcher, H. Gribben, W. H. Nutt, G. Paulin, Edwards, Thomson, McIlwain, and Stewart; Civil Surgeons Enrys and Roberts, of the Welsh Hospital; and Sir W. Thomson, of the Irish Hospital.

Major C. E. Faunce, R.A.M.C., Captain F. J. Wade-Brown, Civil Surgeons H. Bayliss, N. B. Harman, and H. B. Maunsell have been discharged from hospital to duty.

Sir William Thomson and the members of the staff of Lord Iveagh's Irish Hospital arrived in Dublin on Wednesday morning, Nov. 21st, and were received with warmhearted enthusiasm.

ARMY REORGANISATION AND REFORMS.

There is naturally a considerable amount of curiosity as to what may be the nature and extent of the coming army reform in which the Army Medical Service will, of course, share. But it is a question which concerns the whole army and not merely the medical branch of it, and is a big business. The changes will require to be far-reaching and radical if they are to satisfy the public mind in its present temper. Mr. Brodrick, the new Secretary of State for War, made a judicious and well-balanced speech at Godalming on Nov. 6th. He has already had much War Office experience and as he will be intimately associated with Lord Roberts, who will take up his appointment at the Horse Guards fresh from the South African campaign, to say nothing of all his previous war experience, we may expect that the reforms and reorganisation will at any rate be run on safe and practical lines. Sir Michael Hicks-Beach's recent speech at Bristol from the Treasury point of view struck us as a logical vindication of his position and a trenchant criticism and reply to much of what has been put forward from the purely military side. He had no difficulty in showing that our military system requires a change in several directions in order to bring it abreast of the requirements of the Empire and those of modern warfare and that something more than the expenditure of money is necessary.

THE WAR IN SOUTH AFRICA.

We may direct attention to the interesting articles by Mr. Charles Stonham appearing in THE LANCET as illustrating the great topographical difficulties of a campaign in South Africa. From his descriptions it will be seen that our troops with their hospitals and hospital establishments have had to make most laborious marches and to fight physical geography as well as the enemy. The events in South Africa carry us back to the long and successful defiance of the French arms in La Vendée and, more recently, to the formidable nature of the task undertaken by the Austrians in their occupation of Bosnia and Herzegovina.

THE CITY IMPERIAL VOLUNTEERS

The members of the Volunteer Ambulance School of Instruction received Surgeon-Major R. R. Sleman, who went to the front in medical charge of the C.I.V., on Saturday last at their headquarters. In reply to an address of welcome he remarked that the result of inoculation for enteric fever had proved very satisfactory, for there were 50 per cent. more recoveries among men so treated than among the others. Surgeon-Major Sleman, A.M.R., C.I.V., and also Surgeon-Captain E. W. St. V. Ryan, A.M.R., C.I.V., will be entertained at dinner this (Friday) evening at the Café Florence by the staff of the school.

THE HEALTH OF THE TROOPS IN SOUTH AFRICA

The troops in South Africa are on the whole healthy. There is, nevertheless, as might be expected under the circumstances, a good deal of disease incidental to camp life and campaigning present among them. The amount of enteric fever, which may be said to be endemic in South Africa, is very much less than it was, but if the prevalence of that fever comports itself in the way that it does in India we may expect more of it during the hot season and after the rains.

Correspondence.

"Audi alteram partem."

THE CORONER AND THE DEATHS OF LUNATICS IN POOR-LAW INSTITUTIONS: A VALUABLE REFORM.

To the Editors of THE LANCET.

SIRS,—Some years ago I drew the attention of the Lunacy Commissioners to the fact that no provision was made for notifying to the coroner the death of any lunatic in Poor-law institutions, and in December, 1899, I again called attention to the matter. In reply I was informed that a workhouse, hospital, or infirmary of a union under the management of the guardians did not come within the definition of "an institution for lunatics" under the Lunacy Acts. In consequence, I brought the matter before the Coroners' Society, and by direction communicated with the Home Office, pointing out the desirability of such deaths being reported to the coroner, as is done in all asylums and houses licensed for the reception of lunatics.

The Local Government Board have now issued a General Order, of which I enclose a copy. By it you will see that the death of any person of unsound mind under the care of any

Poor-law board must be reported to the coroner in like manner as lunatics, and that the word "lunatic" means "an idiot or person of unsound mind." The particulars to be furnished to the coroner are similar to those given by the authorities at asylums or licensed houses.

This consummation of our efforts is highly satisfactory to the coroners themselves and, I should think, to the medical profession and the public generally. At times rumours are heard of ill-treatment of lunatics in Poor-law institutions but formerly, as the coroner had no notice of deaths he knew nothing as to particulars until too late for him to interfere. Now, however, coroners will be cognisant of all such deaths if the Order is properly carried out and he can make further inquiry and order an inquest if necessary before the body is buried. By the operation of this Order the Poor-law institutions which retain lunatics even temporarily will have to fall into line with those admirable institutions for the reception of lunatics under the county or borough authorities and in private licensed houses where strict supervision is given. Another public advantage is that friends or relatives having an alleged grievance can ask the coroner to hold an inquest, and though this may throw additional work on the coroner I cannot think that any one of us will shirk responsibility, for if the charge is unfounded the credit of the institutions will be established and if sustained a remedy may be suggested. As this is a matter of interest to the medical profession I venture to ask space for the publication of this letter and of the Order (or so much of it as you may think necessary).—I am, Sirs, yours faithfully,

A. BRAXTON HICKS,

Honorary Secretary of the Coroners' Society of England and Wales.

Lupus-street, Nov. 19th, 1900.

*** (The Order will be found printed on p. 1528 of this issue.—ED. L.

"APPENDICITIS."

To the Editors of THE LANCET.

SIRS,—In addition to Sir Samuel Wilks's letter in your impression of Nov. 3rd I can affirm that in 1859 Mr. James Long (brother of the eminent classic George), in his course of lectures on surgery in Liverpool not only included diseases of the cæcum and inflammatio appendicis, but objected to the terms "cæcitis" and "appendicitis" as hybrid, slipshod words, and used the terms "typhlitis" and "perityphlitis" and commended their use.

I was Mr. Long's private pupil at the time, when he had been 22 years' lecturer on anatomy and eight on surgery, and I know he was in favour of early surgical "interference," or rather assistance. I am, Sirs, yours faithfully,

Brook-street, W., Nov. 20th, 1900. TOM BIRD.

THE LATE WILLIAM ANDERSON, F.R.C.S.

To the Editors of THE LANCET.

SIRS,—As an old St. Thomas's man who has had the advantage and privilege of association with the late Mr. Anderson, first as a pupil and afterwards as a friend, I venture to trespass upon your space to invite old St. Thomas's men who have had a similar happy experience of his teaching and generous sympathy to show their appreciation of it by cooperating with me in perpetuating his memory in the hospital where he has been such a conspicuous figure as teacher and friend. Any attempt at laudatory commendation would be superfluous. His life is so well known to St. Thomas's men that I feel certain there are many who will gladly avail themselves of any opportunity that may offer to secure such recognition of his services as would be acceptable to the hospital and gratifying to his friends. I shall be glad to help in any way and will readily respond to anyone who may wish to join in this effort.

I am, Sirs, yours faithfully,

W. GIBSON BOTT.

37, Kennington Park-road, S.E., Nov. 20th, 1900.

"THE TREATMENT OF SPRAINS AND OF SOME FRACTURES."

To the Editors of THE LANCET.

SIRS,—I have read Mr. A. H. Tubby's address on sprains and fractures with much interest, and, though it contains nothing particularly novel, it is well that good rules of practice should be insisted on. I quite agree with Mr. Tubby that the only proper time for the use of cold applications in cases of sprain is immediately after the accident; but unfortunately the surgeon does not usually see these cases in the first quarter of an hour, and later warm applications are better. But I am surprised that Mr. Tubby entirely ignores the application of adhesive plaster to sprains, and I think he will find that strips of the American indiarubber plaster, carefully applied, give better results than a bandage with cotton-wool beneath it. The use of plaster-of-Paris can seldom be required in cases of sprain and has the disadvantage of causing stiffness which requires a good deal of massage, or possibly forcible movement, for its relief.

It is, however, the second part of the address which is most important, and I am glad to find the treatment of injuries about the elbow without splints inculcated. I have practised this method for many years, and in THE LANCET of Jan. 12th, 1889, I published a clinical lecture in which I say: "I believe that in all cases of fracture of the lower end of the humerus the elbow should be well bent. I include, of course, cases of separation of the lower epiphysis, and I like to bring the forearm thoroughly up so as to put the hand to the opposite shoulder, and then I feel confident that the fragments will fall into the best position." I have seen such terrible results from treating these fractures with rectangular splints, and particularly splints made of flat boards, so that the elbow and arm are tightly compressed when the inevitable swelling occurs, that I venture to emphasise Mr. Tubby's excellent teaching and to [illegible] the credit of it to Mr. Jonathan Hutchinson, from whom I learnt it.

I am disappointed not to learn Mr. Tubby's method of treating fracture of the olecranon, which he apparently ignores. In 1883 I read a paper before the Surgical Section of the British Medical Association at Liverpool, urging that in cases of fractured olecranon the elbow should be bent to a right angle and the forearm carried in an ordinary sling. I have always treated these cases in this way with the best results and I have seen disastrous consequences from keeping the limb straight, to say nothing of the discomfort to the patient during the treatment. I may add that I have never had occasion to wire a fractured olecranon.

I am, Sirs, yours faithfully,

Cavendish-square, W., Nov. 18th, 1900. CHRISTOPHER HEATH.

"THE IMPROPER USE OF ASYLUMS FOR THE INSANE."

To the Editors of THE LANCET.

SIRS,—Could you help in a matter that calls for a thorough change of plan? Lunatic asylums are built for the insane; delirium tremens is a passing madness only, and is recoverable from by the rigid withdrawal of the exciting cause. Clearly the Act never contemplated the treatment of such afflicted persons as lunatics. Among the poor, if the boards of guardians cannot take such cases in and put them under proper restraint, we, certifying magistrates, are constrained to send these poor people to asylums. They get rapidly well and are yet prejudiced as to future employment by the fact that they have been lately under asylum treatment, and so the drink craze is bound to resume its sway, recrudescent as it is from idleness and low spirits and lack of food. Thus the mode of cure makes sure of the renewal of the disease: surely a sad irony on modern methods.

I am, Sirs, yours faithfully,

GEORGE H. R. DABBS, M.D. Aberd.

Shanklin, I.W., Nov. 16th, 1900.

"THE WEDGE OPERATION FOR ENTROPION AND TRICHIASIS."

To the Editors of THE LANCET.

SIRS,—With regard to an article under the above heading appearing in THE LANCET of Nov. 3rd, 1900 (p. 1280), I wish to call your attention to the fact that a modification of Snellen's operation has been constantly advocated and practised by Mr. W. E. Cant, of the British Ophthalmic Hospital in Jerusalem, for many years past, differing in no essential detail from that described under the above heading. Personally I have only used it in 300 or 400 cases, but Mr. Cant has used it in a large number (probably 7000) of cases. It is also used by men working in Palestine who have seen the modified Snellen's operation done in

Jerusalem by him. If the incision is continued through the conjunctiva no harm results and a very good result is got, but this should only be done in healthy lids. Sutures to bring the skin together need never be used and in almost all cases a linear scar results which is often indiscernible in two or three years. The cases in which the operation as above described is contra-indicated are those in which much skin has already been removed by native practitioners or quacks (generally with scissors). In such there may be failure to close the lids without strong effort, and the cornea is exposed during sleep. In these cases the operation tends to exaggerate this defect. For these I believe Van Millingen's operation to be by far the best available, because the latter lengthens the lid slightly. Only last summer I saw many cases in the north of Palestine where failure to close the lids after quack operations had resulted in partial, if not complete, xerosis corneæ, and others in which failure to close the lids during sleep would probably result in this.—I am, Sirs, yours faithfully,

J. CROPPER, M.A., M.B., B.C. Cantab.,
Late of Acre, Palestine.
Chepstow, Nov. 7th, 1900.

⁂ Surgeon-Major Herbert's method of operation has been practised by him for many years. The cases refer to the year 1895. We regret that we did not make this clear.—ED. L.

"NECROPSIES IN MEDICO-LEGAL CASES."

To the Editors of THE LANCET.

SIRS,—I have read with interest the leading article in THE LANCET of Nov. 10th (p. 1357) in which you refer to the importance of making a complete post-mortem examination in medico-legal cases. With your remarks I most fully concur, and my object in writing this letter is to accentuate a point which arises in connexion with the last case referred to in your article—viz., the importance of examining the cervical vertebræ. Fracture or dislocation of the neck as a result of violence is by no means so rare as might be supposed and these conditions not infrequently exist without any external signs of injury or, indeed, any indication that death has resulted from other than natural causes, and are therefore easily overlooked unless the vertebræ are subjected to careful examination.

Two instances illustrating this fact have recently come under my notice—one in which a man drawing a barrow slipped and the contents, weighing about 1 cwt., fell upon the back of his head and shoulders, and the other the case of a man who was found dead at the bottom of a short flight of stairs. In neither instance was there any external sign of injury; in both there were pathological conditions of the heart which *might* have accounted for death, but in both the examination of the neck in the manner I am about to describe, which should form part of the routine procedure in all post-mortem examinations, led to the discovery of the true cause of death. The procedure, which is well known, consists in extending the mesial incision on the anterior aspect of the body to a point immediately below the symphysis menti and then reflecting the skin for a short distance on either side of the neck. The knife is then passed up close to the lower jaw and the attachments of the tongue to the floor of the mouth are divided. The tip of the tongue is hooked down by the left forefinger until it can be firmly grasped and pulled downwards, while with the right hand the knife is passed boldly backwards, dividing the soft palate and tissues of the posterior pharyngeal wall. The whole of the soft structures in the neck, including the soft palate, tonsils, and fauces, are now easily brought down into view and one or two cuts with the knife serve to separate them completely from their position in front of the cervical vertebræ.

The advantages of the above procedure being followed in every case are two-fold: first, it is the only way in which the condition of the upper air-passages, pharynx, and tonsils, can be properly examined; and, secondly, I venture to maintain that in no other way can the presence of any fracture or dislocation of the cervical vertebræ be clearly made out. The first proposition everyone will agree with, although my experience is that this method of examination is frequently neglected or imperfectly carried out, with the result that such causes of death as œdema glottidis, or accidental suffocation from choking, more especially in young infants, are often overlooked. With reference to the second proposition, everyone who has made the attempt must be aware of the difficulty of speaking definitely as to the presence or absence of fracture the cervical vertebræ from mere manipulation of the head and neck, more especially when rigor mortis is present; in fact, it is impossible, as a rule, to give a definite opinion upon the point. If, however, the cervical vertebræ have been exposed in the manner described, then by placing one hand on their anterior surfaces and moving the head with the other hand, or, better still, placing the finger in the foramen magnum after removal of the skull-cap and brain, any abnormality can be detected with ease and certainty.

My excuse for writing upon a matter which may appear trivial is your article, and the fact that, notwithstanding the well-known rule that all post-mortem examinations in cases of sudden or violent death should be full and complete, the structures and organs of the neck are frequently totally neglected or only imperfectly examined; whereas, if the parts were exposed in the manner indicated as a matter of routine in all post-mortem examinations such an oversight as the one mentioned by you could never take place, while not a few apparently mysterious deaths would be satisfactorily explained. A point also of considerable practical importance is that no greater disfigurement of a body is occasioned than in a less complete examination.

I am, Sirs, yours faithfully,
HARVEY LITTLEJOHN.
Surgeon's Hall, Edinburgh, Nov. 19th, 1900.

"THE MICRO-ORGANISMS OF VACCINE MATERIALS."

To the Editors of THE LANCET.

SIRS,—I have read with interest in THE LANCET of Nov. 17th (p. 1414) an article by Dr. J. B. Buist on the subject of vaccine organisms, in which he refers to certain observations made by him with my assistance some 15 years ago. I wish it to be generally understood that although my name has been freely made use of in his book (1885) and also in his present paper above cited, I entirely dissociate myself from the conclusions at which he appears to have arrived. To say that a *spore* is the *contagium vivum* of vaccinia is simply a confession of defeat in his very noble effort to clear up an awkward pathological problem. Every bacteriologist should know that a spore—i.e., the immature ovum of any *contagium vivum*—is not to be looked upon as a definite cause of disease. It is only as one follows the life-history of such a spore through its subsequent developments that one is able to assign to it its pathogenetic rôle, and it is only matter of regret that in his paper Dr. Buist has neglected to take this sequence into his consideration. His paper is of so much interest and importance that one must venture to re-assert the well-known dictum that *like produces like*. That a torula should give birth to micrococci, that they in turn should be spores of bacilli and may be fat or lean according to nutrition and environment, and in sequence give birth to one or other type of micro-organism, is a theory not supported by exact research and one so chimerical as to make exact research appear at a disadvantage. Having taken part in Dr. Buist's research to the extent he mentions, and having absolutely declined to associate myself in his book (*op. cit.*, 1885), I think it is now my duty to dissociate myself from the views expressed in his paper in your last issue.

I have no doubt that an artificial nutrient medium for the development of vaccine lymph will soon be introduced; and if it can be standardised, as so many drugs have lately been standardised, for medicinal use, so much the better. There ought to be little trouble in this matter, and the result should strengthen the hands of the Local Government Board in insisting upon vaccination of a uniform type, and supported by irrefragable scientific evidence of unquestioned authority. I must leave the further discussion of this matter to the specialists who can scarcely fail to realise its importance at the present juncture.

I am, Sirs, yours faithfully,
ARTHUR W. HARE, M.B., F.R.C.S. Edin.
Newquay, Cornwall, Nov. 19th, 1900.

"THE QUESTION OF THE COMMUNION CUP."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 13th reference is made in an annotation to "intinction" as a sanitary substitute for individual or separate communion cups; the latter, suggested by a correspondent in the same issue, are dismissed rather *summarily as impracticable.* *Regarding the revival of the* former method of celebrating the Lord's Supper I agree that the sanitary reasons for the change are both patent and cogent, although it is not unlikely that there will arise many ecclesiastical or dogmatic objections to the change from many quarters. But the reason for advocating intinction that THE LANCET gives—namely, that individual communion cups are not practicable—is valid or not according to whether the subject is viewed from the sacerdotal or sanitary standpoint

If THE LANCET means that individual communion cups are impracticable in the Church of England because of certain doctrines, or because of the ritual, "high" or "low," that may obtain, then I have no protestation to make; the advocates of this sanitary reform do not urge any body of the Christian Church to relinquish any beliefs that it considers vital and dear to its spiritual serenity or moral conduct, and holding which it believes would be jeopardised by substituting individual for the commonly-used communion cups. But if THE LANCET means that individual cups are not *feasible from a purely sanitary point of view,* then it is very mistaken, permit me to urge. Furthermore, though admittedly a "modern" innovation, that has not made it necessarily difficult of adaptation—here in America at least; nor has any church found that it introduced "complications into a rite" or rendered the service of the ordinance less "dignified, solemn, and reverent."

Individual communion cups have come increasingly into use during the past six years, and I have yet to learn of one church that, having adopted them, would under any consideration use the single or several cups again. Hundreds of churches are constantly demonstrating the individual cups to be not only practicable but practical—clean, safe, expedient, and reverent to use. I have recently canvassed to find out about how many are now using these cups. It is difficult to learn of all, but I have at this time collected 732 churches, distributed throughout the United States (in all but three or four States) and in all of the principal denominations. The majority of these churches are in the eastern and middle western states, and in the Baptist, Congregational, and Presbyterian churches, the Reformed, Lutheran, and Methodist Episcopal churches being next in order, the Protestant Episcopal (sister to the Church of England) and Universalist churches having separate cups being fewest in number. I have reason to believe that there are approximately 800 churches now using the cups throughout Christendom, about four times as many as in 1897, and representing nearly half a million communicants—evidence of wholesome substantial progress.

Whatever the method of avoiding the unclean, unsanitary single chalice, it is gratifying to note the increased interest and moral courage being shown in desiring the proper union in performance as well as in promise of cleanliness with godliness at the Lord's table as well as at our home table.

I am, Sirs, yours faithfully,
HOWARD S. ANDERS.
Philadelphia, Nov. 9th, 1900.

THE ROYAL ARMY MEDICAL CORPS "AS SEEN FROM WITHIN" BY A VOLUNTEER SURGEON-CAPTAIN TEMPORARILY ATTACHED R.A.M.C.

To the Editors of THE LANCET.

SIRS,—I have had the privilege of six months' service with the Royal Army Medical Corps, both at home (Aldershot and Cowshott) and in Cape Town and Pretoria and neighbourhood during the present Transvaal War, and after 16 years as a private practitioner may be allowed to express my opinion on this important establishment of Her Majesty's army. The work done by this corps can only take a first place, in my opinion, among the other branches of the service. In point of fact, I doubt whether any other corps can excel in the work effectively achieved by them during this dire war.

As a plain volunteer officer who has been temporarily attached to the army and has worked hand-in-hand with the military surgeon and has studied his daily routine I claim the right to give expression to my views in the matter of the corps' usefulness, competency, or otherwise. I consider the medical service a model of what is expected in any modern army and doubt whether any other army could show better results, especially after strict trial, as has been the case with us in the present struggle. Several improvements might advantageously be forthcoming and will in all probability occur sooner or later, but up to the present, as far as I can find, no definite action in this important matter has taken effect.

My suggestions are these and may meet with the approval of many military and civil surgeons:—1. Retain the military titles, which are necessary for obvious reasons. 2. In *military matters* have undoubtedly *military discipline*: for example, a superior officer should certainly have power to order his junior officer to attend a certain case or cases at any time or place or to give any order for any other medical purpose he chooses; but (3) in *medical matters* there should be substituted *medical etiquette.* I deny the right of any medical officer senior to the officer in attendance to interfere with the care and treatment of any case under the latter's charge. Every medical officer in the army should be responsible to Government and to Government alone for the care of his sick and wounded and if found incompetent should be discharged the service. 4. There should be less "writing up" of diet sheets and report sheets; this takes up a considerable time of the army surgeon's work. 5. As to requisitioning for instruments and medicines, especially the former, the present practice is perfectly absurd: it causes unnecessary delay and is often responsible for the safety of a patient's existence. I hold that the protection of human life is one of the most sacred duties and any system which militates against this must be radically wrong.

As a cure to existing evils I would suggest:—1. Relieve the army medical officer of the vast amount of useless filling in of diet sheets which takes up his time to an extent so as to interfere greatly with his usefulness in his medical and surgical wards. 2. Arrange for a commission composed of prominent medical men who have had experience of professional work in time of war, and of officers of the Royal Army Medical Corps, who are not sufficiently long in the service to be influenced by "red-tapeism," and draw out some such scheme as here proposed and the army in the future will even be better doctored than at present.

I am, Sirs, yours faithfully,
FRANCIS WILLIAM GRANT, M.D., B.Sc. Edin.,
Surgeon-Captain, 1st Banff Volunteer Artillery,
Captain (temporary) R.A.M.C.
Elgin, N.B., Nov. 12th, 1900.

MEMORIAL TO THE LATE MR. G. J. SYMONS, F.R.S.

To the Editors of THE LANCET.

SIRS,—On May 31st a meeting was held at the rooms of the Royal Meteorological Society to consider the question of a memorial to the late Mr. G. J. Symons, F.R.S., the distinguished meteorologist and founder of the British Rainfall Organisation. It was resolved unanimously that the memorial should take the form of a gold medal to be awarded from time to time by the Council of the Royal Meteorological Society for distinguished work in connexion with meteorological science. An executive committee was appointed to take the necessary steps to raise a fund for that purpose. We have now much pleasure in stating that their appeal has been very heartily responded to, not only by meteorologists, engineers, and representatives of other branches of science and industry, but also by personal friends and admirers of the late Mr. Symons in all classes. The committee have decided to keep the list open until the end of January, 1901, in order to allow all who have in any way benefited by Mr Symons's advice and assistance to contribute to the Memorial Fund.

We are, Sirs, yours faithfully,
C. THEODORE WILLIAMS, M.D., Treasurer.
R. MELDOLA, F.R.S., } Secretaries.
WM. MARRIOTT. }
70, Victoria-street, Westminster, S.W.

"SMOKE NUISANCE."

To the Editors of THE LANCET.

SIRS,—I take the liberty to send you under separate cover a copy of the *South London Press* of Nov. 3rd, 1900, in which you will find an account of the action taken by the Lambeth Vestry against the South London Electric Supply Corporation, for creating a nuisance by burning of street refuse, the complaint being: (1) the smoke; (2) the dust and ashes blown into the gardens and houses; and (3) the stench arising from the combustion of the refuse.

The decision of the magistrate was that, on the Electric Supply Corporation giving an undertaking not to burn street refuse in future in their furnaces or to permit any effluvia to be emitted from their chimney, the judgment would be postponed *sine die*. The corporation having given this undertaking no fine was imposed, but should the nuisance be repeated the proceedings can always be re-opened. I may mention that the vestry of Lambeth summoned the corporation after having received a memorial signed by 10 householders, as demanded by Section 21 of the Public Health (London) Act. I think this result is very satisfactory, and if the communities in other parishes will take a lesson from this we may soon succeed in improving the air we breathe in London.

I am, Sirs, yours faithfully,
Nov. 3rd, 1900. L. R.

THE VESTRY OF CAMBERWELL AND THE ANTITOXIN TREATMENT OF DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—The late vestry of Camberwell, shortly before its death, published and circulated a leaflet, signed by the bacteriologist, concerning diphtheria and its treatment by antitoxin. After stating that antitoxin cures 99 per cent. of cases of diphtheria and that a single dose protects a healthy person from the disease for a month and making some other similar statements for which there does not seem sufficient warrant, he finishes up this remarkable document as follows: "About 70 of the doctors in the parish are using the remedy and having suspicious throats examined. If all would do the same there would not be one death where there are 20 now."

We must all admire zeal in the discharge of his duties on the part of a public official and of a public body, but we might expect the zeal to be tempered by discretion. The paragraph which I have quoted adds nothing to the value of the document and appears to me to be a gratuitous insult to the practitioners of the parish. I cannot imagine by what means this gentleman can discover whether his fellow practitioners are or are not using antitoxin. And finally he accuses them of causing the deaths of 19 out of every 20 cases of diphtheria. Personally I protest in the strongest manner against this language and consider that an apology should be offered to these gentlemen by the bacteriologist and the leaflets withdrawn from circulation.

I am, Sirs, yours faithfully,
Nov. 17th, 1900. CAMBERWELL.

*** The circular in question is before us. Like our correspondent we respect the zeal that has led to its issue, but we do not think it happily worded. It protests too much. Yet the good that it will do outweighs in our eyes the objections that may be taken to some of the statements on the ground of exaggeration.—ED. L.

A VISIT TO ROBBEN ISLAND.

(FROM A CORRESPONDENT.)

Robben Island Asylum.

ONE does not go to a war to get holidays, and yet I have managed to secure two, both of which were very enjoyable. On the first occasion I was escorted down a gold-mine at Johannesburg, and on the second I was conducted by Dr. Gregory, the medical officer of health of Cape Colony, to see the well-known asylum for the Cape lepers My thanks are due, too, to Mr. Piers, the lay commissioner in charge of the island, to Dr. Black and to Dr. Mitchell, who showed me everything within their various domains. The early history of leprosy in South Africa is vague, but there are native traditions which tend to the belief that the scourge existed amongst the Hottentots before the white man discovered the Cape. It was, perhaps, introduced later among the Dutch settlers from the Dutch East Indies, whence their servants were procured. About the year 1817 there were so many lepers that the first asylum in South Africa was opened by the British who had been virtual rulers of Cape Colony since 1806. The spot selected, called "Heaven on Earth," was in the Caledon mountains, not very far from Cape Town, and it is interesting to note that this district still supplies a very large percentage of lepers.

In 1845 the patients were transferred from Hemel-en-Aarde to Robben Island, which takes its name from an old Dutch word for the seal. Whales must have been frequent neighbours of the island, for their remains are still used as palings and boundary marks there. The island, history tells us, was used as a quarantine station in 1803 and perhaps earlier; then criminal lunatics were confined there, and now there are 270 lunatics, 600 lepers, and 120 convicts. It was not till 1892 that the Leprosy Repression Act for compulsory segregation was brought in. The Ministers of that day feared that there would be opposition, but the friends of the lepers made no sign. The island is conveniently situated, being two miles long and half a mile wide, and is distant six miles from Cape Town. Yet this stretch of sea, which takes less than an hour to cross in a steam-tug, is considered by the Kaffirs a great drawback. Moreover, they complain of the loneliness of the island, forgetting that any compulsory leper asylum must be equally irksome to the inmates. The statement that the island is barren and ugly may be true of some months of the year but it is certainly not the case in September, when the fields are rich with lovely arum lilies growing as weeds. However that may be, the sentimentalists in the House of Assembly have carried the day and a promise has been given to the lepers that they shall have an asylum built for them on the mainland. As a consequence of this no improvements are being carried out in the leper quarters, which is, perhaps, the chief reason why they look neglected and forlorn. The numbers include 360 males and 240 females, mostly Kaffirs, with a few separate huts for the Dutch. There are now no inmates of English birth. These figures include the lepers of the Orange River Colony who were prevented by the war from being moved to a new asylum which had been built for them at Bloemfontein. The Kaffir male and female compounds are separated by high barbed fences and palings, which are not always sufficient to prevent illicit flirtations among the lepers who greatly resent being deprived of the society of the other sex. The island is rich in churches and Sunday services for the lepers are held in English, Dutch, and Kaffir. The sanitary arrangements seem to be as perfect as could be expected, but there are two or three obvious blots which might be remedied. The institutions on the island are not directly under the control of the sanitary department of the colony—i.e., the medical officer of health—though they may be theoretically so. Then there is no regular supervision of either lepers or lunatics by independent experts, so that there is no one beyond the medical officers on the island to decide whether a patient should be released or detained indefinitely. Perhaps the evil which appealed most to me was that I saw the non-leprous children of leper women living with dozens of lepers with no attempt made to isolate them from the danger of their surroundings and no care taken of their education. This has been strongly reported upon by the medical superintendent in his annual statements and ought at once to be ended. The case could easily be met by putting a schoolmistress in a cottage on the island where a kindergarten could be started and where the leper mothers might be allowed under strict regulations to see their children every week. Much good work is being done by the medical men in charge of the lepers. Photographs are taken of all of them, microscopical and bacteriological work is carried on, and there are every year some 60 post-mortem examinations made. Two-thirds of the lepers are of the anæsthetic type and they usually die from pulmonary tuberculosis, while the remaining third are either nodular or mixed lepers, and they die from kidney and liver infection. If compulsory asylums are justifiable it is obvious that cases of nodular leprosy and mixed leprosy must be isolated; but are anæsthetic patients equally dangerous to the community? Dr. Black and Dr. Kolle systematically examined the nasal discharge of the anæsthetic cases with the result that leprous bacilli were found in the noses of several old-standing cases which were apparently quite quiescent. This more accurate and modern method of examination may cause several cases to be re-considered which had been thought to be entirely arrested.

Lunatic Asylums.

Money is much wanted to supply separate accommodation for the lunatics, for at present criminals, paupers, and paying patients all want sorting badly. In one airing court I saw a European dangerous patient with the native lunatics, because the other Europeans were afraid to have him with them. Among other acts of violence he had succeeded lately in fracturing the thigh of the head attendant during a struggle. Last year a female patient while out walking with two nurses and some other patients suddenly broke loose from them and sprang over the rocks into the sea. One of the boatmen swam out through a heavy sea and brought the patient to a rock, but she was swept out of his grasp by the surf and drowned. I understand this is a very exceptional occurrence.

Emjanyana Leper Asylum.

This is the only other leper establishment in Cape Colony, and, with the exception of one in Pretoria, the only other in South Africa. The numbers vary from 250 to 300, the two sexes being divided pretty equally. Here again, there are confined a few non-leprous children, who have either been admitted with their leper mothers or have been born in the wards of women admitted while in a state of pregnancy. Two years ago 12 male lepers and four female lepers effected their escape in spite of a guard of the Cape Mounted Rifles. On the day after the escape the dormitories were carefully searched and a number of sticks, stones, knives, and pieces of sharpened iron were found secreted in the bedding. The ringleaders confessed that they had intended to use force to obtain their escape. The lepers are satisfied with their diet and medical treatment, but they believe that they are wrongfully detained after being cured and they abhor the strict separation of the sexes. Lately there has been no outbreak among the patients.

Cape Town, September

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Plague and Cholera in India.

THE increase in the plague mortality throughout India which I have had to record during the past few weeks seems temporarily arrested, only 2123 deaths having occurred during the past week in India against 2136 in the previous seven days. There were fewer deaths in Calcutta (88 against 101) and in the Bombay district (1142 against 1215). In Mysore, however, the number of deaths continues to rise, the returns showing 765 deaths this week compared with 696 last week, the total for the outbreak being 28,734 cases and 23,186 deaths. Two cases of plague have occurred in the Royal Artillery at Bangalore, and a third case is reported as suspicious. The disease is rapidly making headway in Poona, 95 deaths having occurred yesterday (Oct. 10th). Two cases have occurred in the Cantonment amongst persons inoculated last year, but amongst the 7688 inoculated this year not one case has so far occurred. Plague is reported to have reappeared in the Hischispur district of the Punjab but only a few cases have up to the present been noted. Plague has within the last few days broken out in epidemic form at Patna. In this crowded city therefore a much more serious development than occurred before (February) may be expected. This early recurrence within eight months is particularly interesting because it is similar in time to the first recurrence of plague in Poona in 1897, whereas Bombay, Calcutta, and other places have for the most part had an interval of about a year.

The health of Calcutta since the floods in the third week of September has been very bad. Although the mortality is declining it is still very high. The increase of deaths is almost confined to the suburban or added areas of the city, the districts to the east and south of the city. These areas are undrained, low-lying, and naturally swampy, and were most affected by the rains. During the past fortnight while the normal mortality would be 812 the deaths have been 1872. Plague is apparently on the increase. Cholera, diarrhœa, dysentery, and the direct effects of exposure explain the chief excess since the heavy rains.

The health of Bombay, which has been so bad for many months, continues bad. The general mortality is slowly declining, but 947 deaths were registered last week against an average of less than 600. Plague deaths were numbered at 84, but the increase in the new cases and deaths during the past few days suggests that a further development is in progress. The figures to-day are about on a level with those of the same period last autumn.

Cholera still continues in some of the cantonments. A small outbreak is reported amongst the 4th Hussars at Secunderabad and amongst some native regiments at Meean Meer and Sialkot. In Kashmir this disease is still very virulent. Up to Oct. 7th there were 2157 deaths and in addition Srinagar had 821 deaths. There is no sign of the visitation falling off. In the Punjab also it is raging extensively, as for the week ending Sept. 22nd 914 cases were returned and the total cases (48,675) and deaths (25,115) have formed the heaviest cholera rôle since 1892.

Oct. 11th.

The Famine and Plague.—The Increase of Deaths from Phthisis in Bombay City.

In nearly every part of India the harvest promises to be a bumper one. The exceptions are the Deccan, Guzerat, and the Carnatic, where rain has been very deficient. The numbers on famine relief have now dropped to about 1,250 000 and nearly all these are in the Bombay Presidency, and chiefly in Guzerat. The relief works are closed in Madras, the North-west Provinces, and the Punjab.

Plague throughout India remains about the same. The chief places at present suffering are Poona, Nasik, Mysore, Belgaum, and Bangalore. At Poona the outbreak seems to have attained its height and has begun receding. In Mysore city the cases are still numerous. In Bombay city there is the same steady return of from 12 to 20 cases a day. The mortality of the city still keeps very high, having been 834 last week, as compared with the five years' mean of 678. In Calcutta is to be noticed a sudden absence of the return of plague deaths. There has been a steady improvement of late in the general mortality and a decline in the numbers returned of plague deaths, but the sudden cessation of all plague deaths suggests that some change of policy in the returns has been inaugurated. Whereas previously we heard of suspicious deaths these also are not now published, so it can only be inferred that some order has gone forth that even the most highly suspicious deaths are not to be returned as plague. With the experience of the past two years one can hardly believe that this represents the true state of the city. Highly suspicious deaths we are told continue to occur, but living cases have latterly not come under observation. If this absence in the return of plague deaths be a change of policy such as was adopted in 1898, it is, to say the least, very misleading.

In a Government resolution recently published it is observed that there has been a remarkable increase since plague first appeared in Bombay in the number of patients suffering from phthisis at the large hospital. Whereas in 1896 there were 212 patients suffering from phthisis, in 1897 the numbers rose to 405, the following year they rose to 530, while in 1899 no less than 607 were admitted.

The municipal statistics of death registration during these plague years show similarly a large and steady increase in the deaths from phthisis and other pulmonary diseases. The health officer naturally attributes the increase to plague in some of its forms, but the surgeon-general considers that this explanation is inapplicable to the hospital cases and has arrived at the conclusion that there has been actually a great rise in the mortality from phthisis in Bombay city during recent years. The increase of the hospital figures is so remarkable (the cases and deaths from phthisis having nearly trebled) that one cannot but think that plague has had immense influence. It has been observed that phthisical subjects who survive an attack of plague show rapid decline afterwards. It is probable, therefore, that many of these phthisical subjects at the hospital may have had plague before admission. It is also extremely probable that many of them actually died from plague. The municipal returns of deaths from "other pulmonary diseases" covers a multitude of possible diseases, as the registration of anything like the correct cause of death in the majority of cases is extremely problematical. The inference of the health officer is perfectly legitimate and it is also probable that the whole of the excess mortality in Bombay city since plague first appeared may, with the exception of deaths due to certain other well-known and recognised epidemic diseases, be put down to plague.

Oct. 31st.

CARDIFF INFIRMARY.—At a meeting of the executive committee of the Cardiff Infirmary held on Nov. 14th it was stated that the adverse balance of the institution now amounted to £11,035.

BIRMINGHAM.

(From our own Correspondent.)

The University of Birmingham.

The founders of a new institution accept an enormous weight of responsibility and a vast amount of work in the pursuit of their object. This is clearly illustrated in the labour and energy involved in promoting the new University of Birmingham. The arrangement of the many new subjects of study involve much thought and careful consideration, while the multiplicity of details in working and the arrangements tax the time and the strength of all the chief promoters and their allies. The dean of the medical faculty (Professor B. C. A. Windle) has been indefatigable in looking after the interests of the school of medicine and ever ready in seeking to maintain its efficiency and high standard. Of late he has been actively engaged in the important task of arranging for the examinations for medical degrees to which practitioners of a certain standard will be admitted. Already a large number of practitioners have expressed a desire to submit themselves to the examinations, and it is expected that the number will be largely increased. This examination offers a healthy stimulus to revive the knowledge of former years by the additions of modern methods in order that the coveted degree may be obtained. Some of the classes show a goodly proportion of quali[illegible] men anxious to equip themselves for the ordeal. The dean is willing to give any information to applicants for particulars as to classes, text-books, and all details.

City Health Returns.

At this season of the year the returns of the Health Committee show much fluctuation, but unfortunately they exhibit a high relative increase of infectious diseases. For the week ending Nov. 10th the record showed that scarlet fever was increasing and typhoid fever was decreasing. Last week this order was reversed, scarlet fever having decreased from 80 to 60 cases and typhoid fever having increased from 25 to 38 cases. The epidemic is not so severe as in some seasons, for during the past week, of the total number of deaths registered only three had reference to scarlet fever and six to typhoid fever. Measles is credited with four deaths, the general death-rate being 18 3 per 1000. 484 cases of scarlet fever were under treatment at the hospital—a large number even in a large population. The Widal blood-test in cases of typhoid fever is recommended by the Health Committee, who have arranged to bear all expense in providing glass tubes and outfits for the purpose, in addition to the tests being conducted in the laboratory of the University.

South African Experience.

The Pathological and Clinical Section of the Birmingham Branch of the British Medical Association is ever ready through its active secretaries to excite interest in the work of the section. A meeting has been arranged for Nov. 30th at which Mr. Frederick Treves has kindly consented to give an address on Notes from a Field Hospital in South Africa. Birmingham has contributed well to the work done so nobly in this quarter—Mr. J. F. Hall-Edwards and Mr. C. A. Leedham-Green having been actively engaged in important duties. It is expected that a large audience will be present to give a hearty welcome to Mr. Treves.

Superstition still Existing.

A curious instance of superstition occurred lately in one of the suburbs of Birmingham. Two men were engaged in dragging the canal for a child's body. A small loaf of bread was placed in the water within a few yards from the men and it was stated that as soon as the loaf turned round they would be near the body. It is an old superstition in the Midlands that if a dead body is in the water and a loaf into which some quicksilver has been inserted is allowed to float about, it will stop over the spot where the body lies. It is hardly necessary to point out how entirely fallacious such an idea must be, and yet there are to be found those in this enlightened age who believe in the practice. It is, of course, well known that obstructions in running streams cause eddies, and these collect floating substances—light matters passing rapidly down on the surface; but a weighted object like a loaf of bread with quicksilver inside would sink nearly below the surface and would be caught by the undercurrent of the eddy caused by the corpse and so remain stationary. This possibly is the matter-of-fact explanation of an apparently occult phenomenon.

Nov. 20th.

LIVERPOOL.

(From our own Correspondent.)

Hospital Saturday Fund.

The annual meeting of the subscribers to the Hospital Saturday Fund was held recently under the presidency of the Lord Mayor (Mr. A. Crosthwaite). The treasurer's statement showed the amount collected to have been £7103 16*s.* 10*d.*, an increase of £83 1*s.* 1*d.* over the year 1899. Notwithstanding that the day appointed for the ladies' street collection was most unfavourable for the work, the result had been very satisfactory. Since 1890 the fund had increased by £3062 4*s.* 2*d.*, the return of that year being £4041 12*s.* 8*d.*, while the expenses, which were 8 per cent. in the former period now amounted to about 5 per cent. There were now in use 1695 boxes, 865 cards, and 131 firms who adopted their own system—an increase over 1899 of 67 boxes, 38 cards, and 16 firms using their own method—a total of 121 new collections commenced during the year. One feature of this branch of the report, to which the treasurer called special attention, was the increase in the number of firms working their own collections, and he would strongly recommend the adoption of that system where possible. During the year 122 notes of admissions to the various hospitals had been supplied through the office. The Hospital Saturday Fund was now represented upon the committees of all the hospitals to which contributions were made, and the representatives were unanimous in their testimony as to the very close attention given in any case of complaint or suggestion made to them by the committee. It is pleasing to find that the representatives of the fund on the various hospital committees speak in terms of praise both of the good work accomplished by the medical staffs and nurses in the several institutions and of the economical yet efficient manner in which these institutions are conducted.

The Central Hospital, Liscard.

A highly successful bazaar in aid of the funds for building the new central hospital at Liscard was concluded on Nov. 19th, the total amount realised being £5800 The committee of the hospital have much cause for congratulation, as the amount desired was only £4000.

Liverpool School of Tropical Medicine.

Dr. R. Fielding-Ould, Dr. C. Balfour Stewart, and Dr. A. S. F. Grünbaum have been appointed assistant lecturers in the Liverpool School of Tropical Medicine. These gentlemen have afforded much assistance to the school in many different ways, and it was felt by the committee that it would be of great advantage to the school to have their coöperation as official members of the teaching staff. In view of the return of the second malarial expedition from West Africa the following resolution was carried unanimously at the recent meeting of the committee :—

> That the best thanks of the Liverpool School of Tropical Medicine are due to Dr. Annett, Dr. Dutton, and Dr. Elliot for their valuable services in West Africa whilst members of the second malarial expedition of the school; and, further, that the committee of the school desire heartily to congratulate the expedition on its safe return from its labours.

At the same meeting a resolution was passed thanking his Excellency Dr. J. Paes Carvalho, the Governor of the State of Pará, for the magnificent reception which he extended to the yellow fever expedition of the school on its arrival from Cuba and for the public-spirited manner in which he had interested himself in the success of the expedition.

Nov. 20th.

IRELAND.

(From our own Correspondents.)

Port Medical Superintendent of Dublin.

At a meeting of the Port Sanitary Authority of Dublin held in the City Hall on Nov. 13th, Mr. Daniel Bergin presiding, it was decided to appoint Sir Charles Cameron to the office of Port Medical Superintendent at a salary of £50 a year.

Royal College of Surgeons in Ireland.

His Excellency the Lord Lieutenant, Lord Iveagh, and many other distinguished guests have already accepted invitations to be present at the dinner to be given on Nov. 24th by the Royal College of Surgeons in Ireland to welcome Sir William Thomson and the other members of the staff of the Irish Hospital home from South Africa. A telegram has been received from Sir William Thomson stating that the members of the staff reached Southampton on Nov. 20th, and would arrive in Dublin by the London and North-Western Railway Company's steamer *Cambria* at 7.30 A.M. on Nov. 21st

Poor-law Medical Appointments in co. Down.

Dr Charles O'Neill has been appointed medical superintendent officer of health for the Holywood district of co Down. The district extends from the outskirts of Belfast, embracing Castlereagh, to Holywood, and the duties of the post are to report once a month to the Belfast Guardians, while once a month the officer will receive a report from each of the dispensary medical officers in the district He will consult with these medical officers if any question of sanitary matters arises, and for this work the guardians propose to give him £8 per annum, he to pay his own travelling expenses. The other district is from Whiteabbey, embracing Ligoniel, to the Black Mountain at Dunmurry, and the guardians propose to pay the medical superintendent officer of health for this large area £10 per annum. In former times Dr. Seaton Reid did all the work and was paid £50 per annum; now the guardians make two appointments, for which they pay £8 and £10 respectively, which is but a miserable pittance for the work to be done. Of course, owing to the extension of the area of Belfast, part of the district formerly under the charge of the guardians has been taken into the city of Belfast, but still the remuneration proposed to be paid by the guardians to their two new health officers is wretchedly small and inadequate It only shows to what Poor-law medical appointments in Ireland are coming.

The Housing of the Working-classes in Belfast.

Dr. Henry O'Neill, J.P., who went as a delegate from the City Council of Belfast to the late Sanitary Institute conference in London and the Tenth International Congress of Hygiene and Demography in Paris, has presented a report on "The Housing of the Working-classes" to the Public Health Committee of Belfast. Dr. O'Neill gives an account of discussions at the London conference on "Unhealthy Areas and Displacement of Town Populations," on "Improved Houses for Town-dwellers," and on "Improved Means of Communication." He also gives details of reports presented to the Paris Congress on "Industrial and Professional Hygiene: Insanitary Houses." Dr. O'Neill thinks that by a judicious application of the Housing of the Working-classes Act, 1890, and its amending Acts a very great improvement might be effected in more than one district of Belfast, and he puts forward a series of most useful recommendations for improving the hygiene of houses, streets, &c He makes a practical suggestion (plan being given) for a scheme to improve one of the most densely populated districts of old Belfast, an area bounded by King-street, Divis-street, Barrack-street, and College-square North, as well as for an open space at the junction of the Crumlin and Old Park-roads. Taking the year 1899, he says that of the population of Belfast—350,000 as calculated by the Registrar General—2117 persons died from preventable diseases—that is, because of disobedience to the ordinary laws of health. Dr. O'Neill has, as a result of great trouble and unceasing energy, now presented to the Belfast Public Health Committee three important reports on (1) "The Housing of the Working-classes"; (2) "The Inspection of Meat-supply"; and (3) "The Inspection of Milk-supply of Cities and Towns, and how the Supply of Meat and Milk is Controlled by Municipal Corporations so as to enable the citizens to obtain meat and pure milk." With the Public Health Committee, therefore, further action as to these reports now rests.

Londonderry Infirmary.

The medical appointments under the new scheme for the regulation of this institution were made on Nov. 15th In former times there was one extern medical attendant (physician and surgeon combined), now there are to be two surgeons and two physicians and an intern house surgeon. Mr. Joseph Byrne, M R C.P., F R C S. Irel, and Mr. J. E. Miller, M.B., B Ch. Dub, have been appointed the new surgeons, and Mr. Thomas MacLaughlin, L.R C.P, L R C S. Edin., and Mr. Walter Bernard, F.R.C.P Irel., M R.C S. Eng, were elected as physicians. Mr. J. G. Cooke, M.B, B Ch. Dub., was reappointed resident medical officer. There is a strong feeling that in all the county infirmaries of Ireland it is far too narrow a policy to have only one extern medical officer There should be at least two, one a physician and the other a surgeon Londonderry is to be congratulated on having led the van in a very necessary reform, and on having broken through the narrow policy of past ages.

Donegal Lunatic Asylum.

At the monthly meeting of the governors of this institution, held in Letterkenny on Nov. 15th it was reported that the number of male patients had increased from 365 to 388 since the staff was last increased, and on the female side from 185 to 206. Both sides of the house were overcrowded It is proposed that there should be an increase of two male and two female attendants.

A Herbalist's Plaster

An inquest was held by the Belfast city coroner on Nov. 15th, in reference to the death of a female, aged 35 years. It would appear that the woman suffered from lupus of the nose. She had been operated on at the Royal Victoria Hospital, but the sore had not healed and a herbalist on Oct. 25th put a plaster on the nose, for which he was paid 5*s* by the woman's husband. The woman had to go to bed on Oct 26th and died on Nov. 2nd (no medical man having seen her) She had previously complained of headache and "pains in her inside." The post-mortem evidence was to the effect that the nose was in a state of acute inflammation, but that the cause of death was heart disease, death being accelerated by the depression produced by the pain of the arsenical plaster. The jury found that the woman died from heart disease, and that her death was accelerated by the application of an arsenical plaster to the nose by the herbalist. The depositions are to be sent to the Attorney-General, with whom the further conduct of the case rests

Disinfecting Machines.

At a meeting of the Lurgan Board of Guardians on Nov. 15th Mr J. M Moore reported on the testing by a committee of a disinfecting machine used by them as well as in Portadown. On the outside of the machine there was a gauge which was supposed to indicate the temperature within. On heating the apparatus to the usual height three different tests were made by placing a thermometer inside the machine and comparing it with the outside gauge. A thermometer was wrapped up inside a blanket and when the outside gauge indicated a temperature of 450° F. the thermometer registered only 112°, showing an error of 338° on the part of the machine. In the other tests the thermometer was placed in the machine uncovered with the result that errors of 232° and 207° were proved. As it is necessary to get a temperature of 300° to destroy germs the machine was thus both defective and deceptive, for people who had their clothing passed through it believed the articles to be properly disinfected, whereas such was not the case. A charge of from £1 to 30*s*. had been made to every person using the machine in Lurgan and in Portadown, and the guardians and the public had been deceived The machine had been relied upon by the workhouse, by the sanitary bodies of Lurgan and Portadown, and by three rural councils. It was advised that a permanent disinfecting chamber should be erected and that the makers of the machine (which cost £200) should send an expert to test it in the presence of the committee

Belfast Medical School.

It is satisfactory to know that despite the falling off in the number of students at other schools this year there is little change at Belfast. At the Queen's College there is a slight decrease, 189 as against 200 last year, while at the Royal Victoria Hospital there is an increase, 155 as against 147 of session 1899-1900.

Royal Victoria Hospital, Belfast.

Mrs W. J Pirrie, who with her husband, the Right Hon. W J Pirrie D L has done so much to raise the necessary funds for the building of the new Jubilee Memorial Hospital in Belfast, is collecting a sum of money to perpetuate the memory of the late Professor J Cuming A tablet is to be placed in the ward of the new hospital called after Professor Cuming inscribed with the names of contributors of five guineas and upwards In March last the amount subscribed for this object amounted to £7000, and Mrs. Pirrie now makes a further appeal, so that when she closes the list on Dec. 15th she may have realised a total sum of £10,000.

Assault on a Medical Man.

Mr. M. M. Sheedy of Kilmallock, in the discharge of his duty as a guardian, directed the attention of the board of guardians of the Kilmallock Union to the fact that some of the inmates had come from other union districts. As the result of an investigation five men were discharged from the house. One of them, named McNamara, went to Mr. Sheedy's residence one evening lately and abused him. Mr. Sheedy ordered him out and he accordingly left, but marched up and down outside still indulging in abusive language. After a time he approached one of the windows and shattered it, doing damage to the amount of £1. Mr. Sheedy rushed out and confronted McNamara who told him that it was he who had broken the window, that he would do it again, and that he would "do" for him (Mr. Sheedy) when he came out of prison. McNamara followed up his threats by seizing Mr. Sheedy and endeavouring to throw him down, but fortunately the procedure was reversed, as Mr. Sheedy managed to grapple with his assailant and to hold him till the police arrived. In due course McNamara was brought before the magistrates and even then his attitude was so threatening that it was found necessar to place a constable on each side of him. He was sentenced to a month's imprisonment with hard labour for being drunk and disorderly. For breaking the window and using threatening language he was ordered to find bail himself in £20 and two sureties of £10 each, or in default to be imprisoned for three months, to take effect on the expiration of the first sentence. Mr. Sheedy's plucky action and the exemplary sentence of the magistrates ought to serve to teach the rowdy element in workhouses that assaulting guardians and destroying property is an amusement which cannot be indulged in with impunity.

Nov. 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Drinking-water Question.

THE question of the quality of the drinking-water supplied to Paris is always coming to the fore and I have many times brought the subject before the notice of your readers. Every year as the hot weather comes round the matter is discussed with fresh interest. The water engineers argue that the supply of drinking-water far exceeds the quantity necessary for the population, while the hygienic authorities reply first of all that the water is not as pure as the engineers maintain because it does not come from a source which is free from danger of contamination, and secondly, that even if it were pure a great part of the supply is taken up by lifts and for flushing closets and the like, because it is supplied at such a pressure that it can be used for such purposes without the company needing to have recourse to the pumps which are necessary for the water of the Seine to be so used. These arguments take place every year and meantime the question is no nearer solution. The only real remedy—namely, that of a double and separate supply, one of drinking-water and the other of water for working purposes supplied at a proper pressure—is never applied. The engineers persist in their idea of increasing the supply of so called drinking-water, and to this end they are always taking up new sources of supply and constructing new filtering-beds. However, all the principal sources of supply in the neighbourhood of Paris are already taken up; new ones have to be sought at a greater distance and consequently at a greater expense, and owing to the increase in the number of houses these sources are liable to pollution from contamination of the gathering grounds. As for filtering-beds it becomes more and more evident that but little trust can be placed in them. So it comes to pass that typhoid fever is far from having disappeared from Paris as it has from Vienna, and as it would have disappeared from Paris if that city were supplied exclusively with good drinking-water—for the sums which have been expended to this end are enormous and quite enough for the purpose. During the month of October the weekly number of cases of typhoid fever, so far from diminishing, have been from 70 to 90, with a mean of seven deaths. In the suburbs, especially at Saint Denis and Gennevilliers, the number of deaths from typhoid fever has been three times as great as during the corresponding period of 1898. The water engineers give their stock answer: they say that the inhabitants of Gennevilliers, for instance, persist in drinking the water of the Seine in spite of all prohibition and in spite of there being plenty of drinking-fountains. As for bacilli, they are ubiquitous. They are found in mineral waters, in spring water, and on fruit and vegetables, while on the skin of one peach as many as 250,000 have been found. Another explanation which the engineers give as to the presence of contaminated waters in the town reservoirs is that the river Vanne, which supplies most of the capital, is fouled at its source, and they bring forward as a proof of this argument that the town of Sens, which is higher up the stream than Paris and derives its water from the river, is as much stricken with typhoid fever as is the capital itself.

At a recent meeting of the Council of Hygiene there was a lively discussion on this subject. M. Henriot remarked that as a matter of fact the town of Sens had been free from typhoid fever this year at the very time when Paris was most affected by this disease. The sources of the Vanne could not therefore be to blame and it was evident that the pollution occurred between Sens and Paris and most likely in the Paris reservoirs themselves. The chief engineer, M. Bechmann, who had at the beginning of the summer declared that not a drop of Seine water would be given to the inhabitants of Paris to drink, said that Seine water had been mixed with drinking-water in the mains when the water-supply looked like failing altogether, but this had only happened once. The results, however, are sufficiently serious, for typhoid fever, which in 1898 gave rise in Paris to 346 cases with 67 deaths, was the cause in 1899 and the first half of 1900 of 3553 cases and 600 deaths. One of the daily papers started an inquiry and arrived at the following startling results:—It is unfortunately true, even in addition to the probable pollution of the water of the Vanne, that the Charonne reservoir has constantly supplied unwholesome water to the Parisians with the full knowledge and acquiescence of the engineers. The Charonne reservoir is divided into two parts, one of them containing ordinary Seine water and the other containing water derived from the filtering beds at Ivry. These filtering beds, which have been constructed quite recently in opposition to the opinions of the committees of hygiene at great cost, are composed of successive layers of gravel gradually becoming finer (*système Puech*); in the opinion of the inventor himself they act merely as strainers, and do not really purify the water, because the water as it issues from the filters still retains from 60 to 70 per cent. of its organic matter and about 5 per cent. of its microbes. The intake of this water at Ivry is in one of the dirtiest portions of the Seine, near factories which discharge waste water into the river and near the outlets of sewers of suburban parishes. Under these circumstances the water as it comes from the filters cannot really be regarded as fit for drinking, and it is this water which after arriving at the Charonne reservoir has been conveyed to the reservoir at Ménilmontant and has been there mixed with the wholesome water of the Dhuys. This proceeding has been going on for four months. It was just then that typhoid fever attained its maximum in Paris. When the engineers saw that the matter was discovered they discontinued mixing the water and typhoid fever immediately declined with the precision exhibited by a laboratory experiment, for in 12 days afterwards the mortality fell from 18 deaths per week, a rate at which it had remained for a considerable time, to seven deaths per week. The Council of Hygiene has been much exercised by these revelations, and after hearing a careful report by M. Le Roy des Barres protested against the imperfect purification to which the river water which had been distributed for human consumption had been submitted. Resolutions were also unanimously passed by the council declaring the following to be urgent requisites:—(1) effective and permanent supervision by the Council of Hygiene over the collection, conveyance, and distribution of water intended for human consumption in the Department of the Seine; (2) maintenance of a sufficient space free from contamination round the intakes or gathering grounds; (3) constant inspection of the original sources of the water, so that any water of doubtful quality may be shut off; (4) protection of the water from contamination during the whole of its transit; (5) eventual purification of the water either by filtration or otherwise and resumption of the experiments on sterilisation on a large scale; and (6) immediate separation in Paris of the water intended for human consumption from that intended for other miscellaneous or trade purposes.

Small-pox in Paris.

At the present time there is a recrudescence of small-pox in Paris. As a rule there are always some few cases of this disease existing, but only a very few, for vaccination is practically obligatory throughout France. Such cases as do occur, therefore, are found almost entirely in foreigners, and it was therefore to be expected that the enormous influx of foreigners into France for the Exhibition would result in an increase of the cases of small pox. Such is the case. During the year 1899 the deaths from small-pox in Paris numbered four. The Exhibition was opened in April, 1900, and from Jan. 1st to the end of May there were 15 deaths from small-pox, while from June 1st up to the closing of the Exhibition (Nov. 11th) there were exactly 100, of which 14 occurred during the week Oct. 28th to Nov. 3rd, a week during which the Exhibition was particularly well attended. Two arrondissements were specially affected, the one being Grenelle, where most of the foreigners employed in the Exhibition were lodged, and the other being the eighteenth, close to the Aubervilliers Hospital, which is reserved for cases of small-pox.

Nov. 21st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Examination for the Degree of M.D.

IN Germany the possession of the degree of M.D. does not carry with it any legal authorisation to practise medicine. In order that a practitioner may be *legally* qualified he must pass the State examination, and for the purpose of avoiding the anomaly that a duly appointed Doctor of Medicine might be unqualified in the eye of the law it was last year decided that Germans should not be allowed to graduate as M.D. until they had passed the State examination. The conditions of examination for the degree of M.D. have hitherto differed very much in the various universities, but by a decree of the Federal Council they have now been made uniform. The candidate has to write a "dissertation" on a scientific subject, and this dissertation must be approved by the medical faculty and printed at the expense of the candidate. There is a great difference between the oral examination for Germans and that for foreigners, the former being not much more than a mere formality, because the candidates have already passed the difficult State examination. German candidates have, in fact, only to present themselves for a short "colloquium" with the dean and two members of the medical faculty, and in this respect foreigners, if duly qualified to practise in Germany, are regarded as Germans. Foreigners who have not passed the State examination, and who are therefore not qualified to practise in Germany, have to pass the "examen rigorosum" before a commission consisting of the dean and seven members of the medical faculty. There are two oral examinations, one theoretical and one practical The subjects of the theoretical examination are anatomy, physiology, pathology, and hygiene; those of the practical examination are clinical medicine, surgery, and gynaecology with obstetrics. The practical examination has to take place at a hospital, and the candidate must examine several patients. In the theoretical examination the time allotted to each candidate is one hour in anatomy and physiology respectively and half an hour in pathology and hygiene. The classifying distinctions of successful candidates are "rite," "cum laude," "magna cum laude," and "summa cum laude," the last distinction being granted only by the unanimous vote of the whole medical faculty. Unsuccessful candidates may present themselves a second time after the lapse of six months. Foreigners desiring to graduate as M.D. have to produce certificates showing (1) that their general education is in accordance with the regulations in force in their respective countries, and if such regulations do not exist they have to satisfy the examiners that their education is approximately equal to that given at German schools; (2) that they have attended a course of instruction lasting from four to five years at a proper medical school abroad or at a German university; and (3) that they have been registered for at least one semester as students at the medical faculty of the university where they desire to graduate as M.D. Exemptions from the above rules may be granted under special circumstances. The principal feature of the new regulations is the obvious rendering of the examination more difficult for foreigners.

Medical Graduation at Various Universities.

In the year 1899 the number of men who became qualified to practise was 1364. It was remarkable that many more candidates passed at Munich (179) than at Berlin (141) The number of medical students at Munich increases from year to year, so that the clinics, laboratories, &c., of this university are altogether overcrowded. German students have the right of changing from one university to another during their curriculum, and many of them do so several times. As Munich is a very pleasant place, owing to the "gemüthlichkeit" (affability) of the townspeople, its situation in the immediate neighbourhood of the Alps, and last, but not least, the wide-spread renown of the Munich beer, a great many medical students have a preference for Munich University. The number of medical students in Munich was 1165 in the summer of 1899, whilst in Berlin only 1093 matriculated. As to the teaching staff, that of the Munich Medical Faculty consists of only 62 professors and *privat-docenten*, as compared with 142 at Berlin. The number of degrees conferred at Wurzburg was 139, being, therefore, not much less than at Berlin, although only 566 medical students were registered there. The Berlin State examination being regarded as the most difficult one in Germany it would seem that a good many students leave Berlin one or two semesters before the end of their curriculum and settle at another university in order to pass the examination there. The number of medical degrees conferred at the other universities were as follows:—111 at Halle, 95 at Leipsic, 89 at Kiel, 72 at Bonn, 65 at Freiburg, 64 at Breslau, 69 at Erlangen, 44 at Strassburg, 44 at Greifswald, 43 at Jena, 40 at Gottingen, 37 at Konigsberg, 36 at Tubingen, 33 at Marburg, 29 at Giessen, 28 at Heidelberg, and 16 at Rostock. 21 foreigners became qualified, of whom three were Americans and one was an Englishman.

Serum Treatment of Malaria.

An important communication concerning malaria has been made by Dr. Sander of Berlin in the *Deutsche Medicinische Wochenschrift*. He has received a letter from Dr. Kuhn, chief medical officer to the South-West African field force, to the effect that he (Dr. Kuhn) had succeeded in curing malaria by injections of serum The serum is obtained from horses which have contracted the so-called "sterbe" disease. By injections of this serum malaria becomes altered from a chronic relapsing disease to an acute one, curable in from two to six weeks; immunity is also obtained. After the injection slight fever of a more continued character generally appears, but no local reaction takes place. 60 natives immunised by Dr. Kuhn in 1899 did not take the disease in the malarial season of that year, whilst numerous others who had not been immunised fell ill but were cured by the injection. Dr. Kuhn being on his way home more detailed information will be received very soon.

Plague at Bremen.

A case of plague occurred at Bremen a fortnight ago, the patient being a sailor on board a steamer which had come from Brazil, Bacteriological examination showed that his illness was plague. He had been for three days in the town and had been in communication with a great many people. The other members of the crew of the steamer were conveyed to the hospital and kept under observation, but as no other case has since happened they have now been discharged. The patient himself died in three days. The report of a fresh case of plague at Hamburg was unfounded. A sailor suspected of having this disease was found to be suffering from simple sore-throat and was discharged from the hospital in a few days.

Nov 19th.

ROME

(FROM OUR OWN CORRESPONDENT.)

The Agitation against Foreign Practitioners.

THOSE agitating for the exclusion from practice in Italy of medical men holding only foreign diplomas have evidently no intention of allowing the question to drop. At the meeting lately held in Rome by the delegates of the Ordini di Medici the subject was again brought up by Dr. Santini, who, after recounting what had already been done in regard to it, recommended that the different branches of the Association should bring their influence to bear upon the deputies of their respective districts so as to facilitate and to hasten the presentation to the new Parliament of the projected law which was about to be submitted to the last Legislature when the dissolution took place. This Bill, it will be remembered, in its final form proposed not only to restrict the list of foreign medical men admitted to those holding diplomas of countries granting reciprocity to Italy, but further to permit those who might then still remain to practise amongst persons of their own nationality only. This latter restriction would seriously affect the British practitioner in Italy by cutting off his American *clientèle* and possibly also that from British colonies. If the Bill be allowed to pass in this form the effect will be to exclude from practice all foreigners who do not possess an Italian degree, since no country, so far as I am aware, grants precisely the same amount and kind of privilege as this Bill proposes to accord to foreign practitioners. True, certain prominent members of the profession here promise that the Bill will be modified in this particular before it is passed in such a way as to meet the liberal offer of Great Britain to put into force for Italy Part II. of the Medical Act of 1886, which will secure to Italians properly qualified full rights of practice in Great Britain. Whether this concession will be made remains to be seen; meanwhile the suspense amongst foreign medical men of all nationalities, who realise that within a short time they and their families may be deprived of the means of livelihood, is naturally very great. The remedy, it has been said, lies in their own hands—let them take an Italian degree. To the younger men this is doubtless a possible solution of the difficulty, although even to them the task of preparing for and passing examinations conducted in Italian is sufficiently formidable and the hardship would be great. But that the older men should be required to go through such an ordeal is not reasonable or just, and yet it is upon them, for obvious reasons, that the loss entailed by the prohibition to practise would fall most heavily.

Typhoid Fever and the Consumption of Raw Vegetables.

Professor Gualdi, chief of the Bureau of Hygiene of Rome, who has given much attention to the study of typhoid fever as it occurs in large cities and who intends shortly to publish a paper on the subject, has observed a close connexion between its prevalence and the consumption of raw vegetables, the seasonal curve of typhoid fever corresponding closely to that indicating the quantity of such vegetables sold throughout the different months of the year. Apart from the occurrence of local infections due to accidental pollution of water-supply or milk-supply, the contamination of either of the latter cannot satisfactorily explain the distribution of cases in the city of Rome, whereas it is readily accounted for on the hypothesis that these cases arise in connexion with the consumption of raw vegetables which is so extensive amongst the lower classes there. At Padua a careful microscopical and bacteriological examination, conducted by Dr. Ceresole, of vegetables commonly eaten in the raw state has yielded results which clearly demonstrate the importance of these as a possible source of parasitic and infectious diseases generally. The vegetables examined, consisting of lettuce, endives, radishes, fennel, and celery, were bought on the market and were first well washed with the excellent water of the Padua aqueduct so as to place them in the same condition as that in which they are usually eaten. They were then cut into small pieces with sterilised scissors, and placed in a sterilised flask of distilled and sterilised water. The water containing the particles detached from the vegetables after a vigorous shaking was then subjected to a direct microscopical and to a bacteriological examination. The former revealed an extraordinary quantity of animals belonging to various groups, rhizopoda, infusoria, worms, crustacea acarida, arachnida, and insects, some 52 species in all, mostly innocuous, but including amœba coli, balantidium coli, isotrica prostoma, and anguillula stercoralis. A great number of eggs of worms were found and among them some pathogenic species—namely, tænia echinococcus, oxyuris vermicularis, ascaris lumbricoides, trichocephalus dispar, and ankylostoma duodenale. By the bacteriological examination microbes were found in such myriads that a complete list of their species could not be made. For washing 100 grammes of vegetables 300 grammes of water were employed, and one cubic centimetre of the washings was found to contain on an average some 10,000 000 microbes, including bacillus coli communis, bacillus septicus, bacillus tetani, and a bacillus indistinguishable from bacillus typhosus. Of six animals inoculated with the washings heated for some minutes to from 70° to 80 C°, all died, five from malignant œdema and one from tetanus Of four animals inoculated with the washings not heated two died, one from malignant œdema and one from tetanus: the other two developed a large abscess at the seat of inoculation, from the contents of which pure cultures of streptococcus and staphylococcus pyogenes were obtained. The danger of eating salads made of vegetables containing this vast amount of parasitic and microbic life must be considerable. A thorough disinfection is, however, easily effected by soaking the vegetables for half an hour in a three per cent. solution of tartaric acid (about an ounce of acid to a quart of water).

Nov. 16th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Syphilis in Asia Minor.

SYPHILIS has for a considerable time been increasing in certain provinces in Asia Minor, and has become so diffused that according to official reports 80 per cent. of the inhabitants are affected with it, and the Government has now ordered the adoption of measures intended to check the spread of the disease. Every year the Turkish Government selects for military service 12,000 men out of 20,000 in each *vilayet*, but in the *vilayets* where syphilis prevails the requisite 12,000 efficient recruits can only be obtained by selection from among 30,000 men, the remaining 18,000 being unfit for service. The provinces where syphilis has gained such a hold are Castamoni, Bartin, Erzingian, Angora, Ismidt (Nicomedia), and Adana, the last of which was added to the list only a few days ago. This prevalence of syphilis in these regions dates from the Russian occupation of Constantinople in 1830, when a force of 30,000 Russian soldiers was landed near Beicos on the Asiatic coast of the Bosphorus. It is the Moslem population who suffer most severely from the disease, for they consider an examination by a medical practitioner to be an offence against morality, especially if the patient happens to be a woman.

Death due to Corporal Punishment.

A pupil at a Turkish school in Scutari, one of the suburbs of Constantinople, died three days after the infliction of severe corporal punishment. During these three days he lay in a drowsy condition with occasional convulsive seizures, and at the necropsy it was found that the meninges were very much congested. The school teachers have been arrested. In Turkey corporal punishment in schools is forbidden.

The Accident to Professor Rieder.

Professor Rieder, who had the misfortune to fall from a building which was in course of construction, as mentioned in THE LANCET of Oct. 27th (p. 1245), is still confined to bed. Professor Schede, who was sent for from Bonn, did not discover any fracture of the spine; he connected a manometer with the spinal canal and found that the pressure of the cerebro-spinal fluid was higher than normal. The paralysis of the rectum and bladder still continues. The Sultan has conferred upon Professor Rieder the silver and gold medal of Imtiaz and has provided for him financially.

The Imperial Medical Society of Constantinople.

The meetings of the Imperial Medical Society, which take place every Friday, were resumed a month ago. The proceedings at the meetings include many valuable communications and discussions and the exhibition of interesting cases. The society was founded by the medical officers of the allied armies stationed in Constantinople during the Crimean war with the view of establishing a distinction between properly qualified medical men and irregular practitioners who had never attended a medical school. All the hygienic progress that has been made in Turkey during the last 40 years has been due to this society. The late Sultan Abdul Medjid, recognising the value of the society, took it under his patronage and granted it an allowance of £T50 per month, which has up to lately been paid regularly, but now the allowance is reduced to £C10 and is paid irregularly At the opening of the present session the President drew attention to the precarious financial condition of the society, which is so poor as to be unable to pay either the rent of the building where the meetings are held or the wages of the housekeeper, the only servant who is employed

The French Medical School at Beirut

Professor Morat and Professor Vallas of the Lyons Medical School have been directed by the French Government to proceed to Beirut in order to supervise and take part in the examinations which the students at the medical school there have to pass before obtaining their diplomas The Turkish Government has also sent two of the professors of the military medical school in Constantinople for the same purpose After having been approved by these French and Turkish professors the graduates of the Beirut Medical School are allowed to practise in Turkey without further examination, such as is obligatory on those whose qualifications have been obtained at other medical schools

Nov 10th

AUSTRALIA

(FROM OUR OWN CORRESPONDENT)

Medical Practitioners Act Amendment Bill

A BILL to amend the law relating to medical practitioners has passed through committee in the Legislative Assembly of New South Wales Many Bills with the same object have been previously rejected because the House thought that they went too far and gave too exclusive privileges to medical practitioners The present Bill is simply to enable the public to discriminate between the legally qualified and registered practitioner and the unqualified and unregistered quack It provides a heavy penalty for an unqualified person who assumes titles representing that he is a properly qualified medical practitioner or that he holds diplomas which he has not obtained Power is also given to the Medical Board to remove from the Register the name of any person who does not possess or has ceased to possess the qualification on which he has been allowed to practise, or has been convicted of certain offences, with a right of appeal to the Supreme Court

The Plague

The bubonic plague has practically ceased Seven weeks have elapsed since the last case occurred in New South Wales and no fresh cases have occurred in Victoria or South Australia The plague hospital at Sydney quarantine station has been disestablished, all the patients having been released, and Sydney is declared free from infection

Health of Sydney

The officer of health of the city of Sydney, Dr O E Corlette has issued a very comprehensive and interesting report on the sanitary condition of the city He states that extended powers are necessary in order to deal properly with a number of matters affecting the public health in the city, so that detailed provisions should be set out relating to such matters as the paving and draining of yards, the construction of stables, building over made ground definite rules as to foundations, damp proof courses, ventilation beneath floors, lighting and ventilation of rooms, and the prevention of overcrowding and of the storage of food materials in unsuitable places Dr Corlette points out that the vital statistics as at present obtained are fallacious, owing to ignorance as to the age and sex distribution of the population Concerning the housing of the poorer classes in Sydney Dr Corlette observes that a radical change is necessary Back to back houses exist, and the covering in of open areas at the rear of buildings has gone on to a serious extent He says that special provision must be made for housing the poorer classes in sanitary conditions by the erection of model dwellings at low rentals and the demolition of the buildings in which they were formerly housed; but that the condemnation of low grade dwellings by itself simply increases the pressure on the existing accommodation in the neighbourhood and causes increased overcrowding of dwellings, as in the case of Darling Harbour where houses were destroyed during the plague outbreak

Decline in the Birth rate in New South Wales

The vital statistics for the colony of New South Wales for the last year show that the birth rate continues steadily to decline The excess of births over deaths was 1 54 per cent representing a marginal loss of nearly one half during the past decade, the excess in 1888 being 2 36 per cent A notable feature is that the native born population reproduces nearly 20 per cent less than the immigrant portion of the community It is suggested that this state of affairs is due to the alarming prevalence of criminal abortion and the unrestrained advertising of those who practise it in the public press Lately legislation has been passed to suppress such advertisements and it will be interesting to see if any improvement in the birth rate will occur in the next few years

The Australian Natives Association and the Medical Profession of New South Wales

Reference was made in a previous communication to the establishment in New South Wales of the Australian Natives' Association as a friendly society At a meeting of the Council of the New South Wales Branch of the British Medical Association, held on August 7th, it was resolved •

> That the Australian Natives Association as at present constituted is prejudicial to the interests of the medical profession in terms of Article of Association 35a and that a circular embodying the foregoing resolution be sent to all members of the medical profession

On August 31st a general meeting of the medical profession was held to consider the matter, Dr P Sydney Jones being in the chair, and there was a large and representative gathering Dr Sydney Jamieson moved—

> That this general meeting of the medical profession endorses the resolution of Jan 10th 1896—viz, that medical aid and benefit societies are intended for the poorer members of the community and not for the well to-do, and that in the opinion of this meeting it is not desirable that people in receipt of incomes of over £200 per annum should receive medical attendance and medicine from societies as at present organised

Dr Jamieson pointed out that the Australian Natives' Association adopted no wage limit, that the members, on the contrary, enrolled a better class than the ordinary friendly society, and that in Victoria such people as well paid civil servants, bank managers, parliamentary and municipal magnates, land owners, and business men were found as benefit members The rate of pay for their medical officers was fixed at less than 15s per annum; and no extra fees were allowed except for midwifery The motion was seconded by Dr Abbott, and after some verbal amendment was carried The second motion was brought forward by Dr W H Goode —

> That this meeting approves of the course adopted by the council of the New South Wales Branch of the British Medical Association in calling attention to the action of the Australian Natives Association and declaring it a society 'prejudicial to the interests of the medical profession

Dr R S Bowker seconded this motion, which was carried Dr R Worrall in a very earnest speech moved that—

> This meeting earnestly appeals to those members of the profession whose advice is sought in consultation to refrain from meeting medical officers to associations which have been declared ' prejudicial to the interests of the medical profession

Dr Angel Money seconded this motion, which also was carried Finally, it was resolved to suggest to the New South Wales Branch of the British Medical Association that it should form a permanent investigation committee to collect and circulate information which may be of use to the profession in their dealings with friendly, benefit, and medical aid societies, and hospitals and kindred institutions, and any other matters affecting the welfare of the medical profession throughout Australasia

Queen Victoria Home for Consumptives

At the time of the Jubilee funds were subscribed to establish homes for consumptives in commemoration of the Queen's Jubilee, but so far nothing has been done The third annual meeting of subscribers to the fund was held on Sept 26th The report stated that the only thing done had been to maintain the Thirlmere Home where 94 patients had been admitted, of whom 26 were benefited, 24 had died, and 44 were unrelieved The average cost per bed per annum was £34 16s 2d The large number of deaths and unrelieved cases was due to indiscriminate admissions of necessitous and urgent cases in the last stages of the disease The committee had decided in future only to admit such cases as could reasonably be expected to be so far restored to health as to be able to resume work of some kind The committee had waited on the Colonial Secretary to urge the Government to establish a hospital for poor persons in advanced stages of the disease

A Medical Libel Action

Mr J W O Brien, F R C S Irel, brought an action in the Supreme Court, Melbourne, against Mr Thomas Scott, M.R.C.S., for the recovery of £1000 damages for alleged libel, which consisted of two paragraphs written by defendant which appeared in the *Warrnambool Standard*, stating that the plaintiff, as honorary surgeon to the local racing club, had improperly treated an injured jockey. The case was settled out of court, Mr. Scott stating that he had discovered that there was no ground for his remarks about Mr. O'Brien and agreeing to pay £400 costs.

Conflicting Medical Evidence.

At an inquest on the death of a patient in the Albury Hospital some conflicting evidence was given by the medical men concerned. Dr. Schlink had certified that the man was insane, but Mr. Andrews, the Government medical officer, said that he was not insane, but that he was a fit patient for the hospital when he died. Mr. M. O'Shaughnessy deposed that death was due to obstruction of the bowel. Mr. Andrews, Dr. Muller, and Dr. Schlink said that the cause of death was lead poisoning. The coroner found, in accordance with the preponderance of the medical evidence, that deceased died from lead poisoning.

An Explanation.

In a letter in THE LANCET of August 25th (p. 631) Mr. W. B. Vance insinuated that the account given by your Australian correspondent of what he calls "the O'Hara case" was incorrect and biased. In writing it I took special pains to give an impartial statement of facts, which could nearly all be corroborated by documentary evidence. Having critically re-read it I affirm that every statement made in my letter in THE LANCET of May 26th (p. 1554) is correct, with one exception—viz., in the account of the meeting (of which at the time of writing there was no authenticated report other than that which had appeared in the newspapers) it is stated "the others" referring to Dr. Macansh and Mr. Cuscaden, "admitted Mr. O'Hara's culpability." It should have been, instead of "others," Mr. Cuscaden, as I find on referring to the report in the *Australasian Medical Gazette*, where he only is reported to have said, "I also agree with the Council that a breach of ethics has been committed." I regret this unintentional mistake, the result largely of condensation. A comparison of the authenticated report of all the proceedings given in the *Australasian Medical Gazette* of April 25th will show that my account was otherwise correct.

Oct. 10th.

Medical News.

UNIVERSITY OF BRUSSELS.—The following practitioners have satisfied the examiners and obtained the M.D. degree:—

H. M. W. Bridgman, Alassio, Italy, and London; A. V. Johnson, Kensington; E. Winckler King, Bombay; W. M. Permien, Allahabad; John R. O'Brien, Great Yarmouth; and A. J. Treasuryvala, Bombay.

Nine candidates entered.

ROYAL COLLEGE OF SURGEONS IN IRELAND: DENTAL EXAMINATION.—Mr. John Isidore Potter having passed the necessary examination has been admitted a Licentiate in Dental Surgery of the College. The following candidates have passed the primary part of the examination: Mr. T. Beaumont, Mr. G. Friel, and Mr. L. Goldfoot.

NEWTON ABBOT WORKHOUSE.—Mr. J. W. Ley, F.R.C.S. Eng., has collected over £40 and purchased two pianos for the use of the inmates of Newton Abbot (Devon) Workhouse.

TYPHOID FEVER AT PLYMOUTH.—An outbreak of typhoid fever has occurred at Plymouth and the medical officer of health (Mr. F. M. Williams) has traced the cause to contaminated milk supplied from a small dairy-farm outside the borough boundary at Egg Buckland. The typhoid fever ward of the Borough Infectious Diseases Hospital was only built for the accommodation of 16 patients, although on Nov. 15th it had 23 cases. The sanitary committee will open the scarlet fever block, which is empty, and also will fit up the old laundry with beds. The committee will recommend the Town Council at once to complete the enlargement of the isolation hospital. 55 cases of typhoid fever have been notified in Plymouth up to Nov. 20th.

ERRATUM.—ENTRIES AT THE MEDICAL SCHOOLS.—The figures for University College, Sheffield, given in THE LANCET of Nov. 3rd (p. 1283), should read as follows: Full medical course 1900-1901, eight; special classes, two; dental, one; full medical course 1899-1900, five; increase, three.

A MEDICAL GOLF TOURNAMENT, which was recently concluded at Trafford-park, proved a great success. There were about 60 entries. Mr. W. J. Baird of Springwells, Bury, who was fortunate in having two walk-overs, played a consistently steady game throughout with a handicap of 7 and won the tournament, beating Mr. P. Worley of Pendleton, handicap 9, by 3 up and 2 to play.

ROYAL GEOLOGICAL SOCIETY OF CORNWALL.—At the annual meeting of this society held at Penzance on Nov. 13th the President (Mr. J. D. Enys) presented Dr. Clement Le Neve Foster, inspector of metalliferous mines for North Wales, with the William Bolitho Gold Medal in recognition of the distinction which he has attained as a mineralogist and also of the great services rendered by him to the society as curator during the period when he held the appointment of inspector of mines for Cornwall and Devon.

MUNICIPAL HONOURS AND MEDICAL MEN.—In addition to those whose names were published in THE LANCET of Nov. 17th (p. 1451) the following members of the medical profession have been elected or re-elected mayors:—Bolton: Mr. J. E. Scowcroft, M.D. St. And. (re-elected). Carnarvon: Mr. W. J. Williams, L.R.C.P. Edin., L.F.P.S. Glasg. (re-elected). Cheltenham: Mr. G. Norman, M.B., B.S. Durh. (re-elected). Crewe: Mr. Charles Wilson, M.D. Glasg. Pwllheli: Mr. S. W. Griffith, L.R.C.P. Edin., L.R.C.S. Edin. (re elected). Saffron Walden: Mr. John Parkinson Atkinson, M.D. Glasg.

CENSURE OF A PUBLIC VACCINATOR.—At the meeting of the Bideford (Devon) Board of Guardians held on Nov. 13th a communication was read from the Local Government Board in reference to one of the public vaccinators of the union. The letter stated that out of 405 vaccinations by the officer referred to only 95 were performed by him, the remainder having been done by his deputy. The Local Government Board considered this improper, as only when it was absolutely necessary should the deputy perform the operation; they thought that the contract ought to be determined, but they desired to have a written explanation from the public vaccinator in question.

THE members of the London Hospital Medical Club held their annual dinner on Nov. 15th, when Mr. E. H. Openshaw was the guest of the club on his return from South Africa. A good muster of the members supported the chairman, Mr. C. W. Mansell Moullin, in giving a hearty welcome to their guest. In response to the toast of his health Mr. Openshaw gave an interesting account of his experiences, not the least exciting being a graphic description of the running down of the ill fated *Mexican* by the boat on which he was a passenger. Mr. Openshaw also exhibited a large number of photographs illustrating the various phases of the country through which he travelled.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

AUBREY, THOMAS, L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Newmarket Union, vice A. G. L. Campbell, resigned.

BONNER, T. J., M.B., C.M. Aberd., has been appointed Medical Officer by the Towyn District Council, vice B. M. Bone, resigned.

BRADY, CHARLES M., L.R.C.S. Irel., L.A.H., has been appointed Honorary Medical Officer to the Royal Albert Edward Infirmary, Wigan, vice R. Hamilton Cowan, deceased.

BROWNE, ADA M., L.S.A., has been appointed Assistant Anæsthetist to the Chelsea Hospital for Women.

CREAN, JOHN JOSEPH, Lieutenant-Colonel, L.R.C.P. & S. Irel. (retired list Royal Army Medical Corps) has been selected for duty with the troops at Brighton.

EDWARDS, C. W., F.R.C.S. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory Acts for the Wincanton District of Somersetshire.

Fenn, C. F., M.B. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon, Worcester Infirmary.

Field, R. O., M.B. Lond., has been appointed *pro tem.* Medical Officer of the Patrington Union, vice E. Robinson, resigned.

Fuller, A. W., M.B., Ch.B. Edin., has been appointed Assistant House Surgeon to the Rotherham Hospital and Dispensary.

Fullerton, Andrew, M.D., has been appointed Surgical Registrar to the Royal Victoria Hospital, Belfast.

Fulton, Wm., M.B., C.M. Glasg., has been re-appointed Parochial Medical Officer by the Stevenston Parish Council.

Hayden, W. Falconer, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the County Hospital, Newport, Monmouthshire.

Iles, Mary M., M.B., B.S. Lond., has been appointed House Surgeon to the General and Children's Hospital, Walthamstow, N.E.

Jones, Herbert, L.R.C.S. Irel., D.P.H. Cantab., has been appointed Medical Officer for the Combined Sanitary Districts for rural Herefordshire, vice H. V. Sandford, resigned.

Kenwood, H. R., M.B., C.M. Edin., L.R.C.P. Lond., D.P.H., has been appointed Medical Officer for the Borough of Stoke Newington.

McGilmont, John, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Parochial Medical Officer by the Stevenston Parish Council.

Nicholas, James Hamilton, Major, L.R.C.P. Irel., L.R.C.S. Edin., (retired list Royal Army Medical Corps) has been selected for duty with the Southern District at Gosport.

Oyston, W. P., M.B., Ch.B. Vict., has been appointed Certifying Surgeon under the Factory Acts, for Osmotherly District.

Shaw-Mackenzie, John A., M.D. Lond., has been appointed Physician to Out-Patients at the Samaritan Free Hospital for Women and Children, Marylebone-road, London, N.W.

Stanford, W. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer, Hollingbourn Union, vice E. S. Webber, resigned.

Starkey, William, M.B., B.Ch. Irel., has been appointed Assistant Medical Officer to the Down District Asylum.

Steed, John, M.D. Edin., has been appointed Medical Officer to Jarvis's Charity, Staunton-on-Wye, vice W. E. Barton, resigned.

Tyrnau, F. J. W., L.R.C.P., L.R.C.S. Irel., has been appointed District Medical Officer, Smallburgh Union, vice A. Crisp, deceased.

Trevor, R. Salusbury, M.A., M.B., B.C. Cantab., has been appointed Assistant Curator of the Museum, St. George's Hospital, Hyde Park Corner, London.

Walker, E. T., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of the Luddenden Sanitary District, Halifax Union, vice E. E. Crowther.

Ward, J. A., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Training Ship *Shaftesbury*, Grays, vice W. Robertson, resigned.

Wearne, Walter, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for the Borough of Helston (Cornwall).

Wild, G. S., M.D. Durh., M.R.C.S., has been appointed Honorary Physician to the Bootle Borough Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Birmingham and Midland Eye Hospital, Church street, Birmingham.—Assistant House Surgeon. Salary £60 per annum, with apartments and board.

Brentford Union.—Assistant Medical Officer for the new Infirmary, unmarried. Salary £100 per annum, with furnished apartments, rations, washing, &c. Subject to statutory deductions. Apply to the Clerk to the Guardians, Union Offices, Isleworth, W.

Bridgnorth and South Shropshire Infirmary.—House Surgeon. Salary £80, with board and lodging in the Infirmary.

Brighton and Hove Lying-in Institution and Hospital for Women, 76, West-street, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance.

Brixton Dispensary, Water lane, Brixton.—Resident Medical Officer for two years, unmarried. Salary £150, with furnished apartments, attendance, coal, and gas.

Bury Infirmary.—Junior House Surgeon. Salary £80, with board, residence, and attendance. Apply to Hon. Secretary, Dispensary, Knowsley road, Bury.

Cardiff Infirmary.—Assistant House Surgeon for six months. Salary at the rate of £75 per annum, with board, washing and apartments.

Central London Sick Asylums District.—Second Assistant Medical Officer and Dispenser at the Asylum at Hendon for twelve months. Salary £75 per annum, with board and residence. Subject to statutory deduction. Apply to the Clerk, Cleveland street Asylum, Cleveland street, W.

Children's Hospital, Forest House, Nottingham.—House Surgeon for six months, unmarried. Females ineligible. Salary at the rate of £100 per annum, with board and residence.

City of London Hospital for Diseases of the Chest, Victoria Park, E.—Second House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

Clayton Hospital and Wakefield General Dispensary, Wakefield.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, lodging and washing.

Clinical Research Association, 1, Southwark street, London.—Assistant Pathologist. Commencing salary £125 per annum.

Croydon General Hospital.—House Surgeon for one year, unmarried. Salary £105, with board, lodging and washing at the hospital.

Darlington Hospital and Infirmary.—House Surgeon, unmarried. Salary £150 per annum, with rooms in the Institution. Applicant to board himself.

East London Hospital for Children and Dispensary for Women, Glamis-road, Shadwell, E.—House Physician. Board, residence, &c., provided and an honorarium of £25 given conditionally.

Government of Ceylon.—Medical Man for the Ceylon Medical College, for the post of Registrar, Curator of Museum, and Lecturer. Salary Rs. 6000 per annum, rising by triennial increments of Rs. 500 to Rs. 8000.—Address, Private Secretary, Colonial Office, S.W.

Guest Hospital, Dudley.—Assistant House Surgeon, for six months. Salary at the rate of £40 per annum, residence, board, and washing.

Hospital for Sick Children, Great Ormond street, London.—Resident Medical Superintendent for one year. Salary 100 guineas, with board and residence in the Hospital.

Huddersfield Infirmary.—Junior House Surgeon. Salary £60 per annum, with board, residence, and washing.

Hull Royal Infirmary.—Honorary Surgeon. Also Assistant House Surgeon for one year. Salary £60, with board and furnished apartments.

Leeds Public Dispensary.—Junior Resident Medical Officer for one year. Salary £100, with board and lodging.

Leicester Infirmary.—Assistant House Surgeon for 12 months. Salary £80, with board, apartments, and washing.

London Hospital Medical College, Mile-end, E.—Assistant Demonstrator of Anatomy. Salary £30 a year.

Manchester Children's Hospital, Gartside street, Manchester.—Assistant Surgeon. An honorarium of £50 per annum will be given.

Miller Hospital and Royal Kent Dispensary, Greenwich road, S.E.—Junior Resident Medical Officer for six months. Salary at the rate of £60 per annum, with board, attendance and washing.

Ramsgate and St. Lawrence Royal Dispensary and the General Hospital and Seamen's Infirmary.—Resident Medical Officer, unmarried. Salary £100 per annum, with furnished apartments, board, and attendance.

Royal Albert Hospital, Devonport.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board, lodging, and washing.

Royal Hospital for Children and Women, Waterloo bridge-road, London.—Resident Medical Officer for twelve months. Salary £70, with board and laundry. Also Assistant Physician.

Royal Hospital for Incurables, Donnybrook, Dublin.—Resident Medical Officer for one year. Salary £100, with board and furnished apartments.

Seamen's Hospital Society ("Dreadnought"), Greenwich, S.E.—House Physician for "Dreadnought" Hospital. Salary £75 per annum, with board and residence.

St. Mary's Hospital for Sick Children, Plaistow, E.—Assistant Resident Medical Officer for six months. Salary £80 per annum, with board, residence, laundry, &c.

St. Mary's Hospital Medical School, Paddington.—Lectureship in Chemistry and Physics. Salary £150 per annum, with extra fees for London University Classes.

Throat Hospital, Golden square, London.—Non-resident Junior House Surgeon. Salary £100 per annum, with luncheon daily.

Trinidad Government Lunatic Asylum.—Assistant Medical Superintendent. Salary £250 and £50 allowance, rising by quinquennial increments of £50. Furnished quarters for unmarried man in the Asylum. Free passage provided. Appointment pensionable. Applications to the Private Secretary, the Colonial Office, S.W.

University College, London.—Assistant Surgeon.

University of Glasgow.—Two additional Examiners for degrees in Medicine. Annual salary £30 in each case.

West London Hospital, Hammersmith road, W.—House Physician and House Surgeon, for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

Barlow.—On Nov. 16th, at Dalston lane, N.E., the wife of Thos. Carey Barlow, L.R.C.P. Edin., of a son.

Beadles.—On Nov. 17th, at Battle Cottage, Sydenham, S.E., the wife of Arthur Harry Beadles, M.R.C.S., L.R.C.P. Lond., of a son.

Bundey.—On Nov. 16th, at Honor Oak park, the wife of H. Marchant Bundey, M.B., C.M. Edin., of a daughter.

Hudson.—On Nov. 16th, at Vine House, Cobham, Surrey, the wife of Arthur B. Hudson, M.R.C.S., L.R.C.P. Lond., of a daughter.

Pitt.—On Nov. 19th, at Portland place, W., the wife of G. Newton Pitt, M.D. Camb., of a son.

Scott.—On Nov. 15th, at Shooters hill road, Blackheath, the wife of Patrick Cumin Scott, M.B. Cantab., of a son.

MARRIAGES.

Anderson—Turnell.—On Nov. 5th, at St. Augustine's Church, Sheffield, Alexander Anderson, M.B., D.P.H., Wadsley lane, Sheffield, to Florence Ida, second daughter of the late Samuel Turnell, Sheffield.

O'Keeffe Wilson—Light.—On Nov. 14th, at Christ Church, Sefton park, Liverpool, George O'Keeffe Wilson, L.R.C.P.I., L.R.C.S. Irel., of Dublin, to Florence Gwendolen, eldest daughter of James Barclay Light, Liverpool.

DEATHS.

Beardsley.—On Nov. 20th, at The Towers, Grange-over-Sands, Amos Beardsley, M.R.C.S. Eng., aged 73 years.

Cockle.—On Nov. 15th, at The Lodge, West Molesey, John Cockle, M.D.

Mackay.—On Nov. 20th, suddenly, at Learmonth terrace, Edinburgh, George Mackay, M.D., *Deputy Surgeon-General, Madras Army*, retired, in his 81st year.

Higgall.—On Nov. 15th, at Elgin-crescent, W., Edward Higgall, M.R.C.S., aged 82.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

MEDICAL EVIDENCE AT CORONERS' INQUESTS.

We have in these columns constantly called attention to the fact that the absence of medical evidence at coroners' inquests may endanger the course of justice. The want of a proper medical explanation of the cause of death may enable a criminal to escape justice or may leave some catastrophe unexplained to the detriment of the reputation of persons who have been in association with the deceased. Two examples have recently come before us where inquests have been conducted without medical evidence although medical evidence was clearly required and was for that matter tendered in a fashion by persons not in a position to give it properly.

The first case occurred at Aberford, near Leeds, and was an extraordinary case because the subject of the inquest, who had committed suicide, was only eight years old. He was at a private boarding school and had been admonished on the way home from church for an exhibition of temper. He was sent to his bedroom with his Bible to learn some verses and was shortly afterwards discovered hanging by a rope from the bedstead. Mr. J. H. Wigham, acting for Mr. T. B. Abbott of Aberford, was called in and pronounced life extinct. At the inquest, which was held at the school, it was elicited that the boy was weak in health and of a reserved disposition, being inclined to sulk when rebuked and preferring to play alone. His schoolmaster gave evidence as to the position in which he found the body hanging and the first-aid assistance which he administered. A woman who laid out the body deposed that there were no marks on the deceased with the exception of a blue one round his neck. The coroner in summing up pointed out that the schoolmaster's conduct was wise and exemplary. There was no evidence of bullying on the part of the unfortunate child's schoolfellows and the jury returned a verdict of "Suicide during a paroxysm of rage."

In the second case an inquiry was held upon a cabdriver who died from the effect of injuries received while driving a party in a landau from Dorchester to Portland. At the inquest it was elicited that during this drive the party had stopped at a public-house near Dorchester and at another, the Crown Hotel in Weymouth, where "they had a few drinks" according to the evidence of one of the party and where they stayed "a considerable time, perhaps three-quarters of an hour," according to an eye-witness. A short time after leaving the hotel at Weymouth the driver, a man named Spencer, fell over the side of the landau under the wheels, two of which passed over his chest. Four minutes later Mr. D. T. Key, of Wyke Regis, near Weymouth, arrived and saw at once that he had a bad case to deal with. The employer of the unfortunate man wanted to take charge of him, but this Mr. Key would not allow as he did not think the employer sober, and the crowd, who seemed to hold the same view, led the employer away. After a time some policemen arrived and Spencer was lifted into the landau and Mr. Key accompanied him to the Weymouth Hospital. But while he lay on the ground one of the men who had been in the carriage came back and kicked him, saying, "Get up, you lazy ——." Four or five days afterwards Spencer died in Weymouth Hospital, and at the necropsy he was found to have five broken ribs as well as injury to the lungs. Mr. Key was not called by the coroner to give evidence. The jury brought in a verdict of "Accidental death," the foreman adding that Spencer was not in a fit condition to drive.

In the first of the cases which we have related no public harm is done by the fact that proper medical evidence was not invited. No suspicion of injudicious treatment rests upon the schoolmaster or of bullying upon the victim's schoolfellows. But these things might very well have been otherwise. We have only the word of the woman called in to lay out the body in support of the fact that the deceased had no other injuries than a blue line round his neck. Clearly the medical man who was called to the case at once ought to have been asked to state the medical opinion that death occurred by hanging and to have given the medical testimony that the deceased had no other lesions. If such evidence was required at all it should have been given by the only person who was qualified to give it. In the second case the absence of medical evidence is more obviously wrong. The circumstances under which Spencer fell from his box do not appear to have been made clear, though we agree with the foreman of the jury that he was probably too drunk to be capable of driving. The tragedy occurred during election time. The landau appears to have contained a group of semi-drunken men who stopped at various public-houses and regaled themselves with champagne and beer and who sang songs and skylarked. One of the parties received injuries leading to his death, and from that time forward the most important witness who could possibly be called was the medical man who appeared on the spot four minutes after the accident. He could have given the best evidence as to the condition of Spencer, as to the inebriety of the party, and as to the brutality of the person who kicked the injured man on the ground. From the time of his arrival on the scene Mr. Key took charge of the patient, saved him from his friends, and delivered him to the hospital. He alone could have made the story of the death of Spencer a clear one, while it is possible that his evidence might have led to the arrest and salutary punishment of a lot of drunken, brutal Hooligans. This is only a supposition, but there would be no just basis for such suppositions if proper medical evidence had been forthcoming at the inquest.

"HAVE MATERNAL IMPRESSIONS ANY EFFECT ON THE FŒTUS IN UTERO?"

To the Editors of The Lancet.

Sirs,—Having read Dr. William Duncan's paper on the above subject in The Lancet of Nov. 3rd (p. 1266), it has occurred to me that the following case which has come within my own experience may not be without some interest, and for this reason I beg leave to publish it in your columns, although it is only one of many similar cases which have from time to time been recorded. A boy, about nine years old, while playing with some friends at a large children's party ran headlong into a fence of barbed wire, with the result that his left cheek was torn open from the angle of the jaw to within an inch of the mouth, leaving a nasty gaping wound. A lady who was some months advanced in pregnancy was present and saw the child shortly after the accident, and was greatly horrified at his appearance. In due course she gave birth to a girl, and on the infant's left cheek was a nævus corresponding exactly in position and direction to the wound she had seen on the little boy's face. The girl is now grown up and still retains the birthmark on her cheek, though it has faded somewhat with the lapse of time. I am, Sirs, yours faithfully,

Thomas J. T. McHattie, M.B., Ch.B. Edin.

Holloway-road, N., Nov. 7th, 1900.

To the Editors of The Lancet.

Sirs,—Having read the article under the above heading by Dr. Duncan in The Lancet of Nov. 3rd (p. 1266), I think that the following cases may be interesting to those medical men who look upon such cases as more than mere coincidences. On March 28th, 1893, Mrs. X—— brought a little boy to me suffering from a simple fracture of the lower end of the left humerus, which had been caused by being run over by a bicycle. On Sept. 5th, 1893, Mrs. X—— was delivered of a fine male child with a so-called intra-uterine amputation of the left forearm an inch below the elbow and with rudimentary fingers. In August, 1890, I attended Mrs. Y——, a multipara whose preceding labours had been normal. On my entering the room she said that she was certain something was wrong because she had visited Barnum's show in London when a few weeks pregnant and she felt sure that seeing the "freaks" had affected the child. In about three hours I delivered her of an anencephalous monstrosity. How maternal impressions act I do not pretend to know, although it seems comprehensible that in the case of nævi a "nervous impression" might in some way disturb the arrangement of the blastodermic cells.

I am, Sirs, yours faithfully,

Grimsby, Nov. 12th, 1900. T. W J. Allen, M.D. Durh.

AN AMERICAN ADVERTISEMENT.

In a popular lecture given by a medical man some time ago he drew attention to an advertisement which at one time appeared on the inner cover of yellow-back railway novels, describing the advertiser's pills as "not fooling round like other pills" but doing their work at once. From an American medical magazine we print the following, which would make a good companion advertisement to that of the volatile pills:—

> "As a chaser after a Welsh Rabbit, I want nothing better than ——— Tablets," says a prominent physician. They're good lobster chasers too—Try them yourself, Doctor.

Such advertisements in medical journals may be funny but they are not dignified.

"HOSPITAL ABUSE: A SIDE THAT IS SOMETIMES OVERLOOKED."

To the Editors of The Lancet.

Sirs,—I have read with interest the letters of your correspondents on this subject in The Lancet of Nov. 3rd (p. 1320) and 10th (p. 1396), and as a general practitioner of over 20 years' experience in several parts of London I am convinced that there is a great deal of truth on both sides of the question as enunciated by the letter of "Hospital Surgeon" and "A General Practitioner." The great and practical fact, however, remains that abuse of hospitals continues, both by members of the hospital staff in encouraging all sorts and conditions of patients to the injury of the general practitioner and by the general practitioner in sending to hospitals cases which he is either unwilling to take up himself or patients who could well afford to pay a consultant's fee. It is at present my lot to be in practice in the neighbourhood of the Docks, my practice almost entirely being not among the dock employés but with the skilled mechanics and labourers who are employed in the many large factories in this district. The practice in this neighbourhood was until a few years ago good for a working-class district and there was plenty of surgical work (in consequence of the numerous accidents in the factories), which was well paid for by the employers. Then a change came o'er the scene; a branch of the "Seaman's *Dreadnought* Hospital Society" was established at the Albert Dock, and will it be believed that although this was a hospital for seamen, women and children were at once encouraged to attend the out-patient department from all the surrounding districts. No inquiries are made and no connexion with the sea is necessary. It is the common habit now for the men, women, and children of the mechanics here to flock to this hospital for every trivial complaint and the large firms send every accident that occurs there at once, and so the private practice of the district has been ruined by the unfair competition of this charity and, as *I maintain, by the misapplication of* the funds which, I presume, are subscribed for "seamen." The reason of this is not far to seek—viz., this, the large firms in the neighbourhood finding that it pays them better to subscribe to the hospital and send all their accidents there rather than to pay a private practitioner, the hospital as a *quid pro quo* throws *open its doors* to *their employés as out-patients.* When I say that among the mechanics here I am able on occasions to obtain fees of five, *four*, never less than three, guineas for the services of a consultant, it is evident that an indiscriminate and pauperising charity such as this is out of place in a district where even labourers can and do pay as much as from 8s. to 12s. a week rent. Personally I always make a point of feeing a consultant rather than sending the case for hospital advice when I consider a second opinion advisable, neither do I ever send cases to hospital which can be *treated* at home within *the means of the patient and* the capacity of the medical attendant; but in the face of the treatment meted out to us by the hospitals I ask what encouragement is there for general practitioners to do this? It is the *reckless system of* hospital abuse which is making the general practitioner regard the hospital physician and surgeon as his enemies and naturally, therefore, he not only becomes indifferent as to their welfare, but anxious to shift on to their shoulders the burden of those cases which are unremunerative or uninteresting to himself; and this state of things will continue until he can be brought to see that the consultant regards him as a man and a brother who has also "a right *to live" and not to be regarded, as he so often is, as an ignorant person* from whom every patient who applies for hospital relief has had a lucky escape.

A great deal has been made of the fact that in some of the large hospitals a special officer has been appointed for the purpose of making inquiries into the circumstances of the out-patients. I had occasion a short time since to make a personal investigation into this system at one of the largest London hospitals, and I found that although there certainly was such an officer the system of his inquiry amounted to this—that every applicant for relief was valued by him as being able to afford a certain sum from 1d. to 2s., and was asked to contribute that to the hospital funds before being sent into the consulting room. At a certain "special hospital" I know it to be even worse, for there every decently dressed person is requested to go to the private house of the consultant and to pay a reduced fee, and at this same hospital I know of a woman who has attended regularly for months once a week who pays the porter 2s. 6d. each time to be sent in early. These are by no means *isolated cases. Many such, no doubt,* come within *the daily* experience of every general practitioner and, I need scarcely add, do *not tend to foster that esprit de corps* without which there can be no remedy for the present lamentable state of affairs within the profession and through which we have become the prey not only of the public but even more of those who pull the strings of hospital charity.

I am, Sirs, your faithfully,

Nov. 12th, 1900. GENERAL PRACTITIONER.

THE CASE OF MR. JOSEPH HENDERSON MARTIN.

To the Editors of THE LANCET.

SIRS,—In addition to the £5 4s. 6d., the receipt of which was acknowledged in THE LANCET of Nov. 17th, the following subscriptions have been since received by Dr. W. M. Renton and myself.

I am, Sirs, yours faithfully,

H. LYON SMITH

The Hawthorns, Chester-le-Street, Nov. 21st, 1900.

	£	s.	d.		£	s.	d.
THE LANCET Relief Fund	10	0	0	Mr. Walter A. Batchell, J.P	1	1	0
Sir Thomas Smith	3	0	0	Mr J Gidley-Moore ...	0	10	0
Mr. A. Thomas (Guildford)	1	1	0	"J M."	1	0	0

"MOTOR CARS FOR MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent "Motor-car," in THE LANCET of Nov. 3rd (p. 1320), does he seriously mean that eight out of 10 motor-cars are in "hospital"? To begin with the statement is absurd, and the point is *this—probably nine out* of 10 so-called "breakdowns" of motors are due to the ignorance or carelessness of drivers. "Motor-car" says I have been very lucky; that may be, but I know other automobilists who have the same class of car, that is, Benz or International, who have had less trouble than I have had, because they either have an engineer or are better mechanics than I am; and conversely, the man who has no mechanical skill has much more trouble. In my practice *three or four horses were* always *necessary* and "Motor-car" knows, possibly, the trouble it used to be *for evening or night visits to hunt up* one's coachman and wait about while he harnessed his horse, growling the while at having "cleaned his harness," and so on. Has "Motor-car" never waited half an hour for his horse to be roughed? I have had quite enough of horses to last me the rest of my life. Shying, bolting, laminitis, influenza, nail driven wrong, are only a few of horse worries, let alone the "beggar goes and dies." I have driven about 12,000 miles in my car in two years, in all weathers over atrocious roads, at an inclusive *cost of less than 2d.* a mile. Can this be done with a horse and at the speed of a motor-car? Take one instance. I have had a morning and evening visit six miles from home, besides my other work, that is 24 miles. I took two hours to do it; with a horse and dog-cart it would take me three hours, thus, on two visits, a whole working hour is saved. Roughly this saving goes on every day. To my mind the comfort, saving, and convenience of a motor-car are beyond calculation. *As to my worries with chains, tyres, and wheels, they have* not troubled me at all since the first six months, when I had the first lot off. I confess nearly all my "roadside repairs" have been due to careless*ness or want of experience in driving.* "*Motor-car" thinks £30* a year a "large order" for doing 6000 miles a year. How much would it cost him from first to last doing it with horses? I know very well!

I am, Sirs, yours faithfully,

Nov. 12th, 1900. BENZ CAR.

"NOTES ON AN OLD ENGLISH HOUSE."

WE have received under the above title a copy of an interesting sketch of the history of the old business of Messrs. Burgoyne, Burbidges, and Co., the well-known firm of wholesale and export druggists and manufacturers, of 12 and 16, Coleman-street, E.C. The business was founded as far back as 1741, and has therefore been in existence for over one and a half centuries The sketch contains numerous illustra*tions of the laboratories* and *works* and *facsimiles are published of* formulæ from the firm's oldest laboratory book, the date being 1742.

THE MEDICAL PROVIDENT LEAGUE.

WE have received many letters about this body. Space does not permit us to discuss the scheme at length this week. We recommend those who have written to us, and others, not to join the League, and will give *our reasons in our next issue.*

WHOLESALE DRUG HOUSES AND THE PUBLIC.

To the Editors of THE LANCET.

SIRS,—*No* doubt the profession as a whole will join with me in a growl, for oftentimes we can only hope to obtain what we require by indulging (*of* course in a nice way) in the process. The present grievance is against the wholesale drug houses in supplying retail to the public palatinoids, jelloids, and other up-to-date preparations. My chemist here tells me that ladies (especially) come constantly to him for such and such a preparation (*giving name of house, number of* drug, and retail price, &c.). Such a proceeding I do not consider at all correct and I feel sure no medical man will countenance it. The only remedy for us to adopt will be either to write prescriptions in Greek, German, or Arabic or not to prescribe in writing at all and to cease to get such drugs from the wholesale houses. Can any member of the profession make a better suggestion? I never use such expressions as "jelloids," "palatinoids," or any other 'oids to my patients; why should others cut their own throats by so doing? Besides, the system is dangerous from the public side of the question; one can get such a thing as an overdose, or "push" a drug too far. The present system of advertising new remedies in chemists' shops tends to reduce what is a purely scientific profession to the level of quackery.

I am, Sirs, yours faithfully,

Horsham, Nov. 6th, 1900 GEO. SELKIRK JONES.

"A WELL-KNOWN BONE-SETTER."

THE following paragraph is taken from the *North-Eastern Gazette.* It appeared on Nov. 15th and again in another local paper on *Nov. 16th*:—

> "We are glad to hear that Mr. Pike Pease, M.P., is making satisfactory progress. His injured knee has been successfully treated by Mr. Clayton, the well-known bone setter."

It is astonishing, as Mr Crummles said, how these things get into the papers.

THE INTERMEDIATE EXAMINATION IN SCIENCE AT LONDON UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—I shall feel greatly obliged *if some of your readers can advise* me through your columns as to the text books to read *for* the Intermediate Examination in Science at the University of London

I am, Sirs, yours faithfully,

S. B. C.

"THE EXTRACTION OF TEETH FOR CLUB PATIENTS."

To the Editors of THE LANCET.

SIRS,—In reply to the letter under the above heading signed "Junior" in THE LANCET of Nov. 10th, p. 1395, I should like to tell your correspondent that it is not customary for medical officers of clubs to extract teeth gratuitously for members I should advise him to continue to charge the usual 1s for tooth extraction. Further, I should advise him not to be tempted to imitate the complaisance of his neighbouring medical brethren but to limit rather than to extend his contract work. I have always limited my club work by the literal meaning of the words "medical attendance and medicine" in the rules of clubs—that is to say, I give no pills, ointments, or liniments. When I commenced club work I scheduled certain things which would require extra fees, such as fractures, dislocations, operations, burns and scalds, venereal diseases, &c. Twelve months afterwards a member refused to pay for attention to fractured fingers and as a matter of principle was involved I fought the case through three successive hearings at the county court, unaided by any defence union, and won a verdict. *En passant*, the judge supported an old contention of mine, that in unison with the duties I was appointed under the rules to fulfil, my proper title was not the antiquated one of "Surgeon," but "Medical Officer." The British workman is only too pleased to get as much as he can for his money and although he objects to be sweated himself he enjoys the process on other people. That is my experience of him after 15 years' professional work. "A labourer is worthy of his hire" Why not—

A MEDICAL LABOURER?

Nov. 20th, 1900.

THE UNIVERSITY OF BIRMINGHAM MEDICAL DEGREE FOR PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—The recent regulation of the University of Birmingham, whereby registered practitioners who have studied at the School of Medicine there will be admitted to the M.B. examination, will be a very great boon to provincial practitioners.

Some others of us are apt to think that the favour is almost too great a one to bestow for the mere accident of localities and if the Senate of the University could extend the operation of the rule so as to include every registered practitioner who had passed the matriculation examination up to a certain date it would deal in a practical form with a widespread grievance and would ensure some degree of arts training in the graduates.—I am, Sirs, yours faithfully,

Dublin, Nov. 17th, 1900. J. C. MCWALTER, B.A., F.F.P.S. Glasg.

THE CASE OF DR. PATRICK QUINLIVAN.

IN our issue of last week we published an appeal from a committee formed to aid the family of the late Dr. Patrick Quinlivan. The honorary treasurer is Dr. R. Ambrose, M.P., The Mount, Whitechapel-road, E., to whom subscriptions may be sent, and the following subscriptions have been received:—

	£	s.	d.
Dr. R. F. Starkie	1	1	0
Mr. J. J. O'Donnell ...	2	2	0
Dr. E. L. McSheehy (Wimbledon)	1	0	0
Mr. E. J. F. Moore... ...	1	1	0
Dr. W. B. Grandy	0	10	6
Dr. W. J. O'Meara	1	1	0
Dr. Thomas Neville ...	2	2	0
Dr. R. Ambrose, M.P. ...	3	3	0
Dr. W. Wynn Westcott...	1	1	0
Mr. P. Barragry	1	1	0
Dr. H. J. Gahagan ...	0	10	6
Mr. R. Moynahan	3	3	0
Mr. J. D. Ross	0	10	0
Mr. Jeremiah McCarthy	5	5	0
A Friend	0	2	6
Mr. P. B. Molony (Murroe, co Limerick)	1	1	0
Mr. Mullane (Nottingham)	1	1	0
Mr. F. E. Rogers	3	3	0
Dr. W. Barter	1	1	0
Dr. R. Campbell	0	10	0
Mr. M. Cahill (Ellesmere)	1	1	0
Mr. Brooks	0	5	0
Dr. W. Cahill	1	1	0
A Friend	0	2	6
Mr. T. F. McDonnell (Hailsham)	1	1	0
Dr J. O'Callaghan (Sheffield)	1	0	0
Dr. H. Macnaughton Jones	5	5	0
Mr. McCormack	0	10	0
Mr. Guthrie	1	1	0
Mr. B. O'Regan	1	1	0
Mr. F. W. Foott (Enfield Lock)	0	5	0
Sir Thomas Smith	3	3	0
R. D. P.	5	0	0
Dr. A. Holdsworth Davis (Sunderland)...	0	10	0
Dr. M. Poignand (Rowhedge)	1	1	0
Mr. F. G. Evans (Llwynarthan)	1	1	0
Dr. H. Greenwood (R.S.O., St. Just) ...	0	10	6
Mr. A. Mills (St. John's, S E)	0	5	0
Mr. P. J. Freyer	1	1	0
Dr. Daly (Gort, Ireland)	1	1	0
Dr. Staunton	0	10	6
Dr. Moore	0	10	6
Dr. O'Dwyer	0	10	6
Dr. Sullivan	0	10	6
Mr. J. F. O'Malley... ...	2	2	0
Mr. J. Kennedy	1	1	0
Mr. W. A. Satchel, J.P. (Ealing)	1	1	0
Mr. M. C. Corner	1	1	0
Mr. R. Roche	0	5	0
X. Y. Z.	1	1	0
Mr. S. Cole	0	10	0
Mr. Paul Terry (Gosport)	1	1	0
Mr. H. V. Eames (Nottingham)	1	1	0
Mr. C. Palmer (Burton-under-Needwood) ...	0	5	0
Mr. J. Sheehan	1	0	0
Mr. F. Arthur	1	0	0
Mr. J. Smyth (Leytonstone)	1	1	0
Mr. A. J. Ryan (Romford)	1	1	0
Mr. J. S. Nolan	0	10	0
Mr. J. E. O'Sullivan (Liverpool)	0	10	0
Anonymous	0	10	0

"THE QUALIFIED QUACK."

To the Editors of THE LANCET.

SIRS,—If you refer to the Medical Register for 1900 you will find that John Harman Tarrant has neither the diploma of F.R.C.S. Edin. nor that of L.R.C S. Edin. standing after his name. He was deprived of these qualifications, I believe, in December, 1899.

I am, Sirs, yours faithfully,

Lancaster, Nov. 16th, 1900. C. W. DEAN.

*** The proper action of the Royal College of Surgeons of Edinburgh had escaped our notice. It remains for the Royal College of Surgeons of Ireland to follow suit.—ED. L.

"UNUSUAL LAPSE OF TIME BETWEEN TWO PREGNANCIES."

To the Editors of THE LANCET.

SIRS—On May 12th (p. 1413), 19th (p. 1481), and 26th (p. 1566), 1900, three communications appeared in THE LANCET giving examples of long intervals between successive pregnancies. Perhaps the following parturition history of a woman whom I attended at her last confinement may prove interesting to some of your readers. She was born in February, 1850, and gave birth to four children as follows:—August, 1867; July, 1868; March 19th, 1870, and Dec. 13th, 1895. It will thus be seen that an interval of 25 years elapsed between her third confinement and her fourth conception, but the occurrence of the latter may possibly be explained by the fact that in February, 1895, she was in hospital for some weeks for the treatment of a urethral caruncle, from which, however, she denies that she ever experienced any inconvenience during coition.

I am, Sirs, yours faithfully,

Old Basford, Nottingham, Nov. 3rd, 1900. A. FULTON.

MIXED.

BEFORE the Middlesbrough stipendiary recently an applicant for an order exempting his infant from vaccination applied for "a separation order," much to the hilarity of the court.

AN OLD MEDICAL ACCOUNT.

WE are indebted to Mr. N. J. Highmore, of the Solicitor's Department of the Inland Revenue, for the following old medical account:—

1776. MRS. ELLEN HADDERTON.
March Dtr. to T. Jeffery.
24th.

	s.	d.
To three purging Potions	2	0
To a Cooling Collyrium	1	3
Ditto repeatd	1	3
Two Blystering Plasters and Dressings pr. Ditto ...	1	6
	£0 6	0

Receiv'd Apl. 27th, 1776, the above in full,

pr. T. Jeffery.

◆

Isolation Hospital.—We do not know of any literature that bears on the subject. An isolation hospital of 60 beds can clearly be run for much less money than can two isolation hospitals of 30 beds each. The practical way of ascertaining the facts would be to write to one or two sanitary authorities having supervision over isolation hospitals of 30 and 60 beds, and ask the cost of maintenance.

C.—It is legitimate to give a reasonable amount of publicity to the change of residence in the manner suggested.

Enquirer, who has not chosen a very distinctive pseudonym, is recommended to consult her medical man.

J. W.—Yes.

ERRATUM.—In regard to the Bradshaw Lecture, THE LANCET, Nov. 10th, p. 1323, the figures for the analysis of urobilin should read thus:—C, 63 58; H, 7·84; N, 4·11; O, 24·47; total, 100·00.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 22nd, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain-fall	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8 30 A.M.
Nov. 16	29·13	E.	0·05	62	49	44	45	46	Overcast
" 17	29 64	N.	0·32	66	49	44	46	47	Raining
" 18	30·11	N.E.	0 07	57	47	43	42	45	Cloudy
" 19	30 29	N	...	69	46	40	39	41	Cloudy
" 20	30 05	NNE	...	61	46	39	42	43	Overcast
" 21	29 76	ENE	0 01	61	47	42	43	44	Overcast
" 22	29 74	N.W.	...	51	46	44	43	44	Overcast

During the week marked copies of the following newspapers have been received: *Newcastle Daily Chronicle, Cheshire Daily Echo, Ayr Observer, Manchester Guardian, North British Daily Mail, Glasgow Herald, Nottingham Guardian, Scotsman, South Wales Daily News, Dundee Advertiser, Bradford Observer, Preston Herald, Birkenhead News, Birmingham Post, Times of India, Pioneer Mail, Daylight, Pilot, Sunderland Morning Mail, West Sussex Gazette, Perth Constitutional, Norfolk Daily Standard, Huddersfield Examiner, Liverpool Daily Post, Citizen, Architect, Builder, Leeds Mercury, Bristol Mercury, Mining Journal, City Press, Yorkshire Post, Hertfordshire Mercury, Reading Mercury, Warder, Wiltshire Express, The World, Grimsby News, Blackpool Herald, Salisbury Times, Exeter Times, Stroud Journal, Australian Star, Banbury Guardian, West Cumberland Times, Surrey Advertiser, Eastern Post, Macclesfield Times, Local Government Chronicle, Sanitary Record, Nuneaton Chronicle, West Briton, Kent Messenger, Greenock Herald, The South Africa, Bury Free Press, Cambrian News, West Ham Guardian, Daylight, Hereford Times, Civil Service Gazette, Rural World, Derby Courier, Court Journal, East London Observer, Kettering Guardian, Bridgend Chronicle, Local Government Journal, &c., &c.*

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), *Gt. Northern Central* (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (27th).—London (2 P.M.), St Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.)

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), *St. Thomas's* (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9 30 A.M.), Gt Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2 30 P.M.), London Throat (2 P.M.) Cancer (2 P.M.)

THURSDAY (29th).—St Bartholomew's (1.30 P.M.), St. Thomas's (3 30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2 30 P.M.), London Throat (2 P.M.), *St. Mark's* (2 P.M.), Samaritan (9 30 A.M. and 2.30 P.M.).

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3 30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9 30 A.M. and 2.30 P.M.).

SATURDAY (1st).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the *Royal London Ophthalmic* (10 A.M.), the Royal Westminster Ophthalmic (1 30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (26th).—SOCIETY OF ARTS.—8 P.M. Prof. J. A. Fleming: Electric Oscillations and Electric Waves. (Cantor Lecture.)

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council Meeting 8 P.M. Paper:—Mr. T B Constant: The Etiology of Superior Protrusion. Casual Communications:—Mr. C. V. Cotterell: (1) A Composite Odontome; *(2) A Case of Inverted Eruption of a Tooth.*—Mr. J. G. *Turner*: Pedunculated Epulis and Supernumerary Teeth.—Mr. Perry: The Microscopical Appearances of Teeth removed from a Graveyard. Lantern Display:—Mr. D. Gabell: Multi-coloured Sections of Teeth and other Histological Subjects.

MEDICAL SOCIETY OF LONDON.—8 30 P.M. Dr. F. de Havilland Hall: The Diagnosis and Treatment of Thoracic Aneurysm. The following gentlemen are expected to take part in the discussion—Dr. Barlow, Dr. Beauchamp, Dr. C. Browne, Dr K. Fowler, Dr. V. Harris, Dr. N. Moore, Dr. G. Smith, Mr. Sanderson (Brighton), and Dr. H. Walsham

TUESDAY (27th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Sir Thomas Smith: Suggestions for a possible Improvement in the Method of Removing Stones and Morbid Growths from the Interior of the Bladder.—Mr. W. G. Spencer: Median Perineal Urethrotomy and Cystotomy through a Superficial *Tranverse Incision, after Celsus* *Demonstration*:—Dr. T. R. Bradshaw (Liverpool): An Undescribed Crystalline Urinary Deposit.

WEDNESDAY (28th).—HUNTERIAN SOCIETY (London Institution, Finsbury circus).—8.30 P.M. Pathological Evening

SOCIETY OF ARTS.—8 P.M. Major R. Ross: Malaria and Mosquitoes

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4 30 P.M. Exhibition of Cases 5 P.M. Meeting.

THURSDAY (29th).—CHILDHOOD SOCIETY (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Prof. C. S Sherrington: Physiology for Teachers.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr R. Crocker: Consultation. (Skin.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr Ball: Examination of the Throat, Nose, and Ear.

TUESDAY (27th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. S. Taylor: Consultation. (Medical.)

THE HOSPITAL FOR DISEASES OF THE SKIN (Stamford-street, Blackfriars).—5 P.M. Clinical Lecture:—Dr. P. S. Abraham: Vegetable Parasitic Diseases.

WEDNESDAY (28th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. W. B. Cheadle: Consultation. (Pediatrics.) 5-7 P.M. Dr. H. Tilley *Class.* Practical Rhinology and Laryngology.

LONDON THROAT HOSPITAL (204, Gt. Portland street, W.).—5 P.M. Mr. E. B Waggett: Diseases of Accessory Sinuses. (Post-graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Wethered: Cardiac Dilatation.

THURSDAY (29th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street, W.C.).—4 P.M. Mr. Voelcker: Diphtheria.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. Holloway: Diagnosis and Treatment of some Diseases of the External Meatus.

WEST LONDON POST-GRADUATE COURSE (West *London Hospital*, W.).—5 P.M. Dr. Abraham: Some Skin Affections.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Wallis: Surgical Cases. (Post-graduate Course.)

FRIDAY (30th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. StClair Thomson: Consultation. (Throat.)

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Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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The Harveian Lectures

ON

PROGNOSIS AND TREATMENT IN PULMONARY TUBERCULOSIS.

Delivered before the Harveian Society of London on Nov. 1st, 8th, and 15th, 1900,

By ROBERT MAGUIRE, M.D., F.R.C.P. Lond.,

PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, AND PHYSICIAN TO OUT-PATIENTS, ST. MARY'S HOSPITAL.

LECTURE I.

Delivered on Nov. 1st, 1900.

Mr. President and Gentlemen,—I thank you heartily for the honour you have done me in asking me to deliver your annual Harveian Lectures. In choosing a subject for them I could not but be influenced by the methods used by the man whose name you have chosen to designate this society and these lectures. He trusted especially to observation and made theory subservient to this. Bacon's maxim of "Hypotheses non fingo" is said to be wrong, and taken literally no doubt is wrong. Newton, finding, as it is said, his facts after his theories, did good work and his method has been followed by some in our profession with success but only by few. Yet Newton first saw the apple fall before he reasoned from that fact, and therein he followed the Baconian method. Again, let us remember that Newton dealt with very simple sciences—only with astronomy, physics, and chemistry—nature in its normality, however complex that normality may be, and from normalities one may comparatively easily be led to certainties as, indeed, Newton was. We on the other hand have to deal with nature in its abnormality, a vastly more complex science in which theories must be outside our knowledge until facts—much more indefinite than the fall of Newton's apple—are carefully observed. Let us start then by recording our facts in the way Bacon did, in which Newton actually did, though he is said to have pursued another process in his reasoning, and in which Harvey combined the methods of both. Let us only very carefully suggest theories after facts have been well observed and try not to go beyond those facts.

I wish to present to you facts and then conclusions from those facts. Therefore I have chosen a subject upon which I can deal with facts from a somewhat large experience, and can give you the conclusions which I myself have been able to draw from them. Thus I have taken as my subject, Prognosis and Treatment in Pulmonary Tuberculosis, and yet let me at once say that I do not intend to deal with the whole of these subjects. To do so would lead me beyond our three lectures and would cause me to tell you many things which you know already and others which you can just as well read in the text-books or in the journals as you can learn from me. I wish only to give you points which I have learnt myself from experience and to ignore, as far as possible, those which I have learnt from others, as you also can learn them from others. I appeal for my facts especially to the records of the large number of patients intrusted to my care at the Brompton Hospital for Consumption and Diseases of the Chest, in the out-patient department, later to those of the in-patient department, and to others seen elsewhere. Again, I have made use of the records of the post-mortem rooms at the Brompton Hospital, at St. Mary's Hospital, and at the Manchester Royal Infirmary during the periods in which I was pathologist to those several institutions, while finally, I will give you facts from experiments on animals and upon myself mainly relating to a new method of treatment of pulmonary tuberculosis, which will be described in my third lecture. There I will describe how I have taken advantage of Harvey's great discovery, the circulation of the blood, and, as I hope, for practical advantage in the treatment of disease. Such conclusions as I have been able to draw from the facts I will offer for your consideration, but I intend to make no inferences which the facts cannot reasonably warrant.

Prognosis ought to be based upon full diagnosis, that is, not the mere naming of the disease, but a knowledge of its nature and its course, and a power of appreciating the tendency of such course, and of the signs which indicate its progress. Prognosis sometimes seems to come to a man by instinct, or by what my late and most revered master, Sir William Roberts, used to call "clinical acumen." Some men, and only few, have this power, but even such persons it has always appeared to me, arrived at their results from unconscious observation and reasoning. They would tell you that a certain course would be pursued by a certain case of disease and that they did not know why they thought so, yet such men have always had keen observation and, unknown to themselves, have reasoned from observed facts. For the majority of us to trust to any such instinct would be fatal to our conclusions, and we ought therefore carefully to reason only from well-observed facts.

Let us then, apply the method I have mentioned to the prognosis and treatment of pulmonary tuberculosis, understanding by this disease, not all the cases which are vulgarly called 'phthisis' or 'consumption'—though we may by accident occasionally lapse into the use of these terms—but only those affections of the lungs which are accompanied and caused by the presence of the bacillus tuberculosis. And yet let us also remember in estimating our prognosis and in considering our treatment that the tubercle bacillus does not perform its noxious work alone but is aided by at least two other germs, the staphylococcus pyogenes, causing suppuration, and the pneumococcus causing pneumonia, and each, together with the tubercle bacillus causing poisoning of the general system by its own scarcely yet recognised product. We must then consider pulmonary tuberculosis, as seen clinically, to be a product of all these three germs, and we must form our prognostic opinion and our therapeutic methods upon observation of the effects which each or all of these germs has produced upon the lungs or upon the general system at any particular time.

We hear occasionally of a pre-bacillary stage of phthisis. This no doubt exists but with it we have here nothing to do. We have been accustomed also to divide the conditions of pulmonary tuberculosis into three stages according to their clinical manifestations and to speak of (1) consolidation, (2) softening, and (3) cavitation—names useful enough in their way, but conveying not much to the mind beyond the condition of physical signs which causes their discovery.

Let us, for the purpose of prognosis, think again of three stages, similar to those already mentioned but described rather in view of the pathological conditions which we know, or ought to know, are accompanying them, and we may style these stages, in view of the progressive action of the tubercle bacillus and its companions, (1) invasion, (2) progress, and (3) result. In each case we suppose the tubercle bacillus to be the main noxious germ but, except after the quite early period, to be accompanied by the staphylococcus and pneumococcus. Further, the second stage in one part of a lung may undoubtedly be accompanied by the first stage in another neighbouring or remote part and the third stage, "result" or destruction of lung tissue, may be accompanied, similarly, by both the former stages.

Still another factor must be considered in our prognosis and that is the resistance of the lung and general body powers to the invasion of the bacillus—a most important matter, for by it many apparently pneumonic processes may be caused, and these may be not unhealthy but curative—'chemiotaxic,' as they are called.

All these points must be considered in forming a prognosis and we must discuss them in certain of their aspects under these several headings.

And yet still something else must be defined before we approach the subject proper and that is what we ought rightly to understand by prognosis in each of the above stages of the disease. In the first stage, that of invasion, we wish to attain to complete cure of the patient, an absolute arrest of the bacillary invasion and a return of the lung to an entirely normal condition and yet with the same tendency to reinfection which previously existed, a tendency innate in the subject. That tendency having once shown itself, perhaps being recognised for the first time on the outbreak of the lung trouble, may be combated by suitable means but for a long period must remain hanging over the patient. Such is the most favourable result to which we can attain by the use of all remedies at our disposal, and its probability we style a "favourable prognosis."

are the more likely to present latency of the physical signs, which, as I have above pointed out, is of grave significance. On the other hand, the anæmic subjects much more commonly have shown a slow progress of the disease. Yet in estimating the prognosis one must think, too, of the effects of treatment in such cases, and certainly one finds that the florid patients, when once got hold of, are more amenable to the ordinary methods of treatment than are the anæmic ones. To summarise the above remarks I would say that, viewing the much larger number of anæmic than of florid patients who are attacked by pulmonary tuberculosis, the percentage of cures and of slow progress of this disease is very much greater in the anæmic than in the florid. Given that a florid person is really attacked by pulmonary tuberculosis and that this is decided by perfect observation, the prognosis of his case is on the whole more serious than is that of an anæmic person similarly attacked. An explanation of this may be found in a remark of Sir William Broadbent in his book on "The Pulse," that such florid patients are generally the subjects of vaso-motor atony.

Deformity of the chest undoubtedly predisposes to tuberculosis of the lungs, and this, too, whether the deformity be due to simple scoliosis or to kyphosis from pre-existent tuberculosis of the vertebræ. From whatever cause the deformity results, it greatly increases the gravity of the prognosis when once tuberculosis of the lungs has established itself. This has an obvious explanation. The deformity interferes with respiratory movement and hence with the circulation of blood through the lungs. The tubercle bacillus has then a better chance of attacking the lung tissue without the protection of the tissue by a free flow of nutrient blood. The result is almost invariably, as I have found, a rapid destruction of lung tissue and also an even more rapid decrease of the body powers consequent upon the general feeble vitality. The prognosis is bad. Such deformity of the chest is often, as I have mentioned, due to an actual tuberculous disease of the vertebræ, and this leads one naturally to the consideration of other pre-existent tuberculous affections, and especially to the prognosis of tuberculosis of the lungs following and accompanied by tuberculosis of the lymphatic glands. Before the nature of the pathological process in such glands was accurately known the condition was described as the scrofulous diathesis, and undoubtedly the patients who suffer from it constitute a group differing greatly in many points from those whose lungs are affected at the beginning of their disorder. What is the essential difference between these two rough groups I do not know, but that there is such difference I am well aware of. The danger to a patient of possessing such tuberculous glands is certain. Nevertheless, judging from my own experience, I must say that the progress of a pulmonary tuberculosis secondary to a pre-existent glandular affection is much slower and consequently more favourable than when the lung tissue is primarily invaded. The glands, we know, form a resting-place for the tuberculous poison, a resting-place fairly well cut off from the rest of the body by hardened inflamed tissue, and, still more important for the purpose of prognosis, a resting-place which can often be easily removed together with its contained poison. The surgeons now deal freely with such glands, and absolute ablation is the best remedy for them. The possibility of this greatly increases the probability of cure of any lung affection which may accompany them. They can also be removed by other means, but, to trench upon the subject of my later lectures, let me at once say that nothing can be worse for the future of the patient than the so-called dispersal of such glands by painting with *iodine* or *rubbing with iodide* liniments. The glands then may disappear, it is true, but very frequently only to spread their contained poison elsewhere in the body and to increase any lung trouble which may exist. I shall eventually have to mention how such glands can safely be dispersed, and in a marvellous manner, by the administration of nuclein by the mouth, and then without such bad effects as I have mentioned. But the presence of such glands seems to me to be, on the whole, a favourable element in the prognosis of a tuberculous lung affection in that they can be usually easily removed, that their removal takes away an important focus of tuberculous poison and leaves the lung tissue unhampered in its efforts to fight the bacillus, and, lastly, that the diathesis, if we must call it so, which is displayed by such lymphatic tuberculosis, is generally combined with a similarly slow process of tuberculosis in the lungs.

Time will not allow me to do more than merely hint at the influence of the presence of lymphadenomatous glands and also of lymphadenomatous and malignant disease of other structures upon the progress of a tuberculous disease of the lungs. Suffice it to say that the combination is uncommon and the gravity of the more or less malignant disease entirely overshadows that of the tuberculosis. The connexion of the two series of disorders, uncommon as it is, is extremely interesting, and the out-patient department and also the post-mortem room at Brompton Hospital have given me matter which might well be discussed, but almost entirely from the pathological and not from the clinical standpoint. Again, too, I will not deal here with the co-occurrence of cardiac disease and tuberculosis of the lungs, or their mutual affection of the prognosis, for this has been treated very fully by others.

But amongst the most important disorders (from the prognostic point of view) which may precede an outbreak of tuberculosis of the lungs are pleurisy, serous or purulent, and pneumonia. I have already mentioned how serious is the outlook when pulmonary tuberculosis first shows itself by the presence of scattered patches of pleurisy. I do not wish to refer here to this particular form of outbreak, but to those cases in which a pleurisy, generally with effusion, precedes the onset of the tuberculosis. It is, nevertheless, remarkable how often, judging from the results of many observers, an apparently simple pleurisy with effusion is really tuberculous in nature, as evidenced by the finding of tubercle bacilli in the exuded fluid. Yet we know very well how comparatively seldom such a pleurisy with effusion is followed by more general pulmonary tuberculosis, and I would especially call your attention to this fact as giving ground for the belief that simple pleurisy with effusion need not necessarily bear with it a bad prognosis for a tuberculous subject. Undoubtedly, a pleural effusion, not previously ascertained to be tuberculous, is in some instances followed by an outbreak of tuberculosis in the apex of the lung of the same side, and probably this is due to malnutrition of the lung consequent upon its disordered circulation. But from actual observation I can say that such outbreaks of tuberculosis are rarely so serious in their actual attack or in their further progress as those which have not been preceded by such an effusion. Again, departing somewhat from our order of discussion, I will mention here that the occurrence of pleural effusion in the course of a pulmonary tuberculosis, and especially in the stage of invasion, seems to be actually of benefit if only that effusion be not removed. It is well known at the Brompton Hospital that a simple pleural effusion in a tuberculous patient is best left alone if it does not seem to be unduly hampering the respiratory apparatus, and a probable explanation of this fact I will give under the head of Treatment.

When the pleuritic fluid is not serous but purulent, when, in fact, an empyema has occurred and has been removed by operation, it is again remarkable how seldom this is followed by pulmonary tuberculosis if we take account of the large number of cases of empyema which come under treatment and are permanently cured. Yet when tuberculosis does break out after empyema its course is usually rapidly fatal, a result which one might expect from the fact that the original empyema is itself the result of a very low vitality, and this will of course have its due influence upon a following tuberculosis.

Pneumonia is an essential element of pulmonary tuberculous outbreaks, and, indeed, gives rise to nearly all the physical signs from which we form our diagnosis. But we at this point must deal with pneumonia as a precedent of the outbreak—a pneumonia not of itself tuberculous, but occurring in a person predisposed to tuberculosis. I am not much afraid of a tuberculosis of the lung which follows upon an ordinary croupous pneumonia. But I must be careful here to make myself perfectly understood. I am speaking of the prognosis of the tuberculosis and not of that of the pneumonia. Naturally, tuberculosis is a danger to a person who is suffering from croupous pneumonia and its possible outbreak greatly increases the gravity of the prognosis of the pneumonia. But I think the previous existence of a simple croupous pneumonia does not materially affect the prognosis of a consequent tuberculosis. Most croupous pneumonias affect the base of the lung and tuberculosis consequent to them is, as I have already stated, not only rare, but slow in progress. Pneumonia affecting the apex of the lung, beginning in the ordinary turbulent way of the croupous affection and not initially tuberculous, if it does not cause immediate death, is generally followed by complete resolution of the lung, and, indeed, more frequently and completely than the same affection of the base. The pneumonias of the base which are followed by tuberculosis of the same part are much more frequently found in children, and for this reason, too, the prognosis is the more favourable.

I would say a few words about tuberculosis of the urinary organs followed by tuberculosis of the lungs. 'It is curious that urinary tuberculosis, beginning as such should remain for so long a time—and this is a fact in its history—located to the urinary organs alone.' This seems to be the case, no matter where such urinary tuberculosis first shows itself, whether in the kidney, the ureter, the bladder, the urethra, or the *vesiculæ seminales*. Probably, it seems to me, the reason can be found in the fact that the urinary organs are mostly developed from a different embryonic layer than are the lungs and most other of the internal organs. Yet towards the end of such cases one does meet with pulmonary tuberculosis. Invariably, I have found that the lung trouble plays only a very minor part in causing the end of the patient—the pulmonary tuberculosis, as such, bears a favourable prognosis. Unfortunately, this is of not much benefit to the patient, for by the time the lung trouble has developed his condition is otherwise hopeless.

My out-patient records afford some evidence too of the effect on prognosis of previous tuberculous disease of the lungs in the same family, though let me say that I inquired only into the history of father, mother, brothers, and sisters. Incidentally they indicate how rarely such tuberculous family history could be obtained if we take into account the large number of tuberculous cases included in the records. This supports the view held by modern hygienists that heredity does not play so important a rôle in the causation of tuberculosis as does actual infection. Yet the influence of such hereditary tendency can by no means be ignored, for I find that whenever present it very seriously affected the gravity of the case.

Another point, too, which crops up in the examination of this long series of cases is that but few of the patients affected by tuberculosis led open-air lives, and although I cannot actually bring statistics forward to prove this point, yet it was my impression that those exposed to inclemencies of weather, such as navvies, bricklayers, and so on, did far better than did those who had the opportunity for keeping indoors. I lay, however, but little stress upon this observation, for obviously such as had those occupations were the more robust of the patients. And in contradiction to the apparent conclusion let me say that a certain number of my patients were Polish Jew tailors from the East-end, nearly all of them in a terrible condition of poverty and dirt, and living, as we know, with the most frightful unhygienic surroundings. Only few of these had tuberculous affections, but they suffered greatly from bronchitic and other catarrhs.

A Clinical Lecture

ON

THE TREATMENT OF CERTAIN CHRONIC ABSCESSES BY SIMPLE ASPIRATION.

Delivered at St. George's Hospital on June 19th, 1900,

BY WILLIAM H. BENNETT, F.R.C.S. ENG.,
SENIOR SURGEON TO THE HOSPITAL; MEMBER OF THE COURT OF EXAMINERS, ROYAL COLLEGE OF SURGEONS OF ENGLAND, ETC.

GENTLEMEN,—In advanced days like the present a surgeon who deliberately recommends the use of a treatment which is commonly considered old-fashioned or out of date necessarily places himself in a somewhat dangerous position, since he is liable to be thought either to have lost touch with the spirit of the times or to lack energy and resource to keep abreast with the progress of recent affairs. For my own part, however, I am sure that with an audience like the present, well acquainted with my ordinary practice, I run no risk on this account, and if I run any such risk with others less familiar with me I am content to accept it, because I believe it is only by the record of long personal experience that the value of any treatment, whether new or old, can be properly estimated. Further, it must be remembered that some old-fashioned methods in surgery which failed to achieve ends which would now be considered good, under our present system of cleanliness effect results which, if not ideal, are at least extremely satisfactory. My purpose to-day, then, is to call your attention to one of these old-fashioned methods—viz., the treatment of certain chronic tuberculous abscesses by *simple aspiration*.

Thirty years ago or thereabouts the aspiration of abscesses was a very common method of treatment. At that time the antiseptic system, although spoken of, had not come into vogue and the practice which we now adopt of immediately treating almost every abscess which comes under observation by free incision did not hold good, because treatment in that way was generally followed, at all events in large abscesses, by extremely high reactionary fever, septicæmia, or pyæmia, so that no prudent surgeon as a general routine would have adopted the treatment. Hence it came about, especially in psoas abscess and in abscesses about the hip joint in connexion with tuberculous disease, that the alternatives presenting themselves to the majority of surgeons at that time were aspiration, opening by a small incision, or allowing the abscess to burst. To those of you who do not know the state of surgical treatment in those times it may sound strange to hear that patients with abscesses about the hip, with psoas abscess, or with large collections of pus in other parts would sometimes be allowed to lie in bed for months waiting for the abscesses to burst. Finally, during some night or day (it was generally at night) the abscess would burst and the bed and the patient would be flooded with pus. That was not an uncommon treatment by some surgeons of such chronic abscesses connected with bone disease, especially of the hip and spine. Mr. (afterwards Sir) Prescott Hewitt, who was then senior surgeon to St. George's Hospital, had quite a reputation in the treatment of abscesses of this kind. He almost invariably allowed them to burst and, speaking generally, his cases progressed more favourably than was the average at that time. I have said that the reason that these abscesses were allowed to burst was that if they were incised severe septic fever nearly always followed, the majority of patients dying ultimately from "hectic fever," or from some other form of blood-poisoning the result of septic absorption. It was supposed that the patients in whom the abscesses were incised did so badly because the fresh cut surfaces made by the knife afforded an easy means of entry for the poison into the blood. It was said, on the other hand, that if the abscess was allowed to burst the vessels, mainly the veins, by which the poison entered the blood were sealed in the process and so blood-poisoning was less likely to occur. By many surgeons, therefore, these abscesses were allowed to burst, and those which burst certainly, as a rule, did better than those which were opened. This method was, however, always a very unpleasant and frequently an unsatisfactory one. In consequence aspiration—i.e., the emptying of these abscesses by successive tappings with the aspirator—became a common practice. The aspirator in its present form is not a very ancient instrument—indeed, it was first brought into use at this hospital about the time when I was house surgeon, from 1874 to 1875. Before that time the aspirator as you now see it was practically unknown. At that period, although it was before the antiseptic era, surgeons had learned to realise the fact that if a cavity in the body containing fluid could be emptied without admitting external air the results were generally better than when the external air entered the cavity; in other words, that a large number of abscesses which were treated by aspiration, even if they were not cured, became by degrees very much smaller without any constitutional disturbance, so that an abscess (psoas, for example) which originally might have contained a couple of quarts of pus would dwindle down, after successive aspirations, until it was hardly perceptible. Hence aspiration was not only useful because it sometimes led to the complete cure of an abscess, but also because, failing a cure, it was obviously more satisfactory to open an abscess containing a very small amount than one containing several quarts of fluid. Unfortunately, however, these good results were not the rule, for it was frequently found that "suppurative fever" followed aspiration necessitating the free opening of the abscess—a treatment which more commonly than not in large abscesses, like those associated with disease of the spine or hip, finally ended in death from pyæmia or septicæmia. That this should have been so is not remarkable, as no adequate cleansing of instruments at that time was used.

I have, indeed, seen the aspirator needle taken from one abscess and almost directly, without a more thorough cleansing than a dip in cold water and a rub with a towel, plunged into another patient. In spite of these results, however, the aspirator was then looked upon by many surgeons as better than the knife.

In these days of well-understood surgical cleanliness there is, of course, no reason why the introduction of a properly sterilised needle or trocar into an abscess should be followed by any harm at all. Speaking generally, there is no doubt that the best treatment for chronic tuberculous abscesses is free incision and scraping followed by immediate suturing of the wound, or drainage, as the case may be; but it is extremely difficult to insist with safety upon the use of a routine method of this kind under all circumstances, and there is, I fancy, hardly a single well-tried routine method which is not sometimes amenable to modification with advantage. I think that if you consider for a moment the position of some practitioners and the conditions in which they have to practise their profession you will see that it cannot always be to the advantage of the patient or of the practitioner that chronic abscesses of large size—say, for example, of the thigh—requiring an incision of perhaps six or eight inches in length, in order that their contents may be thoroughly scraped away, should be dealt with in this manner. Conceive yourselves for a moment in the position of a practitioner working amongst poor people setting about a case of this kind in squalid insanitary surroundings with inadequate means for obtaining asepsis and all the difficulties with regard to dressings and time which must frequently arise under such circumstances. A moment's reflection will show that, however safe the radical treatment may be with those who have all the appliances and advantages which a great hospital like this provides, it cannot be undertaken with anything like the same chances of success by practitioners working under the condition just indicated. To such the aspirator is an instrument of the greatest value. The following cases will serve to illustrate the occasional advantages of this method of treatment.

CASE 1.—There is now a female patient in the Wellington Ward of this hospital, aged 26 or 27 years, whom I have treated in the way I have described. Some years ago she suffered from acute hip disease of tuberculous origin; ankylosis followed upon the usual treatment, and, the limb being in a good position, she could walk well, but of course she limped considerably. Unfortunately, she was not content with her condition. She resented the stiffness of the hip and longed for some power of movement in it. She therefore sought advice with a view to getting the movement which she so much desired. The result was, it appears, that an anæsthetic was given to the patient and the joint was freely broken down. The effect of that procedure was to give her some mobility for the time being which, of course, pleased her much. But the effect, also, after a little time, led to the formation of an abscess round the hip—a "quiet" abscess, which caused little pain but rapidly increased in size. On her admission she was in a very delicate state; she was feeble and very nervous and excitable. The temperature was normal and there was little, if any, pain. Over the left hip joint was an abscess which extended from the anterior superior spine of the ilium downwards to within three and a half inches of the knee, involving about one-half the circumference of the thigh. Some treatment was urgently called for and the question arose as to the best method to pursue. As I have already said, the patient was very delicate. The abscess was very large, but there was no high temperature or anything to show that there was acute inflammation proceeding, but there was this growing collection of fluid. The ordinary treatment would obviously have been to lay the abscess open from end to end and to scrape it freely out, but this would have necessitated an incision from the anterior superior spine of the ilium to within about four inches, or at all events to within five inches, of the knee joint—a very extensive operation for a patient in her condition. There came, therefore, the question whether there was any milder plan which could be adopted, at all events temporarily—some treatment which would not at the time subject her to the same danger as would be run in the very free laying open and scraping of this great cavity. Here, it seemed to me, was an opportunity to try the alternative which I mentioned just now—namely, aspiration. I can well imagine some of my more energetic juniors thinking it hardly conceivable that any up-to-date or possibly even any competent surgeon could recommend such a proceeding in the present day. Nevertheless my experience told me that its trial in this case was right and so we adopted it. What has been the result? I tapped the abscess with the aspirator, and on the first occasion we drew off a very large quantity of fluid which was allowed to flow freely until it had become slightly blood-stained, when the trocar was withdrawn, the small opening made by it being sealed with collodion. After the withdrawal of this fluid there was very little evidence of the existence of the abscess at all, except that the side of the thigh was flabby and somewhat puffy. The sense of fluctuation and all the other signs of an abscess had disappeared. In the course of a fortnight the abscess had filled again to half its former capacity. It was tapped again, and this time very much less fluid was drawn away. We tapped it a third time and, later, a fourth time, at intervals of 10 days and a fortnight. After the fourth aspiration no fluid could be got to flow through the cannula and there remained a doughy tumour on the outer side of the thigh not more than a quarter of the size of the original abscess. I concluded therefore that in the course of our tappings we had withdrawn practically the whole fluid contents of the abscess. What was left was granulation and fibrous tissue around the abscess cavity. Having got to this stage I have no doubt that if we could have afforded to keep the patient in the hospital long enough, and if she had been content to wait, the process of inspissation would have taken place, and that in all probability the abscess would have dried up altogether without any further interference from the surgical point of view. Time, however, especially in these hospital cases, is of value, and as I thought that we could now deal with the abscess through an opening about one-third of the size of that which would have been required in the first instance I laid the cavity open by this comparatively small incision and cleared out what was left of the abscess contents. Upon opening the cavity there was a little oily fluid, but very little, and in fact the whole operation was more like the removal of a soft solid tumour than like dealing with an abscess. The cavity had contracted down to a great extent until it was less than one-third of its original size when the patient was admitted to the hospital.

As you have without doubt noticed, this is not a case which illustrates the *cure* of an abscess by aspiration, and on this account I have taken it as my first illustrative case because it shows very well how, under certain circumstances, if you choose to use this treatment discreetly the radical operation may be reduced from a measure of great severity to one of comparative slightness, a very important matter to a patient in the condition of this woman.

The following is an instance showing how a complete cure is sometimes brought about by this treatment.

CASE 2.—The patient was a very busy man, who was not only much occupied at home but was constantly travelling over all parts of Europe on affairs of business. He had hip disease when he was a boy. He is now approaching 50 years of age. The hip disease was followed by firm fibrous ankylosis in a position which at first was not good. The faulty position was, however, rectified later by tenotomy (about 22 years ago). I remember the details of his case well, because I gave the anæsthetic at the time of the performance of the operation. I saw nothing of the patient after this until about a year ago; there was therefore an interval of more than 20 years between the time when I gave him the anæsthetic and the time of my seeing him the other day. He had been perfectly well in the meantime but about a year ago he began to feel a little discontented because he felt a band at the inner aspect of the hip which seemed to drag a little at times. Being a man of a mechanical turn of mind he naturally argued that if that band were divided he would be very much more comfortable, and, further, he thought that he would get a little more movement in the hip, so he came to me with a view of having this band divided. (In passing, I would ask you to bear in mind what happened to the patient whose case I have just described. She was not content with the position of her limb, and although she had a perfectly sound stiff hip she wanted movement. The hip was broken down and freer movement followed for a time—at the cost, however, of the development of the large abscess on account of which she came to the hospital. Now, if there is one thing more important than any other which you must bear in mind in all cases of tuberculous disease affecting joints, I do not care what the joint is, it is this: ankylosis having become firm, although all signs of active disease may have been gone for years, it is a dangerous thing, speaking generally, to attempt to get a moveable joint in such cases by breaking down or otherwise interfering with the actual line of union. In almost all tuberculous cases which heal in this way there is left a certain amount of what may be called latent tubercle; I mean little caseating masses which, if they are disturbed, will, as often as not, lead to the lighting up of fresh disease, ending in the formation of these abscesses which are so frequently seen in tuberculous joints which are interfered with in this fashion. There is no condition, I suppose, to which the old motto, "Let sleeping dogs lie," applies with more force than "quiet" or "cured" tubercle. Never disturb quiescent tubercle if you can help it. An excellent warning of the same kind has occurred in this hospital in the case of a boy on whom I operated to-day for tuberculous peritonitis. He came to the hospital some few weeks since with inguinal hernia which required operation. At the time of the operation upon the hernia a caseous mass was revealed in the cord adherent to the back of the sac. As a matter of necessity the mass had to be removed. It was latent caseating tubercle—"cured" tubercle, in fact. Although the little fellow was perfectly well previously in general health as far as he knew and as far as we could see, except that he had rather a large abdomen, almost before the wound of his hernia had healed he developed rapid tuberculous peritonitis. My belief is that if the latent nodule of tubercle in this case could have been left without interference at the operation I should not have had to operate on the boy this morning for tuberculous peritonitis. The stirring up of the quiet focus started a fresh tuberculous invasion. I mention this case with the other because it shows so well the danger of disturbing quiet tuberculous conditions.) Returning to the case of the patient whom I was describing you will remember that the tense band of which he complained was a source of great annoyance to him; nevertheless, nothing would induce me to interfere with it because of the danger which I believed would be run in the proceeding of lighting up anew quiescent disease. Moreover, I was by no means sure that the recent sense of irritation was not already due to a recrudescence of the old disease in a small way. This suspicion of mine was subsequently justified, for about eight months afterwards the patient came to me again, rather satisfied with his condition because he found that he had a little more movement than before. He stated that he had been "working away at the band" as much as he could, and he demonstrated with some satisfaction the progress which he had made towards increasing the movement at the hip. "In addition to this," he said, "the muscles about the outer side of the hip are really getting quite full and hard." I examined the parts: there was certainly a little more movement at the hip, but the "hard muscles" thought to be felt were in reality the swelling of an abscess. In fact, a large abscess had developed which was so quiet in its progress that the patient was unconscious of its formation. It extended completely across the thigh just below the hip, so that percussion on the outer side of the thigh conveyed a distinct sense of fluctuation to the finger placed on the inner side. It was most important in this instance that the patient should not be laid up. I gave him my opinion of the case, at which he was naturally disheartened. I also told him what the ordinary treatment would be. Under the circumstances in which he was placed, which were such as to make laying up at that time almost impossible, although it was plain that something must be done, it was at the same time manifest that to open an abscess containing at least a pint or a pint and a half of pus, the patient at the same time being able to continue his occupation, was quite out of the question. I therefore treated the abscess by aspiration. At the first tapping one and a half pints of pus were drawn off. A fortnight later, the abscess having re-filled to half its former size I tapped again. At various intervals I emptied the abscess five times, never allowing it to attain more than half the size which it had reached at the previous tapping; at the last tapping only three or four drachms of pus could be withdrawn. That is now some seven weeks ago. There has been no reappearance of the abscess, the patient is absolutely well, and at the present time there is not the least indication of an abscess having existed. The treatment, extending over about three months, was carried out without interrupting his work for a day. There is no other plan which, so far as I know, could produce such a result with so little inconvenience and trouble to the patient.

CASE 3.—The patient, a female, 27 years of age, noticed a gradual enlargement of the left hip for which she could not account. No injury had been received and she was, so far as she knew, in perfect health. The enlargement by degrees assumed the character of a distinct tumour about which she did not much concern herself until an aching pain was habitually felt after a long day of standing or other exertion. As this pain increased steadily she sought advice. Upon examination she appeared to be a strong and healthy young woman. The left hip was enlarged; above and around the trochanteric region there was a well-marked tumour which upon inspection only was suggestive of a lipoma. Upon palpation, however, fluctuation was easily detected and the condition was obviously a chronic abscess. The hip-joint was healthy and no cause for the disease was apparent. The usual treatment by free incision was advised, but to this she would not consent until all other plans had failed, as the laying up which would have been necessary was, under the circumstances in which she was placed, a very serious matter. I therefore thought it worth while to try the aspiration treatment. At the first tapping about two pints of laudable pus were removed. In a fortnight, the abscess having become again half full, it was emptied; ten days later a third aspiration was made; and three weeks after this a final tapping removed about three ounces of pus. No further accumulation occurred and two months later nothing abnormal beyond a slight induration above the trochanter could be detected. When last heard of, eight months after the first tapping, the patient was perfectly well in all respects. Although I could quote other instances, several being cases of psoas abscess, which have been cured by aspiration in the manner which I have described those already mentioned are, I think, sufficient by way of illustration.

I have no desire that you should for one moment suppose that I recommend the adoption of aspiration as a routine method in cases like those described, or that in a general way I think it should supplant other more radical plans. All I wish you to understand is that certain cases of large chronic tuberculous abscesses can be cured in this way, and some, although a cure may not follow the method, may be so modified that the operation finally necessary for their treatment becomes comparatively slight. In abscesses arising from tuberculous disease of lymphatic glands aspiration is not to be recommended under any circumstances, judging, at least, from my own experience, for although I have in this way cured abscesses connected with tuberculous bone disease, &c., I have never, to the best of my belief, effected a cure by the method in lymphatic gland disease. With regard to the details of the treatment there is little to be said. Absolute surgical cleanliness must, of course, be observed in the preparation of the part to be operated upon and in the condition of the instruments. After this the essential points are (1) to be careful to cease to withdraw the abscess contents the moment any sign of blood shows itself in them; and (2) not to allow the abscess to regain more than half its former size before aspirating again. This applies not only to the original tapping but also to the recurrent ones. The more slowly the fluid is withdrawn the better.

It may, perhaps, be new to some of you to hear that very large abscesses, especially of the "psoas" kind, sometimes disappear spontaneously. In these days it is unlikely that you may have the chance of seeing any case of the sort, but in former times, when patients suffering from psoas and other large chronic tuberculous abscesses were kept lying on their backs for many weeks or months without any active measures being taken, it was not regarded as a remarkable thing for an abscess to dry up ("inspissate" was the term used) and disappear. Four or five years ago I had a patient in the Grosvenor Ward in this hospital in whom a large psoas abscess, just as we were about to open it, commenced to diminish and finally disappeared. I have already mentioned this case when lecturing. The patient was a man with a well-marked angular curvature; he is, I believe, at the present time following his occupation. This is the most recent case which has come under my immediate observation. I have, however, a vivid recollection of a case of psoas abscess occurring in the practice of a late colleague of mine in which radical interference was strongly urged but declined by the patient's friends, in spite of the gloomy possibilities which were held out for their contemplation if matters were allowed to take their course. The case, however, although tedious, proved uneventful, for in the course of six months gradual diminution, and finally entire disappearance of the abscess, followed—a result which was claimed as a supreme triumph for domestic surgery. It may be pardonable to remind you that the spontaneous disappearance of abscesses is brought about by the gradual absorption of the fluid contents leading to inspissation; the treatment by aspiration imitates this sometimes natural process and is therefore based upon perfectly rational grounds.

You have without doubt noticed that I have spoken only of simple aspiration without the injection of iodoform or any other germicide. In the commonly used text-books and in other places will be found recommendations, sometimes very strong, for the use of iodoform injections, mainly in the form of emulsion, in all tuberculous abscesses. A fair trial of the drug in this relation led me some time since to the conclusion that no obvious advantage arises from its use. Indeed, I am one of those who rarely use iodoform for any purpose. In operative work I never use it—a fact which is familiar to those who have seen anything of my practice. It may, indeed, be known to some of you that my first admonitions to a house surgeon coming freshly to my work are that he shall be careful about absolute cleanliness and that the use of iodoform shall not be a routine treatment with him. For my own part, I feel bound to say that although I have seen harm come from the use of the drug I have never seen it effect any advantage worthy of mention in operations in any part of the body. In certain stinking or phagedænic sores of a venereal sort it may at times be used with benefit, but in operative work properly conducted it is, in my belief, valueless. On the other hand, I have seen undoubted instances of poisoning from it, and I have seen cases in which, to the best of my judgment, grave complications have arisen solely in consequence of the employment of iodoform. The indiscriminate use of the drug has without doubt vastly diminished of late, but even now by some surgeons, operations, however clean, are rarely completed without its application. For example, the wound in the abdomen after the removal of an appendix during the quiet stage is by some filled with iodoform; the wound resulting from the removal of a breast is frequently freely dusted with it; and I have actually seen the drug freely sprinkled over the parts after an operation for hare-lip. Personally I find it difficult to understand why a drug the germicidal qualities of which cannot be trusted until it has been sterilised in order to kill its own peculiar micro-organisms should be accorded a respect which with some of us exalts it almost to the position of a fetish. Of the evil effects of the drug I could give you sufficient examples were not the matter beyond the scope of the present lecture.

Returning to the main subject which is before us, let me repeat that I wish it to be distinctly understood that I have no desire to advocate the indiscriminate use of aspiration in chronic abscess to the exclusion of the more scientific treatment by free incision and scraping. All that I am anxious to do is to point out that aspiration, in the manner which I have indicated, offers a means of dealing with certain chronic abscesses, especially of the "residual" kind, which can be with safety carried out when the treatment by incision and scraping from the circumstances of the patient, and possibly of the practitioner, is extremely undesirable, if not actually dangerous; and further, that in many cases the aspiration treatment can be adopted without interfering with the patient's ordinary vocation for a single day—an advantage the importance of which in some cases can hardly be over-rated. It is, moreover, a method which offers but trifling difficulty in the matter of sterilisation and needs no complicated dressings or other troublesome details—facts which to those who have to practise, as some of you may have to do, in circumstances of difficulty in the matter of antiseptics and of hygiene, must be of great moment. In this respect it may not be amiss to remind you that it is impossible for all of us, much as we may desire to do so, to practise amongst the wealthy and in the advantageous conditions which can be afforded by riches, or to have at hand the means which are available in a great general hospital like this. To those whose practice lies in the less advantageous circumstances I can with confidence recommend the method as one which, although it may be "old-fashioned," may be used with safety when more radical means are so difficult as to be almost impossible with due regard to the patient's welfare; and further, I am sure, no matter what the facilities of the practitioner may be, that there are many cases of the kind of which I have been speaking in which the use of the aspirator with discrimination may prove of incalculable advantage.

ON A METHOD OF MEASURING THE BACTERICIDAL POWER OF THE BLOOD FOR CLINICAL AND EXPERIMENTAL USES.

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WHATEVER may be the exact rôle played by the bactericidal substances of the blood and lymph in connexion with the destruction of bacteria in the animal organism there can be no doubt as to the important influence which these substances must exert. The quantitative study of the variations in the bactericidal power may therefore serve quite well to elucidate many pressing questions. In the first place, it may furnish valuable data upon which to base a diagnosis and prognosis in cases of specific fever. Again, the quantitative study of the alterations in the bactericidal power of blood which are produced by the addition to that blood (*in vitro* or *in vivo*) of a particular "therapeutic serum" may quite well yield important information with regard to the utility or otherwise of the particular "remedial agent" in question. Furthermore, in the case of animals inoculated with particular bacterial vaccines, a comparison of the bactericidal power of their blood subsequent to inoculation with the bactericidal power of the blood anterior to inoculation may quite well afford valuable indications as to the presence or otherwise in the bacterial vaccines in question of the immunising substances which are desired. Again, quantitative estimations of the bactericidal powers of the blood of normal persons and of persons who have been inoculated with bacterial vaccines may quite well furnish important indications, in the first case as to the expediency of inoculation, and in the latter case as to the successful issue, or otherwise, of the inoculation. Lastly, by means of quantitative estimations of bactericidal power many theoretically important questions may be resolved. Among these may be mentioned the question as to the co-existence and inter-relation between the agglutinating and bactericidal powers of the blood. Without in any way undervaluing the important results already obtained by the initiating work of Buchner, it will be manifest that the investigation of most of these questions has hardly as yet been entered upon. It has been retarded by the fact that the technical methods which have been hitherto employed have necessitated the employment of relatively considerable quantities of blood, and have, in the case of agglutinating bloods, been associated with a serious source of fallacy, arising from the fact that the bacteria, which would normally be separately disposed, are under the influence of such bloods agglutinated together, with the result that the individual colonies which develop on the nutrient medium may be the outcome, not of a single surviving bacillus, but of a whole group of surviving bacilli. By means of the technique described below the sources of difficulty and error, which have been referred to above, can be effectually and, it seems to me, easily disposed of. The method is also a comparatively rapid one, it being possible, after practice has been acquired, to carry out about four quantitative determinations in the hour.

The principle of the method.—With a view of determining in a quantitative manner the bactericidal power of the blood measured volumes of serum and of graduated dilutions of serum are introduced into a series of "capillary cultivation tubes," along with a series of equal volumes of a gelatin culture containing an appropriate number of bacteria. Mixture of the contents of the serum and culture is then effected in the capillary tube. It will be noticed that by this arrangement the serum comes in contact with the bacteria only after these have been suspended in a fluid which is sufficiently viscid to make it impossible for them to come together into groups. After the gelatin has solidified the tubes are incubated for a period of two or more days. The number of colonies of the specific organism which develop is then elicited by counting under a microscope, the results of the enumeration being in each case compared with the results of the enumeration of the colonies in a series of control tubes filled with an equal volume of the gelatin culture duly diluted with an indifferent diluting fluid.

It will be convenient to begin the description of procedure by considering how the desired dilutions of the blood are made and the desired quantities of bacterial culture and serum are measured out. For these purposes it is convenient to make, as can readily be done by the following method, an accurately graduated capillary pipette.

Method adopted for dividing an ordinary capillary glass tube so as to make a graduated capillary pipette.—A piece of ordinary glass tubing of about a quarter of an inch (roughly 0·6 centimetre) in diameter is drawn out in the middle into a capillary tube of an approximate diameter of from $\frac{1}{60}$th to $\frac{1}{100}$th of an inch (from 0·4 to 0·25 millimetre). Before the glass has quite cooled the capillary end of the tube is bent round so as to make a right angle with the wider portion of the tube. *This done a stout glass capillary pipette, such as* the five cubic millimetre pipette, which is supplied with Gowers's hæmocytometer, is taken and filled in up to the calibration mark with a solution of eosin or other coloured fluid. The extremity of the ungraduated thin-walled capillary tube which is to be calibrated is now broken off and the tip of the stout glass capillary pipette is brought into apposition *with the broken end, this last* being during the operation held vertically upwards. By gentle blowing the measured volume of coloured fluid is now transferred to the ungraduated thin-walled capillary tube. The transference of the coloured fluid in an unbroken column can be effected without difficulty provided that the end of the thin-walled capillary tube has been broken off in an accurately transverse direction, so as to make it impossible for bubbles of air to be sucked into the orifice.

When the measured volume has been transferred without loss and in unbroken column into the capillary tube, the point of this latter is held downwards in such a manner as to allow the fluid to flow back to the point. A mark with a coloured wax pencil is then placed on the capillary stem to indicate the upper limit now attained by the coloured fluid. After the first division has been thus placed upon the tube the further calibration is undertaken in the following way. The point of the tube is again raised in such a manner as to allow the column of fluid to run back from the point until the distal end of the column of fluid corresponds with the division mark which has been placed on the tube. The point where the second division is to be placed on the tube is now manifestly indicated by the proximal end of the column of coloured fluid. Two divisions having been placed on the tube with a view to obviate, so far as possible, a progressive loss of fluid by adhesion to the walls of the tube, sufficient additional coloured fluid is introduced to fill the tube up to the second division. This done, the point of the tube is again raised and the fluid is allowed to flow back from the point until its distal limit is in apposition with the first division. The proximal end of the column of fluid will now indicate the place where the third division ought to fall. Proceeding in the same way—the next time filling in the tube up to the third division with coloured fluid—the fourth division mark can be placed on the stem of the capillary tube. A fifth and subsequent divisions if desired can be obtained in a similar manner. For the purposes of the method which is to be described below it will, when operating with an original volume of five cubic millimetres, be convenient to place only three marks on the tube in the manner indicated and then by a subsequent operation to subdivide each of these divisions into two equal subdivisions.

The process of subdivision in question is very simply achieved by the following system of trial and error. The first step is to guess the point on the tube where the first subdivision mark ought to be placed. This point may conveniently be indicated by a light pencil mark. This done, the coloured fluid is filled in up to this tentative subdivision mark. By tilting the tube the column of fluid is now allowed to run down from the point until its proximal end just touches the first of the original (five cubic millimetre) division marks. If it is now found that the distal end of the column corresponds accurately with the tentative subdivision mark this mark will manifestly have been placed exactly at the proper point. If, on the other hand, the distal end of the column of coloured fluid now overlaps or falls short of the tentative subdivision mark, a second light mark is to be placed on the tube to indicate the point upon which that distal end falls. The true point of bisection will now fall on a point of the stem midway between these two light marks. Having by the above procedure found the point corresponding to half the volume originally taken—in other words, to 2·5 cubic millimetres—the points corresponding with one and a half and two and a half volumes respectively are easily found by a procedure exactly identical with that described in placing the original, five cubic millimetre, division marks upon the capillary stem.

It is to be noted that it is not essential that the tubes should be graduated in terms of 2·5 cubic millimetres, or indeed of any definitely known measure; it will suffice for almost all purposes if the capillary stem is divided into equal arbitrary divisions by the method described in the paragraph last but one above. At the same time the calibration in terms of 2·5 cubic millimetres is convenient as giving definite indications of the actual quantities of bacterial culture and serum actually employed.

Method for obtaining the fresh serum required for the estimation.—The next point to consider is the method of obtaining blood serum for examination. Blood may be conveniently obtained from a prick in the finger and may be filled into blood capsules of the pattern elsewhere figured by me.[1] The blood capsule is, in accordance with a suggestion received from Major W. B. Leishman, R.A.M.C., introduced into a small hand centrifugal machine as soon as the blood has clotted. A clear serum is thus readily obtained within a few minutes after drawing off the blood.

Preparation of the bacterial culture employed in measuring the bactericidal power of the blood.—It will suffice under this heading to give indications as to how the bacterial culture is prepared in the case of the bacillus typhosus. The simplest method of operating is here to make a superficial stab into a gelatin tube (inoculating for this purpose from a broth cultivation) and to incubate this for from 12 to 18 hours at a temperature of about 22° C. If after this time the very first indications of growth can, on careful examination, be made out the culture may, after duly melting and mixing, be employed for the estimation of bactericidal power.

Failing a young gelatin culture such as is just described a suitable culture can be obtained by placing 2·5 cubic millimetres of a tenfold diluted young broth cultivation of the typhoid bacillus into a tube of melted gelatin. Similarly, if only an older stab cultivation of the typhoid bacillus is available, this may be diluted 10 or more times with gelatin. In this last case the amount of dilution necessary to give the required number of colonies in the culture tube will readily after a little practice be learned. Until this experience shall have been gained it will be safer to employ only quite young gelatin cultures. It is convenient to employ for the estimation of bactericidal power a culture containing not less than 50, and not more than 200, colonies in 2·5 cubic millimetres of gelatin.

Method of making the blood dilutions.—The indications given under this heading will again relate only to the case where the bactericidal effect upon typhoid bacillus is to be elicited. In connexion with such determinations it will be convenient to employ, in addition to undiluted blood, dilutions of five-, ten-, twenty-, and forty-fold. Dilutions of this order when mixed with equal volumes of gelatin may be expected to show bactericidal effects. Higher dilutions will occasionally be required. The dilutions are made by means of the capillary pipette, the motive force required being obtained by the compression or relaxation of a rubber teat fitted on to the broad end of the pipette. The means for making the five fold dilutions are provided by the division marks which have been placed on the stem of the pipette. The higher dilutions can be made from these primary ones. The procedure for measuring out equal volumes of typhoid gelatin and serum or serum dilution, and for introducing these into the capillary cultivation tubes, and for affecting the necessary mixture must next engage our attention.

Description of capillary cultivation tubes.—The capillary tubes which are illustrated in Figs. 1 and 2 are easily made in pairs by taking a piece of glass tubing of about three-sixteenths of an inch in diameter and drawing this out in a flame into a capillary stem of from one-sixtieth to one-hundredth of an inch in diameter. Before the glass cools the wider ends of the original piece of tubing are bent round upon the capillary stem in such a manner as to form a right angle with it. Finally, the capillary stem is burnt through in the middle, a slight pull being, during this process, exerted upon the ends of the tube in order to obtain

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[1] Brit. Med. Jour., Feb. 5, 1898.

TABLE SETTING FORTH THE BACTERICIDAL EFFECT OF NORMAL HUMAN BLOOD AS DETERMINED BY THE METHOD DESCRIBED.

Initials or other indication of the source of the blood.*	Date of examination.	Number of typhoid colonies in the serum tubes.							Number of typhoid colonies in the control tubes.		
		Serum dilutions †									
		2	10	20	40	50	80	100	Tube 1.	Tube 2.	Tube 3.
Serum of 10 normal men (pooled)‡	1900. Oct. 11th.	0	0	0	0	—	—	10	5	5	5
N. S. W.	,, 13th.	0	0	—	36	—	51	73	41	52	43
G. H.	,, 13th.	0	3	—	20	—	43	—			
R. F. M. F.	,, 13th.	0	1	—	17	—	69	—			
S. B S.	,, 18th.	0	0	—	Over 200	—	Over 200	—	Over 200	Over 200	Over 200
Captain C. W.	,, 23rd.	0	0		—	Over 100	—	100	Over 200	Over 200	Over 200
W. R.	,, ,,	0	0	0	—	4	—	24			
R. N. H.	,, ,,	0	0	0	—	49	—	8			
G. H.	,, 26th	0	0	1	7	—	20	—	0	12	13
G. H.	,, 29th.	0	0	0	—	Circ. 100	—	—	Circ. 200	Circ. 200	Circ. 200
J. G. G S	,, 29th.	0	3	4	—	Circ. 100	–	100	150–200	150–200	150–200
W. A.	,, 30th.	0	0	Over 200	Over 200	—	Over 200	—	Over 200	Over 200	Over 200
A. P.	Nov. 1st.	0	12	105	Over 200	—	—	—	,,	,,	,,
S. A. R.	,, 5th.	0	0	0	0	—	100	100	,,	,,	,,
C. W. M.	,, 5th.	0	0	0	0	—	18	—			
E. P.	,, 6th.	0	0	0	—	40	—	55	150–200	150–200	150–200
J. L. J.	,, 6th.	0	0	0	—	20	—	72			
W. M. B McC.	,, 8th.	0	0	0	—	2	—	39	200–300	200–300	200–300
W. H. L.	,, 8th.	0	0	0	Over 200	—	Over 200	—			
W. D. P.	,, 8th.	0	0	0	100	—	100	—			
A. W. G.	,, 12th.	0	0	0	0	—	0	13	Over 200	Over 200	Over 200
A. P.	,, 12th.	0	0	10	9	—	54	—			
G. G. S.	,, 13th.	0	0	8	86	—	Over 200	—	,,	,,	,,
T. F.	,, 13th.	0	0	0	5	—	22	—			
S. B. S.	,, 15th.	0	0	0	13	—	55	—	Over 300	Over 300	Over 300
A. W. C. Y.	,, 15th.	0	0	5	44	—	57	—			
H. R. B.	,, 15th.	0	1	0	30	—	70	—			
R. B. B. F.	,, 15th.	0	12	9	28	—	52	—			
H. G. P.	,, 15th.	0	0	3	31	—	46	—			

In every case young sub-cultures of a culture of a bacillus typhosus which had been recently isolated from a fatal case of typhoid fever were employed.

* The bloods employed were drawn off from healthy young men. In all but two instances these were Surgeons on Probation at Netley whose ages ranged between 21 and 28 years.

† The dilutions indicated by the figures represent the proportion borne by the whole contents of the cultivation tube to the contained serum.

‡ The serum in question was obtained by mixing together equal volumes of the serum of 10 Surgeons on Probation.

test-tube into another. *Secondly*, the capillary pipette must be carefully cleaned and warmed by washing it out each time in boiling sterile water. *Thirdly*, the gelatin culture must be kept well above its melting-point from start to finish. The cultivation tubes also should be kept on a warm shelf, both before they are filled in, and afterwards, during the interval between filling in and mixture. *Fourthly*, the mixture of the serum, or serum dilution, with the gelatin culture must be efficiently carried out. If this has not been done isolated colonies may, even in the case of tubes containing a highly bactericidal serum, make their appearance at one portion of the tube while the remainder of the tube is found quite sterile. Another point in connexion with the operation of mixing which has to be borne in mind relates to the shape of the cultivation tubes. In making these care must be taken to allow the glass to cool sufficiently to prevent it kinking at the elbow when it is bent round. Kinking of the tube at this point frequently entails the breaking of the column during the operation of mixing. *Lastly*, attention may be drawn to the fallacies which may be introduced into the observations by the use of an inappropriate diluting fluid. In the case of the bacillus typhosus normal salt solution is a very unsuitable diluting fluid. Where it is employed the number of colonies in the higher dilutions of the serum will uniformly be found less than in some of the lower dilutions. In other words, the suspension of the bactericidal powers of the serum obtained by dilution is, where normal salt solution is used as a diluting fluid, over-compensated for by the bactericidal powers of this last fluid. On the other hand, ordinary broth or, even better, saltless peptone broth, constitutes a very satisfactory diluting fluid, the number of colonies being in such a case always more numerous in the higher than in the lower dilutions of serum.

Preliminary account of some of the results obtained.—Having described the most important points of the procedure adopted, it may be well, in conclusion, briefly to glance at some of the results which have been obtained by the application of the above method. It need hardly be said that these are here dealt with only in a preliminary way, for it will be manifest that the problems which are opened up would require the unremitting labour of months, if not of years, for their effective solution. It will be convenient to begin with the bactericidal effects exerted by normal human blood upon the bacillus typhosus. The results of close upon 50 examinations of normal bloods (all instituted with young subcultures of a typhoid bacillus recently isolated from a fatal case of typhoid fever) show somewhat remarkable results. The bactericidal effect was in all cases found complete in a two-fold dilution. In 22 out of the 28 blood examinations separately tabulated above a complete bactericidal effect was obtained also in a 10-fold dilution. In 50 per cent. of the bloods examined the complete effect was obtained also in a dilution of 20-fold. In 15 per cent. it was again complete in a 40 fold dilution. Only in one case was the bactericidal effect complete in a dilution higher than 40. A conspicuous feature in the results is the very considerable individual variation in bactericidal power. It must be carefully understood with regard to these results that they apply only to the particular culture which was used. In a subsequent paper the question will be considered as to whether a greater bactericidal effect is exerted on cultures which have been attenuated by cultivation in artificial media than on cultures the virulence of which has been exalted by a series of passages through animals. Further, it is to be noted that the data which are given above apply in each case to the effect of sera which have been brought into application within two or three hours after the blood has been drawn off from the body. When sera are kept for a day, and even more so when they are kept for 48 hours, a very considerable decline in bactericidal power makes itself manifest. The data concerning this will also be given in a subsequent paper. Suffice it for the present that the results which have been obtained confirm in a general way those of Buchner. The same holds true with regard to the effect which is exerted on the bactericidal power by temperatures of from 56° to 60° C.

The modifications in the bactericidal power of human blood produced by additions to that blood *in vitro* of specific anti-typhoid sera may next be considered. Up to the present two different anti-typhoid sera have been studied from this point of view. Both of these were highly agglutinating sera placed on the market for therapeutic use. The effect produced by both these anti-typhoid sera were to a large extent similar. In every case even quite small additions of these sera to normal human blood brought about a complete, or all but complete, abolition of the normal bactericidal power of the blood, colonies of the typhoid bacillus making their appearance in large numbers even in mixtures containing one part in four of normal blood. Up to the present no increase of bactericidal power has been ascertained to result from the addition to a normal blood of the "therapeutic sera" in question. The importance of the issues thus opened up is immediately evident, for it is not clear that benefit would be derived from the therapeutic administration of a dose of serum which produces effects like these. It is conceivable that experiments of the kind now in question might throw an important light on the utility or otherwise of various other therapeutic sera, *in particular of certain anti-streptococcus and anti-plague sera.*

The question of the alterations in the bactericidal power of the blood which are associated on the one hand with attacks of typhoid fever and with convalescence from this disease, and on the other hand with inoculation with dead cultures of the bacillus typhosus, must be postponed for discussion in a future communication. With regard to the first of these questions it will here suffice to say that it seems possible, from the data which are already to hand, that indications which may be of use in prognosis may be deducible from observations on the variations in bactericidal power during the course of a typhoid fever. In connexion with the second question it will suffice to put on record that after an interval (during which it is possible that the bactericidal power is reduced) a definite increase in the bactericidal power of the blood comes under observation in guinea-pigs which have been inoculated with sterilised cultures of the bacillus typhosus. The data, which have up to the present accumulated in connexion with the effect of inoculation on the bactericidal powers of the blood in man, are not as yet sufficiently numerous to allow of a definite statement being formulated. There appear, however, to be indications that the course of events in the case of man will show a general correspondence with that which comes under observation in animals. In conclusion, it may be recorded that a large series of comparative quantitative estimations of the agglutinating and the bactericidal powers of the blood have shown (as was surmised by many observers, of whom the present writer was not one) that there is no *direct* association between these properties of the blood. I give a table which sets forth certain of the data obtained in connexion with the bactericidal power of normal human blood

Netley.

FUNGUS DISEASE OF THE EAR.

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AND
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IN order to show the frequency with which fungus disease of the ear is met with in Bombay during the rainy season I (W. K. H.) have collected all the cases treated at the Jamsetjee Jeejeebhoy Hospital during the month of October, 1899. I have verified diagnosis by microscopical examination and in several instances Dr. Row has kindly made a culture on agar-agar. Medical practitioners in Bombay often speak of the liability to disease of the external ear in this climate and they generally diagnose the conditions as furunculosis. I am convinced, however, that in most cases the disease is really aspergillosis and the small pustules seen in the canal are merely the result of a growth of a fungus. Von Roosa in his able work has tabulated several varieties and he states that in his opinion the fungus is the cause of the eczematous condition of the canal and not secondary to it. I quite agree with this opinion; moreover, it will be seen from the tabulated cases that in only one was there any pre-existing disease of the ear; this patient had a perforation and discharge some months before which had been treated and stopped by means of nitrate of silver. The ear remained well until the appearance of a fungus; there was therefore no discharge seen before the symptoms were experienced. Formerly there had been several recurrences of discharge with inflammatory symptoms from the affected ear and on none of these occasions was any fungus found, so that I may say that the fungus in all the cases was really primary. There appears to be a considerable difference in the symptoms due to fungus, varying from slight to considerable deafness and attended by pain which is occasionally severe. There is also a good deal of discomfort, generally described, in fact I may say almost universally, by native patients as "heaviness" and sometimes also "stuffiness," but this symptom varies, I think, according as to whether the canal is blocked up by epithelium and fungus or whether the growth is merely a coating to the canal of slight thickness. In most cases the membrana tympani is obscured from view by the growth, or red patches may be seen on it here and there. In a very few instances I have observed small patches of growth on the tympanum only, without any signs of inflammation. Roughly speaking, cases may be divided clinically into dry and moist; in the latter class the symptoms of eczema are present to a greater or less extent and there is therefore a watery or slightly purulent discharge from the ear, and slight pain and deafness with a feeling of heaviness are usually complained of. In the majority of cases the aspergillus niger is found. There is a quantity of moist-looking epithelium on which black particles are plainly visible, having an appearance of grains of gunpowder. If the particles are plentiful there is more black than white visible, but if there are only a few it may not be easy to distinguish them readily. After syringing and the removal of the mass the walls of the canal are seen to be red and denuded of epithelium and often irregular, with small furuncles and swellings, and the membrana tympani may be bright red in colour or dull and sodden in appearance. Often the aspergillus flavus can be seen growing on the surface of small superficial pustules and if in any quantity the small balls of sporangia are plainly visible. The growth of penicillium glaucum gives a fluffy appearance to the surface.

In the "dry" variety the symptoms of pain, uneasiness, and deafness are also complained of, but there is no discharge, and the canal on examination may be found either to be stuffed full of epithelial *débris* with yellow, black, or brownish-looking particles sprinkled on the surface, or the walls of the canal are coated with a crust, usually of a darkish colour, on which the fungus is seen growing. The appearance is not unlike that of rhinitis when dry crusts coat the surface of the mucous membrane; the tympanum is therefore visible but the surface is generally partially coated with a similar fungus to that on the canal. Sometimes white patches on the tympanum also are met with and they are difficult to remove. After syringing the walls of the canal appear red but dry and the membrana tympani is not so often inflamed as in the moist variety. Diagnosis is readily made after a few observations and confirmed by microscopical examination; sometimes the amount of spores is largely in excess of the mycelium.

The treatment which I have adopted in both varieties is the same and it consists in syringing very thoroughly and using iodoform and boric acid in equal parts. The canal may be swabbed out with camphorated salol, but the drugs used are not of themselves so important as frequent cleansing. It is not necessary to say more than this—that cleanliness and dryness are most efficacious.

Notes on some fungi recovered from the cerumen of the ear from the private notebook of Dr. Row.—Out of the 10 specimens which were kindly collected and sent to me for examination by Lieutenant Colonel Hatch, I.M.S., only one gave a negative result. From the rest a variety of fungi

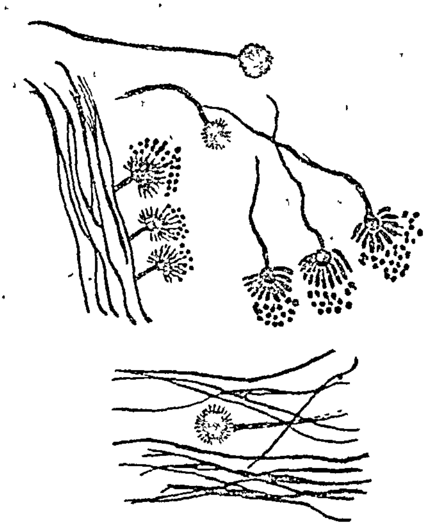
SUMMARY OF CASES OF FUNGUS DISEASE OF THE EAR TREATED IN THE JAMSETJEE JEEJEEBHOY HOSPITAL DURING OCTOBER, 1899.

No. of case.	Caste.	Variety of fungus.	Symptoms.	Appearances.
1	Hindoo.	Aspergillus flavus.	Four days' duration; slight pain and deafness.	The canal was not blocked; no discharge; yellow growth on the surface of the tympanum.
2	Mahomedan.	Aspergillus niger.	Deafness; severe pain in the parotid region of two years' duration.	At the bottom of the canal was a black mass with yellow spots on it. After removal the tympanum was red and angry-looking; the canal was sodden.
3	Hindoo.	Aspergillus niger.	A pricking sensation in the left ear and humming noises; pain in front of the tragus of three days' duration.	Blackish spots on the canal and on the membrana tympani; the spores were small and of a brownish colour.
4	Hindoo.	Aspergillus niger.	Pain and slight deafness of eight days' duration.	The membrana tympani was surrounded by yellowish-brown material and white towards the centre, due to a mixture of epithelium and black fungus.
5	Mahomedan.	Aspergillus flavus.	A pricking pain in the left ear of four days' duration.	The canal was very dry-looking. On the membrana tympani was a white patch with a yellow growth on it, and there was a similar appearance on the wall of the canal. Yellow fungus was found under the microscope.
6	Hindoo.	Aspergillus niger.	Pain in both ears for six days and also an itching sensation.	Both canals were choked with sodden epithelium. On these were black patches. Under the microscope large stalks of aspergillus niger and many spores were seen.
7	Mussulman.	Aspergillus flavus.	Pain, at first slight, in the left ear, but it gradually increased and a watery discharge appeared.	There was a watery discharge, the wall of the canal was eczematous. White spots were seen on the membrana tympani; a fine mycelium and yellow sporangia were seen.
8	Parsee.	Aspergilli flavus and niger.	Itching sensation in the left ear, with headache, tinnitus, and watery discharge. Similar symptoms in the right ear but not so marked.	The left canal had a dry appearance and on the anterior wall there was a dry whitish patch, while the *posterior* wall appeared dry and black. The right canal looked much the same. A mixture of both yellow and black fungus was found in both ears, the black variety predominating in the right ear and the yellow in the left.
9	Eurasian.	Aspergillus niger.	For two or three days the patient had suffered from a pricking sensation in the left ear, headache, noises, and restlessness. There were also a good deal of pain and deafness (of old standing).	Some thick pus and darkish fungus-like masses were seen in the left ear. On removal the membrana tympani was found to be inflamed and was perforated in the centre. This was an old perforation for which I had a few weeks before treated the patient. The fungus had a rusty brown colour under the microscope.
10	Mussulman.	Aspergillus niger.	For 10 days there had been pain and throbbing in the left ear, but no discharge.	The canal had a dry appearance. There were numerous spores of a dark colour, but no mycelium was found.
11	Hindoo.	Aspergillus flavus.	Throbbing in the ear of one day's duration with heaviness. There was no discharge, but there had been a little a few days previously.	The canal was lined by a coating of a yellowish colour, with white patches here and there. Yellow fungus was found.
12	Hindoo.	Aspergillus niger.	For three days the patient had had heaviness, deafness, and some pain in the left ear.	The canal was blocked with epithelium and dark masses which proved to be aspergillus *niger*.
13	Mussulman.	Aspergillus flavus.	For the last 12 days the patient had had slight pain, heaviness, and deafness of the right ear.	The canal was dry, with yellow spots on white patches. Yellow fungus was found.
14	Hindoo.	Aspergilli niger and flavus.	Slight pain and deafness of five days' duration.	The canal looked dry. There were a few pustules on the wall and black and white patches on the canal wall. Aspergillus niger was found and a few yellow sporangia were seen.
15	Mussulman.	Aspergillus niger.	Pain in the left ear of five days' duration and fulness.	The canal was dry. There were black spots on the walls. Aspergillus niger was found. There were small and very large stalks.
16	Mussulman.	Aspergillus flavus.	The patient complained of heaviness of the right ear of six days' duration. There was no pain.	The canal contained cerumen coated with a fluffy growth. Aspergillus flavus was found and large stalks and sporangia were seen.
17	Eurasian.	Aspergillus niger.	For six weeks the patient had had *itching* in the right ear and lately slight discharge. There was no pain and the hearing was not impaired.	The canal was inflamed and elsewhere covered with dry-looking epithelium. Plenty of mycelium and brownish spores were found.
18	Parsee.	Aspergillus albus.	Increasing deafness of three days' duration and a heavy sensation in both ears.	The canal looked eczematous. There was a quantity of white epithelium near the tympanum, the membrane being obscured. Fine mycelium was found, but there were no spores. Culture by Dr. Row showed aspergillus albus.
19	Jew.	Aspergillus albus.	Much pain in the left ear (more at night) and deafness.	The left canal was dry. White pustules were seen on the walls and also on the membra [illegible] Aspergillus [illegible] was found.
20	Mussulman.	Aspergillus niger.	Itching followed by pain of seven days' duration.	The canals were [illegible] Black spores and thick [illegible] in [illegible]
21	Mussulman.	Aspergillus niger.	Pain in the left ear with subsequent watery reddish discharge of three days' duration; no deafness.	The surface of [illegible] hes on the floor. Th [illegible]
22	Parsee.	Aspergillus niger.	For 15 days there had been pains and deafness in the right ear and three days previously a serous discharge was noticed.	

were isolated of which the most conspicuous were aspergilli of different species. From two specimens penicillium glaucum was isolated.

Method.—Of all the nutrient media used for isolation the one that answered best was maltose agar 2 per cent. Glucose agar answered next best. Ordinary peptone broth gave a fair growth of the mycelium and in depths the individuals formed flakes which on examination were found to be destitute of conidia. It is therefore interesting to see that under these conditions the increase in growth may simply be the vegetative increment of the mycelium. A great number and variety of staphylococci and streptococci were always found in the material used for inoculation and consequently in the original swabs. It was only by picking out the fungi of the higher order that pure growths were obtained and used for detailed study and examination The various specimens which were thus isolated appeared in the early stages of their growth so very similar, both in their naked-eye appearances as well as in their broad microscopical characters, that it was extremely difficult to relegate them to their proper suborder. Thus in 24 hours, just as is usual with all moulds, the individual colonies appeared as small specks, with firm, feathery radiations, the whole colony appearing perfectly circular. They were slightly white, and being translucent and thick no colour characteristics were detectable. At a later stage of their growth, however, identification was rendered easy by the following characters: (1) by the colour assumed by the sporangia *en masse*, this being more pronounced at the centre of the colony than at the periphery; (2) by the comparative size of the sporangia and their shape and minute details relative to the arrangement of the radiating sterigmata bearing the spores; and (3) by the temperature at which the various members grew best.

1. Thus aspergillus niger, aspergillus flavescens, aspergillus viridescens, aspergillus fumigatus, aspergillus albus, and aspergillus glaucus showed their various characters by the colour of the growth *en masse* That all these belonged to the aspergillus race was proved by the microscope which brought out all the characters easily. The character of the conidia requires scarcely any remarks as there was absolutely nothing new which could be observed, except in one case where both in the specimen as well as in the culture separate conidia were found of a nature which, by the pseudo-radiate arrangement of the sterigmata, roused some suspicion as to the mould being related to actinomyces. But subsequent culturing and staining by the Gram-Weigert method removed all doubts as to the identity of the specimen, which ultimately turned out to be aspergillus flavescens. The only points which may be mentioned here are: (1) the comparative size of the conidia in various specimens; and (2) the relation in size of the sterigmata to the conidiophore as seen in the various specimens. Thus of all the conidia those of aspergillus niger were larger than those of any other. The large size is partly due to the excess of sporulation, the spores in mature specimens growing to such an extent as to mask the minute structure of the conidia, which then appeared as irregular spheres. The sporangia in aspergillus glaucus were found to be the smallest and in some specimens the structure was clearly defined, the whole appearing perfectly symmetrical with the fine sterigmata radiating in such a way as to give the specimen an appearance not unlike a sunflower. The arrangement of sterigmata in these two specimens was, as seen from fresh as well as stained specimens, all round the clavate, flask-shaped or even spherical end of the conidiophore, the individual sterigmata radiating very symmetrically and giving rise to the appearances above indicated. The conidia in aspergillus flavescens and aspergillus viridescens, however, showed that the sterigmata in mature specimens were arranged round only a part of the circumference of the conidiophore, so that the whole fructification appeared like a half or three-quarter sphere when examined microscopically (see figure). The actual diameter of some of the conidia is as follows: aspergillus glaucus, 27μ; aspergillus viridescens, 72μ; aspergillus fumigatus, 31·5μ; and aspergillus niger, 108μ.



Aspergillus viridescens (3 B) Microscopic appearance, various stages of growth.

2. Without entering into details on the relation in size of the sterigmata to the conidiophore I may cite the instance of only one or two specimens where this was conspicuously noticed. Thus in aspergillus glaucus the central core of the conidium—that portion contributed by the conidiophore—is only 13 5μ, while that of the radiating spoke of the sterigmata is just half of this, while in aspergillus viridescens the proportion of the central to the peripheral zone is as 45μ : 13 5μ.

3 The most favourable temperature for the growth of aspergillus niger was found to be from 25° C. to 28° C., while that for all the rest was from 35° C. to 38° C

The following is the tabulation of the various fungi recovered from the specimens of cerumen which were collected for examination.

Nature of fungus.	Specimens of cerumen from which they were recovered.
Aspergillus niger on maltose agar (four days)	Specimen 1.
Ditto, microscopically.	
Aspergillus viridescens, four days on maltose agar	Specimens 2, 3, and 7.
Microscopically, in various stages of growth.	
Aspergillus fumigatus lighter.	Specimens 2 and 3
" " darker	
Aspergillus albus.	Specimens 1 & 10A.
Aspergillus glaucus, four days.	Specimens 1 and 2.
Microscopically	
Penicillium with oidio-spores, four days. Maltose agar	Specimen 10.
Microscopically.	
Aspergillus flavescens, very vigorous on agar (three days)	Specimen 6
Penicillium (greyish coloured).	Specimen 1
Pseudo-radiate arrangement of sterigmata in a mass of mycelium.	Specimen 3.

Since writing the above I (W. K. H) have had an opportunity of seeing the effect of administering subcutaneously some of the fungi above named to rabbits and monkeys. The lesions in these cases were invariably localised abscesses at the seat of inoculation, containing pultaceous, almost doughy pus, containing the mycelium as well as conidia The abscesses, as a rule, were well encapsuled, so as to admit of an easy dissection In one case where only the mycelium was inoculated the abscess contained more fluid contents tinged with blood This eventually burst and the parts healed. The further study of mycosis is still in progress A table of cases treated during October, 1899, is appended.

[The paper was accompanied by an excellent series of coloured drawings illustrating all the various forms of fungi mentioned. We regret that the space at our disposal does not permit us to reproduce them.—ED. L.]

SOME NOTES ON CASES OF MOVEABLE KIDNEY,

WITH REMARKS ON THEM.[1]

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"MOVEABLE KIDNEY" is not a very common condition, for on looking through my note-books, in which I have kept short notes of every patient whom I have seen at my house for the past 20 years, I can only find 14 patients in whom this condition has been certainly diagnosed out of the several thousands of patients who have passed through my hands during that period, although I have notes of 25 cases which presented some difficulty at first in determining whether this condition was present or not. I propose to bring before you notes of the most interesting of these patients which illustrate the difficulties that are met with in making a diagnosis or which raise points that seem to me worthy of consideration. Hilbert distinguishes two grades of these cases. In the first only the inferior pole and not more than the lower half of the kidney can be felt. This he calls the palpable kidney. In the second grade he places those cases in which "the whole kidney can be felt and can be isolated with the fingers." This he calls "moveable kidney." I very much doubt whether it is possible to say with any certainty that the condition which Hilbert describes as palpable kidney is the cause of any symptoms. At any rate, in the following case, in which recurring attacks of pain were attributed to this cause by two well-known physicians, this diagnosis proved to be entirely incorrect.

CASE 1.—The patient was a stout woman who was seen by me in consultation in March, 1886. She was about 50 years of age, had had three children, and for about one and a half years previously to my seeing her she had been having frequently recurring attacks of pain. These attacks usually came on when she had walked some little distance, but they also came on at other times as, for instance, after walking downstairs. The pain would seize her in the right side just below the ribs and was often so severe that she had to have morphia injections. The pain did not pass into the back or down towards the bladder and was never accompanied by jaundice. There was no evidence of disease of any of the organs, but when the late Dr. Walter Moxon saw her he thought he could feel the end of the right kidney. She was seen by Sir George Johnson and Dr. Moxon, who both considered her condition to be caused by a "loose kidney," slight twisting of which caused the pain. Dr. Moxon in a letter to me said: "I think the drag of a shifted kidney would account for all the symptoms, especially if the twist on its hilus which the kidney undergoes interfered at all with its circulation." In 1890 I again saw the patient in consultation with Dr. J. Mortimer under whose care she then was. She was dying from albuminuria and the attacks of pain had continued up to this date more or less as before. It seemed then as if she might have a stone in the kidney which had caused disease of the organ. Subsequently we made a very careful post mortem examination. The kidneys were absolutely normal as to position and were well fixed and well surrounded by fat. The capsules of both were adherent and they showed the ordinary evidence of chronic Bright's disease No calculus was found and there was nothing to indicate the cause of the attacks of pain. We proceeded to look for "gall stones," which was my original diagnosis of the cause of the attacks of pain when I saw the patient in 1886, but the gall-bladder was normal and contained no gall stones. On removing the liver and examining it very carefully we found a small, round, smooth gall-stone a little larger than a pea occupying the hepatic duct. This readily moved upwards and downwards and was without doubt the cause of all the symptoms which had been attributed to the "loose kidney."

With regard to the second grade in which "the whole kidney can be felt and can be isolated with the fingers," I would for purposes of diagnosis divide these cases into two very distinct classes. In the first the kidney can be felt in outline and can be replaced in its usual site in the loin and again displaced and replaced at the will of the examiner. The diagnosis of these cases is easy and mistakes are only possible when the condition is not looked for. As an example of this type I give the following case.

CASE 2.—The patient, a bright, highly educated single woman, aged 23½ years, had enjoyed very good health up to Christmas, 1897 In January, 1898, she drove nine miles to a county ball and danced several dances as usual. In the middle of a vigorous dance she felt suddenly so faint and sick that she had to lie down on a sofa upstairs for more than an hour and she could not again dance that evening. For the next three days she felt very unwell, with nausea but no sickness, after which she felt quite well. She continued well until March 11th when she was at a tiring social function standing all day. She hurried upstairs to dress for dinner and in the middle of dressing was attacked with sudden faintness and nausea which continued more or less for two or three days. She again appeared quite well until the middle of April when she undertook a railway journey to Bath, and on the night after her arrival, after running upstairs to dress for dinner, she was again attacked in the same way and affected for about the same period of time as before. After this she began to complain of pain in one spot about the centre of the epigastric region, and she complained of pain in this region whenever she swallowed food. She saw several medical men, who at first thought that she had obscure ulceration about the œsophageal end of the stomach, and she was kept in bed and dieted, but without avail. Then she was thought to have "nerves" and was ordered away to various places in Gloucestershire, Scotland, &c , for change of scene. It was noticed that for some days after all these journeys she was worse, with faintness, nausea, and pain in the epigastric region; then she would get better until she tried to exert herself, when after walking she always got an attack of pain or faintness and nausea. This state of affairs continued until January, 1899, when she was sent to London and rapidly in succession saw two eminent physicians there several times. She was said by both to be suffering from "nerves" and was ordered more changes of scene. Finally she was ordered by one of these physicians to have Weir-Mitchell treatment and she came under my care in the Home Hospital for this purpose. I found her a bright, cheerful, well-nourished patient, who did not at all seem to be suffering from "nerves." The curious history of her attacks led me to examine her carefully for a displaced kidney. I found the right kidney easily displaced so that it slipped down to the level of the umbilicus and was freely moveable between that position and the loin. The patient tried a pad and belt but did not care to wear it, and finally she saw Mr. Frederick Treves who stitched the kidney in position. I saw her 12 months after the operation when she appeared quite well; she could walk and apparently do anything that she wished without pain and without any return of her previous symptoms. She then told me that she had bought a bicycle in 1894 but had ridden it very little, as after riding it she always suffered from pain in the abdomen of so severe a character that she had to lie flat on the floor until it passed off. On making careful inquiries lately as to constipation her mother wrote to me saying that she had suffered much from constipation before her illness. It was obstinate, and she used to correct it with aperients, but after a time these failed; then after many days nature relieved itself but with much difficulty. She had no attack of pain but was, of course, much exhausted.

In the second class of case the tumour when found cannot be replaced in the loin. In these cases it is often difficult to make an accurate diagnosis. You have here to distinguish between tumour of fæcal origin, malignant tumour of the bowels and peritoneum, and small solid moveable ovarian tumours, and I have notes of each and all of these conditions in which it was quite impossible at once to arrive at a definite diagnosis. Hydrosalpinx, enlarged gall-bladder, the "tight lace lobe" of the liver, and hydatid disease, are also mentioned in books as causing difficulties in diagnosis, but I have never met with cases of these conditions which presented the least difficulty. It is well to recognise that these cases cannot be definitely diagnosed at a single interview. They require to be watched; possibly to be treated with

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[1] A paper read before the Devon and Exeter Medico-Chirurgical Society.

enemas or aperients *In other* cases it is necessary to have records kept of the temperature; while the general condition *and weight of the patient* should be noted and the condition of the tumour carefully examined If these requirements *are not attended to serious* mistakes will be made, as happened in the following case

CASE 3 —The patient a widow, aged 60 years, who had had two children was seen by me on August 15th 1889 She considered herself to be quite well until about four months previously Since then she had had much flatulence with a constant desire to defecate. The motions, which sometimes occurred four or five times a day, were small but of the usual consistence and were covered with mucus She had lost five or six pounds in weight in the previous three *months* and she complained of weakness as well as of indigestion and *occasional* pain in the stomach My notes say "The abdomen is distended with flatus and the coils of the intestine can be seen together with peristaltic movements in them Just below the ribs on the right side there is a tumour the size of a hen's egg This is so freely moveable that I think it is intestine and is so hard that I do not think it is fæcal The rectum is very freely dilated and I can detect no growth in it Her weight, 99 lb" I prescribed one minim of carbolic acid and quarter of a grain of extract of belladonna three times a day My notes of Sept 29th run thus "The patient has got on better and gained four pounds in weight (weight in some clothes 103 lb) The abdomen is much less distended and she has had no pain in the bowels The tumour is still in the same position but I think it is a moveable kidney, it appears reniform in shape with a depression in front which corresponds to hilus of kidney" Between that time and January, 1892 the patient paid me only seven visits She continued pretty well, varying up and down, sometimes losing two or three pounds in weight and sometimes picking these up again She continued her carbolic acid and belladonna pill twice daily and occasionally she took two or three teaspoonfuls of castor oil which invariably brought off a good deal of blood stained mucus as well as excreta The tumour continued the same and I never had any doubt during this time but that the tumour was a moveable kidney In January, 1892, she had an attack of influenza and became very weak She did not pick up but lost eight or nine pounds her weight going down to 93 lb She became dissatisfied with my opinion so I *sent her to* one of our leading London physicians giving him particulars of the weights, &c, which I had observed He took a very *different* view of her case and in a letter to me dated March 13th, 1892 he wrote as follows "There is no doubt about the case any longer She has a growth in the bowel and I think in the peritoneum also for I can feel lumps in several places and inasmuch as the bowel contents above a *stricture are almost never scybalous the lumps can only be* contracting muscle or growth The mass in the right side which seemed at first to you to be moveable kidney is, I suspect, also a mass of growth, for I can feel nothing of it *in the loin as one usually can in a moveable kidney* And if it be growth I suppose it would be a growth *in the hepatic* flexure or the omega lip of the sigmoid spread out, as is most commonly the case But I am not sure of this, because I can feel a polypoid growth in the rectum at the *end of the finger,* and that is very suggestive of a growth in the near neighbourhood *of which it is an outpost* I cannot *feel* the stricture itself" He prescribed an aperient pill with some mild *tonic which she took* She rapidly *got worse* and required daily visiting so I handed her over to my friend Mr J D Harris, who had attended her family in previous years *Shortly after complete obstruction supervened* and it was thought advisable, after consultation with Mr A J Cumming to perform lumbar colotomy Mr Harris performed colotomy in the ordinary way and he performed a most difficult operation extremely well, for he found *the colon completely* empty, and it is a *matter* of some difficulty to perform colotomy on an empty colon Within a week the patient died and at the post mortem examination we found (1) that the tumour which I have described was the right kidney which was freely moveable and which seemed in every way more or less normal, and (2) that there was a band of adhesion which seemed to be inflammatory in its origin just below the position in which this kidney usually lay This constricted the ascending colon just as it commenced to ascend at two or three inches from the cæcum and caused an obstruction The cæcum behind this obstruction was much distended being as large as a small stomach and the bowel behind this was distended with flatus as may be seen in ordinary cases of obstruction There was no growth of any kind in the bowel or anywhere in the abdominal cavity

This case is the only one of moveable kidney in which I have been able to make a post mortem examination and it is from many points of view very instructive It first of all shows the impossibility of diagnosing the cases which I have placed in my second class by merely taking into consideration the physical examination of the tumour and abdomen For here was a palpable tumour which appeared to one observer to have all the characters of a moveable kidney while to another it appeared *altogether different* It shows, too, that not always is anything of a moveable kidney felt in the loin, although there seemed no reason why this kidney could not be replaced in the loin as in the cases of the first class And further it shows how intestinal obstruction may be caused by bands of inflammatory material even when a moveable kidney is present, and I think this is a more likely cause than by the renal pressure to which it has been sometimes attributed Just below the place where the kidney usually lay was a band of inflammatory material causing a constriction and I think that it is not improbable that kidneys moving about freely in the abdominal cavity often give origin to similar bands of inflammation which interfere with the action of the bowels in various ways and possibly prevent these kidneys from being replaced in the loin In this connexion it is interesting to note that in Case 5, in which I saw the patient at intervals of a year, the kidney did not appear nearly so moveable at the second examination as it had always done previously

There are two *symptoms* associated with *dyspepsia* and various obscure abdominal pains which always make me examine for moveable kidney in a neurotic woman These are recurring attacks of faintness and recurring attacks of nausea or sickness for neither of which any very evident cause can be found Recurring attacks of faintness were a very prominent symptom in Case 2 and the same symptom will be observed in Case 4, while faintness and sickness constantly recurred in Case 5 and also in Case 10

CASE 4 —The patient a single woman, aged 25 years, had enjoyed very good health up to a year previously to my seeing her, when possibly she overstrained herself in riding 45 miles against the wind in one day on her bicycle There was also a history of a possible strain when she pulled a girl companion into a boat from which she had fallen She had also suffered from much constipation and straining at stool on several occasions, especially while taking a strong iron tonic shortly before her illness A note of the case taken at this time reads as follows "Illness commenced by her suddenly feeling faint in church and this has continued a symptom more or less ever since She then began to get *weak and generally* seedy with a dirty coated tongue and nasty taste in her mouth She lost appetite and complained of a good deal of pain across the lower part of the abdomen and in the back" She was treated for indigestion especially with intestinal antiseptics and the Salisbury diet and was brought to me by her medical attendant because she was no better and as she was getting nervous and apprehensive that something altogether wrong was going on inside I found all her organs healthy, but the right kidney was freely moveable It could be moved from the loin to the level of the umbilicus and could be easily replaced For the past two years the patient has worn a belt with a pad which seems to keep the kidney in good position and she has had practically no further inconvenience from her kidney and is now in good health

CASE 5 —The patient in this case was a married woman, aged 43 years, who had had no children She had never been robust and she used formerly to suffer from neuralgia of the head and teeth which ceased after her teeth were put thoroughly right Her menstrual periods were normal in every way Her bowels, as a rule, were very constipated For several years she had suffered every two or three weeks from attacks to be subsequently described which she thought had been caused by over fatigue cold and indigestible food The attacks commenced with pain which began on the right side near the spine and passed forward to the epigastric region in front After a time she seemed to have discomfort all over the abdomen and often got very faint She was troubled with flatulence and if this did not pass off it ended in sickness After these attacks the urine was highly coloured with a red sediment like brick dust The liver the heart and the lungs were normal In the right iliac region was a tumour which was smooth, of the size of an ordinary kidney, and reniform in shape. It was easily moved upwards toward the right lumbar region, but this gave some pain and it could not be moved into the normal position of the kidney. The patient could not remember to have had any strain but she had always suffered very much from constipation. She was once quite free from attacks for nine months, during which time she was taking Carlsbad salts every other morning. I saw her again one year after her former visit. The kidney was in the same condition but was not nearly so moveable She had not had any constipation and she had had no attacks of pain.

In considering the causes which predispose to, and which bring about, this condition I am not going to refer to the anatomy of the kidneys or to the supports by which they are usually kept in position. The anatomy and supports of the kidney are more or less the same in men as in women, and yet the condition of moveable kidney in men is so rare that personally I have never yet seen it. This is the more remarkable because if we consider the so-called immediate causes of dislocation—a blow, a fall, a twist of the spine, carrying a weight on the back when the body is bowed forward, violent coughing, or straining in vomiting or parturition—we shall recognise that with the exception of straining in parturition men are very much more exposed to these causes than are women. We have, then, to find something which is especially peculiar to women which will account for the fact that moveable kidney is so much more frequently found in them than in men. Many writers have considered that moveable kidney is most frequently associated with pregnancy and that most cases are recognised for the first time when the abdominal parietes are relaxed by parturition. My cases do not bear out this view at all, for of the 14 cases which I have collected five occurred in unmarried ladies who had never been pregnant and three in married women who had never had any children, while of the other cases in two each patient had had one child only, in one the patient had had two children, in one four children, in one five children, and in one 15 children. I do not think it is at all certain that pregnancy predisposes to moveable kidney. Nearly every week at the hospital, at the dispensary, or in my private practice I get cases of various displacements of the uterus associated with, or caused by, pregnancy or frequent parturition, but I have never found among these a case of moveable kidney due to this cause, although I have repeatedly examined for this condition in the cases of a very large number of these patients. Other authors have pointed out the influence of tight-lacing as a cause of the displacement and Hertz has shown that "in most cases the tight-lace line on the liver is on the same level as the upper pole of the kidney." But how common tight-lacing is, and how comparatively rare is the condition of moveable kidney. It is my belief that a large proportion of the anæmia in girls is due to tight-lacing, and for several years it was a custom of mine to measure the waists of all the anæmic girls who came before me at the Exeter Dispensary and the corsets they were wearing, and I have records of dozens of cases of anæmia in which waists which naturally measured 22, 23, and 24 inches were compressed into corsets measuring 19, 18, 17, and 16 inches. Yet I never met with a single case of moveable kidney amongst these anæmic girls attending the dispensary, though I have repeatedly seen their livers displaced by tight-lacing, and in one of my private patients the liver was so displaced from the same cause that it filled the abdomen to the level of the crest of the ilium.

Several of my cases have much impressed me with the part which chronic constipation and the straining which is often associated with it play in producing moveable kidney. Constipation, more or less marked, seems to be of such common occurrence amongst women that it may almost be reckoned amongst their sexual peculiarities. We may call to mind the dictum of a celebrated London lecturer who commenced his lecture on gynæcology as follows: "Woman, gentlemen, is a creature of periodicity. She micturates once a day; she defecates once a week; she menstruates once a month; and she parturates once a year." And although I am not prepared to say that this is an exact representation of the facts, yet it serves to remind us how much more common it is to meet with obstinate constipation in women than in men. I am inclined to think that the influence of obstinate constipation as one of the causes producing moveable kidney has not up to the present been sufficiently appreciated. Landau believes "the dragging influence of a colon distended with fæces to have some effect on the production of the displacement," but, as far as I have been able to ascertain, no one has discussed how far the straining at stool which so often accompanies habitual constipation may be a cause of the production of a moveable kidney. That it may be so sometimes is well illustrated by the following cases.

CASE 6.—A married woman, aged 48 years, with four grown-up children, frequently consulted me from 1894 onwards for headaches associated with very persistent and obstinate constipation, and I am certain that she then had no abnormality of the kidney. In January, 1899, she came to me and gave the following history. On going to the water-closet one morning she found herself very constipated, and whilst straining she felt a severe pain on the right side and also felt a lump just below the right ribs. The pain was so intense that she had some difficulty in getting back to her bedroom, where she remained for several hours on the bed, the pain gradually passing off. Since that time she had several times felt a "lump below the ribs." I saw her about a week after this attack. I found all the abdominal organs sound with the exception of the right kidney. This was easily felt just below the ribs in the nipple line. It could be moved downwards to the level of the umbilicus and could readily be replaced in its proper position in the right loin. The constipation has since been treated and the kidney has caused no more trouble.

CASE 7.—The patient was a woman, aged 34 years. She had been married for five years and had one child, who was two and a half years old and whom she had suckled for two years. She had not noticed anything the matter and was more or less well up to a month previous to my seeing her, when she had received a nervous shock through a lady opposite her house going "raving mad" and much disturbing her. Her bowels became very constipated, her tongue got furred, and she lost her appetite. 14 days before I saw her she was one morning, shortly after she had had an action of the bowels, suddenly attacked with great pain in the right hip inside. She was also complaining of "pain on the right hip inside" when she came to me. On examination of the abdomen I found that the right kidney was moveable, lying just above the crest of the right ilium, and that it was easily moved up again into the right loin.

It will be remembered that the patient in Case 5 had her bowels as a rule very constipated, that once for nine months she was free from the attacks of pain, &c., during which time she was taking Carlsbad salts every morning, and that after seeing me in 1897 she had no attacks of pain for one year, during which time she had prevented her bowels from being constipated. The patients in Case 1 and in Case 4 also gave histories of constipation and straining at stool shortly before their illnesses commenced. I do not think that this "straining at stool" can be by any means a rare exciting cause of moveable kidney when it can be directly traced in two out of 14 cases and was probably the cause in several others. The point is one of practical utility and I am sure that I have done great good in several of my cases by seeing that the patients attended carefully to the condition of their bowels and prevented any constipation and straining by the use of aperients.

It is, of course, a question whether the habitual constipation of women is not connected with the corsets which they wear, and whether these articles of dress do not therefore predispose to moveable kidney both by producing constipation and by exerting pressure on the upper pole of the kidney, but as far as my experience goes tight-lacing of itself is much more prone to produce displacement of the liver and uterus than of any other organ.

I would call attention also to the fact that in two of these cases the patients were inclined to put down their trouble to bicycling. The patient in Case 2 "had bought a bicycle in 1894, but had ridden it very little as, after riding it she always suffered pain in the abdomen of so severe a character that she had to lie flat on the floor until it passed off," and the patient in Case 4 enjoyed very good health up to a year before I saw her, when she possibly overstrained herself in riding 46 miles in one day against the wind on her bicycle. In both these cases, however, there were other causes which were more likely to have produced the displacement of the kidney. It would be worth observing whether moveable kidney is becoming more frequent since ladies have taken to bicyling, and whether bicycling can really be put down as one of the causes of its production. I can quite imagine that riding over a very uneven road might jolt a kidney out of position if it were already moveable, but I do not think that a normal kidney would be loosened by this form of exercise

When we come to consider the treatment of moveable kidney we are met with the fact that many patients who are the subjects of this condition get through life with very little inconvenience at all The displaced kidney seems very often to produce no symptoms as long as it remains quiet in one place Thus in Case 8 which is that of a single woman, aged 40 years who has been under my observation at frequent intervals for the past seven years, there are as a rule, few, if any symptoms so long as she leads a quiet life and keeps her bowels open At intervals she has to nurse and to lift an old mother, and this nursing is always attended by severe attacks of pain in the abdomen, and on several occasions after such nursing I have found on examination the position of the kidney to be shifted If, however, the kidney remains in one position the system seems to become accommodated to the displacement and few symptoms result I could quote several cases in which a moveable kidney has been under observation for years, causing very few symptoms but occasional indigestion, and requiring neither support nor treatment One of the first cases (Case 9) of consultation which I had in Exeter 20 years ago was with Mr A C Roper on a case of "floating kidney" The patient was never, and has never been, in robust health, and has always had indigestion, but she has gone through life as well as numerous other weakly women who have their kidneys normally placed

I think that all cases of moveable kidney suffer more or less at times from indigestion There seems to be a connexion between certain conditions of the kidney and stomachic disturbance

I have seen two cases which proved to be those of calculus in the kidney in which the patients had for a long time previously to the passage of the calculus only been thought to suffer from severe and intractable dyspepsia and from this condition only, and I see that Dr Clifford Allbutt, when enumerating the symptoms of calculus of the kidney, says "Another symptom which results from transference of nerve influence has reference to the stomach, nausea vomiting, and dyspepsia are very common not only at the times of actual colic but also during the periods of less acute suffering These symptoms are explained through the connexion of the pneumogastric with the renal plexus" It seems to be reasonable to suppose that the traction and twisting which a displaced kidney must make on the nerves of the renal plexus would produce indigestion in the same way as does the calculus in the kidney through the connexion of the pneumogastric with the renal plexus It will, I think, be found that the indigestion associated with moveable kidney is more benefited by aperients and by regulating the bowels than by any other treatment

In some cases moveable kidney seems to disappear without treatment, the kidney resuming its usual position This occurred in Case 10

CASE 10 —The patient, a married woman, aged 45 years, had had five children In 1889 twins were prematurely born and there were subinvolution and cervicitis of the uterus She was treated by Dr L Atthill in Dublin with much benefit At this time there was no suspicion of a "loose kidney" Some time in 1892 her husband (a medical friend of mine) was examining her abdomen to discover the cause of sudden attacks of faintness with sickly pain and vomiting from which she was suffering and he discovered an abdominal tumour The shape and smooth feeling of the kidney were very perceptible and its absence from the left loin was very noticeable, it being, as is unusual, the left kidney which was displaced The patient was seen by a surgeon who *entirely confirmed* the diagnosis A pad with a belt was devised, but the patient could not, or did not, wear it very long The symptoms gradually subsided and now nothing can be found in the abdomen

These, then are the most favourable cases of moveable kidney In other cases as I have mentioned in some of those which I have described, the symptoms seem to subside when the patient wears an abdominal belt with an inflatable pad over the region of the kidney in front which keeps the kidney from constantly shifting its position, but in some cases as in Case 2 this belt is of no avail—the symptoms continue and the patient's life is rendered very miserable especially when as in this case, a young person is cut off from dancing, tennis and all the pleasures which are most enjoyable at her age In such cases the operation for fixing the kidney should be recommended I am told by surgeons that it is a very easy and very satisfactory operation and my own very slight experience of it would entirely confirm this view

Exeter

THE OPEN-AIR TREATMENT OF PHTHISIS AN INTERESTING CASE.

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THE following case of pulmonary tuberculosis is published as an interesting example of the benefits to be derived from the open air method of treatment, accompanied by special feeding, in this country, as a contrast to one of residence in a warm climate unaccompanied by any special line of treatment, and also as an object lesson in the success that may be attained by appropriate treatment in the climate of this *country even when, as in this case, during residence abroad*, the disease had progressed and was rapidly nearing a fatal termination

A young man, aged 24 years, who was the subject of pulmonary tuberculosis on medical advice went to South Africa in November, 1897 At that time he was stated to be suffering from tuberculous infiltration of the apex of the left lung He resided for two years at Reddersberg in the Orange Free State where the climate is described as being fairly equable, and the place as hilly, sheltered, dry, and free from dust Reddersberg is on the main line to Bloemfontein and is consequently fairly well supplied with the necessaries of life During the patient's residence at that place he followed the light employment of a bookkeeper, spent a great deal of his time in the open air, and continued to carry out the lines of treatment which had been laid down for him by competent medical advisers at home and abroad His complaint at first tended to improve but he began gradually to lose ground till in April, 1900 he appeared to be so obviously going down hill that it was decided that he should return to this country and seek for further aid and, if it was possible, amelioration He accordingly presented himself in May at the out patient clinique of the North London Hospital for Consumption On examination the case presented the following noticeable points The patient's general appearance was that of a person suffering from a rapidly advancing wasting disease He was thin, pale, and emaciated His voice was husky and hoarse and only equal to a whisper He had an incessant cough with copious purulent sputum which on bacteriological examination showed crowds of tubercle bacilli by Gram's, Ziehl Nielsen's, and Honsell's stains His skin was dry, rough, harsh, and inelastic There were loss of appetite, pain after food, and frequent vomiting due to cough His height was 5 ft 9½ in and his weight was 8 st 9 lb His case was one of mixed infection On closer examination both lungs were found to be throughout in a condition of actively secreting bronchorrhœa, the apices of both lungs were dull and the left apex was the seat of a vomica below the sternal end of the clavicle Laryngeal examination showed pyriform swellings and slight ulceration with congestion of the whole larynx, all undoubtedly tuberculous His temperature ranged from 101° to 102 8° F daily His heart sounds were normal, though weak, The pulse was frequent, there were copious night-sweats and clubbing of the fingers, also slight anasarca of the feet His urine was free from albumin or sugar, but it was loaded with phosphates

His appearance being so obviously serious and as he needed immediate care and nursing, it was deemed advisable that whilst waiting for a vacant bed he should be sent into a general hospital as an in patient After residence in such an institution for a fortnight, during which time he made no favourable progress he was removed to his home by his friends, here he continued to reside during the space of five weeks, during which time he carried out as best he could the instructions which had been given to him for the application of the open-air methods. At the end of this period he had so far improved and was so much better, having gained five pounds in weight, that he appeared to be a more suitable case for treatment at Mount Vernon, Hampstead. He was therefore admitted into that institution on July 25th, 1900, when he weighed 9 st., and here he continued to reside and to enjoy the open-air treatment with appropriate remedies and diet under the care of Dr. B. O'Connor until Sept. 27th, when he left weighing 9 st. 12 lb.

The patient was now so much improved in health that when he presented himself for examination at the out-patient clinique in Fitzroy-square in October he was unrecognisable as the same patient. His appearance was that of a fairly nourished young adult. His voice was strong with the merest suspicion of huskiness, the laryngeal affection having markedly subsided under the care of Mr. R. Lake. His cough and night-sweats had disappeared and the bronchorrhœa had dried up, the only remaining signs being in the apices. The right apex had markedly cleared up, though the breath sounds were still harsh and the left apex showed fibroid thickening with the original vomica. There were very few bacilli in the sputum. His skin was now moist, oily, supple, and elastic, with some subcutaneous fat and a decided pinkness of hue. He expressed himself as never having felt better in his life, and his spirits and bearing conveyed that impression. At the present date he continues to attend the out-patient clinique and he carries out the principles of the open-air treatment at home in the country near London. His weight is now 10 st and he continues to improve in every particular.

This case is a good example of the prompt abatement and arrest of symptoms tending at one time to indicate a rapid progress towards a fatal termination. Although it is yet somewhat early to speak of "cure," yet from the progress of the case and its present condition there seem to be substantial grounds for much hope, as the patient appears to have now an excellent chance of recovery, which he certainly had not before the open-air treatment was adopted. The case is put on record as a sufficiently striking example, among many others, of the benefits of the open-air treatment of tuberculosis. At this time information as to the results of this method may be valuable and helpful to others who may desire assistance in deciding upon a line of procedure in suitable cases.

SOUTH AFRICAN HORSE-SICKNESS: ITS PATHOLOGY AND METHODS OF PROTECTIVE INOCULATION.[1]

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THIS disease, so far as is known, is peculiar to South Africa. While affecting the Transvaal and Rhodesia every year—beginning about the end of October and continuing until the following May or even later—it only affects the Cape Colony and Natal in an epizootic form in certain years, although sporadic cases occur annually in certain localities. It affects horses, asses, mules, and it has been asserted—although I have never seen such cases—that quaggas have also been killed by it. A disease which occurs to a limited extent among cattle, called by the natives "imapunga," and one which exists as a widespread plague among high-bred sheep and goats in the eastern province of Cape Colony, are each closely related in their pathology with this malady. The most dangerous areas infected by the disease are those which are relatively low-lying—independently of the absolute altitude of the district.

Period of infection.—It has been commonly observed that where animals during a season of sickness are not permitted to graze after sunset and before the sun has dried up the dew from the herbage they do not so commonly become affected as where such a routine is not carried out. Horses which are stabled during the night are, as a rule, safe, but during last year 60 per cent. of the stabled horses in Eshowe, Zululand, died from this sickness. Veterinary-Lieutenant Coley, A.V.D., who kindly made the observations for me, stated that these horses were mainly fed on Guinea or Ubaaba grass mixed with forage or Indian corn. This grass was usually cut in the evenings and made into bundles till next day. Those who took particular care to have the grass thoroughly dried in the sun before using it did not lose their horses, while those who neglected this precaution lost heavily. The disease is only directly contagious; for while inoculated horses have died in my stables among clean animals I have never found, during observations extending over seven years, a single case of infection from such a source. The annual mortality in Rhodesia and the low-lying parts of the Transvaal amounts to over 90 per cent. Animals which have recovered from the sickness are termed "salted," and are increased from six to ten times in market value. Animals which are "salted" are liable to subsequent attacks of fever which have no necessary relation to fresh infection. I have observed numerous cases of this description among the "salted" animals under my observation and during periods when the sickness was unknown.

Symptoms of the disease.—The disease occurs under two forms—the "dikkopziekte"[2] and the "dunpaardeziekte"[3]. In the former the head and neck swell up enormously, thus affording trustworthy indications of illness during life. In the latter form, as a rule, no symptoms appear until close to the period of death, when the animal becomes subject to very rapid breathing with heaving at the flanks. At the moment of death, in both forms, it is common to find a huge cloud of white foam ejected from the mouth and nose. This foam is produced from a free exudation of blood plasma into the air-passages. Owing to the fact that the animals suffering from the "dunpaardeziekte" show no symptoms until toward the end of the period of illness, it had come to be believed that the whole period of the disease was limited to a few hours' duration.

Post-mortem phenomena.—The pericardium is almost invariably filled with a yellow fluid which, while usually clear, is sometimes blood-stained. Solidified gelatinous exudate is frequently found in relation to the beginning of the aorta. The pleural cavity is frequently occupied by yellow fluid and the interlobular and sub-pleural tissues are also frequently distended by this material. The interlobular tissue is frequently so distended by exudation that the lung tissue proper is dissected up in all directions. The subcutaneous tissue, especially about the great vessels in the neck, is commonly found to be invaded by this exudation, while in the "dikkopziekte" the swelling of the head and neck is due to this effusion. The yellow fluid of the pericardium and the pleuræ is spontaneously coagulable in the presence of minute traces of blood. These represent the more characteristic pathological conditions obtaining in this disease, among which one characteristic is most noticeable by its absence—e.g., inflammatory phenomena. Pathological phenomena are, therefore, for the most part to be ascribed to the marvellous exudation of blood plasma which, while seen more or less throughout the serous and subcutaneous tissues, is best marked within the thoracic cavity. In my annual reports as Director of the Colonial Bacteriological Institute I have referred to the morbid anatomy in greater detail.

INOCULATION EXPERIMENTS.

For the purpose of conveying to healthy animals the infection from those already sick three materials have been made use of—viz., (1) the yellow fluid from the trachea of infected animals; (2) the yellow fluid from the pericardium of infected animals; and (3) the blood of infected animals. The use of the first two fluids has not always been successful in setting up the disease, but fresh virulent blood has invariably proved successful. The methods of use of the materials mentioned are: by subcutaneous injection; by the insertion of a seton, impregnated with the fluid, under the skin; and by drenching—e.g., giving a dose by the mouth. The sites selected are: directly into the lung tissue by hypodermic needle operating through the skin over an intercostal space; into the subcutaneous tissue of the neck; into the subcutaneous tissue of the flank; and intravenously. Any one of the channels selected is equally suitable, but the incubation period is somewhat shorter when the intravenous method is used. When the malady is induced by the inoculation of two or three cubic centimetres of the blood of an animal which has died from spontaneous disease, a mean period of from eight to nine days supervenes, after which the temperature begins to rise The elevation is gradual, with remissions during the night, but it attains to 106° F, as a rule before death, which usually occurs after four or five days of fever

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[1] A paper communicated to the Royal Society for the author by Sir David Gill, F.R.S., on August 20th, 1900.

[2] Dikkopziekte, a Dutch word signifying "thick head sickness," is applied to the form in which the swollen head is the most obvious symptom.

[3] Dunpaardeziekte, "thin horse-sickness," applied to the form in which the head is little or not at all swollen.

After having transmitted the disease through a succession of animals I found it possible to preserve its virulence unimpaired through a long period of time I bleed the animals into bottles which hold 800 cubic centimetres of fluid These bottles are prepared by placing in them 50 cubic centimetres of a 10 per cent solution of neutral citrate of potash and plugging the necks with cotton wool Such bottles are sterilised in the autoclave previously to use After being filled with blood the influence of the citrate arrests coagulation and the corpuscular matter soon subsides leaving the more or less clear plasma above The latter is drawn off to half the original bulk and is replaced by a 50 per cent solution of glycerine and water, containing 0 25 per cent of pure carbolic acid Such a mixture preserves its virulence quite unimpaired for over two years One cubic centimetre of this material serves to induce the disease in its characteristic form, but if the dose is increased to three or five cubic centimetres the period of incubation is shortened and the post mortem phenomena are less characteristic

From the observations which I have made I have found that the subcutaneous injection of fresh or properly preserved horse sickness blood produces symptoms during life, and shows pathological changes after death which are not to be distinguished from those found in the spontaneously occurring cases of the lung form of the disease It is somewhat remarkable that the only cases in which I have succeeded in producing the "dikkop" form were those in which the virus which was used was somewhat septic When however, I have inoculated virulent preserved blood into partially protected animals I have in a number of cases although not in all, produced this form In three cases where the virus used has been sufficiently attenuated not to produce death but a longer febrile period than is found in the fatal cases, I have also seen the "dikkop" form produced

Citrated blood dried in a thick layer was rendered non virulent Where, however, such blood was rapidly dried on glass plates in very thin layers it was found when two grammes were dissolved in salt solution and injected into horses that it produced fever, but not in a virulent form The fever thus induced gave practically no protection against a dose of virulent blood at a subsequent date Mild attacks of horse sickness do not, however, give such protection as is required to resist virulent blood

Experiments made in regard to protective inoculation —The yellow fluid from the pericardium of an animal which had died from the disease was filtered through a Pasteur filter 100 cubic centimetres of the filtrate were injected subcutaneously into a horse 11 days later it was inoculated with three cubic centimetres of preserved blood injected subcutaneously The result, which culminated in death from ordinary horse-sickness, showed that no protective influence had been exerted by the filtered fluid

Calomel in doses of from 30 to 60 grains daily had the effect of retarding death and the blood of such animals drawn at periods later than that at which death usually occurs was distinctly weakened in virulence Such blood has on several occasions though not on all, induced attacks of the disease from which the animals not only recovered but acquired protection against virulent blood injected subsequently

Transference of the disease to other animals —The subcutaneous or intravenous inoculation of donkeys with fresh virulent blood is followed by fever The period of onset is irregular and uncertain, while the duration of the febrile period varies from one or two days to in my experience a week or more The amount of the virus used has some relation to the severity of the fever, but the special susceptibility of the animal is the principal factor in determining the degree and duration of the fever Two donkeys, equal in age were inoculated respectively with one cubic centimetre and 50 cubic centimetres of the same blood In both cases a moderately severe reaction followed and while the animal which had received the injection of 50 cubic centimetres was rather more severely affected than the other, the difference on the whole was but slight In all I have inoculated 12 donkeys, and, while none died, the difference in susceptibility was most clearly demonstrated, some scarcely showing any reaction at all

The susceptibility of cattle to the inoculated disease is excessively variable I have inoculated 21 cattle A definite febrile action was produced in seven cases, and four of the animals died In the case of one which died, and in which the symptoms produced were quite characteristic of those found in horses, the inoculation of its blood into a clean horse was followed by the usual period of incubation, the onset of fever, and death from characteristic horse sickness The disease known as "Imapunga" which occurs to a limited extent among cattle, presents features which in every respect are identical with those produced in susceptible cattle by the inoculation of virulent blood taken from animals suffering from horse sickness

Angora goats are also to a limited extent susceptible to horse sickness infection Of 17 which were inoculated a febrile reaction occurred in 10, none died From one of the 10 blood was taken, which was used to inoculate an ox The latter animal developed fever, and died with exactly similar symptoms during life, and showed the same post mortem conditions as the ox already referred to, the blood of which, when inoculated into a horse, produced characteristic horse sickness

Sheep are also susceptible Of 10 sheep which were inoculated six showed a well marked febrile reaction, but none died I have not succeeded in transferring the disease to rabbits, guinea pigs, rats or mice

The transmission of the disease for protective inoculation by means of the inoculation of fresh blood —The inoculation of horses with the blood of donkeys which were suffering from fever produced by inoculation has been attended with most varying results In some cases death has been produced in some an irregular febrile period, and in others no apparent result has followed The period of onset of the fever has likewise been most variable In some cases a reaction has been set up corresponding to the normal period of incubation which obtains in horse sickness, while in other cases reaction has been delayed for more than 25 days

Where fever has set in on or about the eighth day, has been moderately severe in degree and duration, and has subsequently subsided, a very definite degree of protection has been produced, although seldom high enough to set up such a resistance as to oppose death when the animal was subsequently inoculated with virulent blood

A striking demonstration of variable susceptibility among horses was furnished during these experiments Of three horses and one mule which were each inoculated subcutaneously with five cubic centimetres of fresh blood the mule had no reaction, two horses had scarcely any reaction and one horse had a good reaction In the case of the last horse when subsequently inoculated with virulent blood it suffered severely and just managed to recover The others had not been protected to any appreciable degree Obviously, therefore, the susceptibility of the last animal had been such as to admit of infection from the blood of the donkey producing reaction and the establishment of protection, whereas the higher degree of insusceptibility of the other animals resisted infection and in this way evaded the onset of protection This phenomenon forms the greatest barrier to protective inoculation and has contributed to the enormous trouble which I have experienced in devising a practical method of protective inoculation The fresh infected blood of cattle sheep and goats is still more variable in its results than is that obtained from the donkey Numerous other experiments of the same nature have been made all of which result in showing that donkeys, oxen, goats and sheep possess a very irregular susceptibility to the disease, that the blood of donkeys which do not react may produce no effect when inoculated into the horse, that the blood of donkeys which have evinced moderate reaction may produce intense reaction in some horses and practically none in others, and that a mild reaction in the donkey furnishes no definite assurance as regards the reaction which its blood may set up in horses

Owing to the variable quality of the infection possessed by infected blood of the donkey in the fresh state I experimented with blood taken from donkeys and oxen which after those which react slightly after 100 cubic centimetres of serum and one cubic centimetre of virulent blood is equal to 100 cubic centimetres of fortified serum. Moreover, as already shown, when the virus is attenuated by its passage through less susceptible animals, such as the donkey or the cow, its effect, when used in the same dose, either by subcutaneous or intravenous injection, varies very greatly in different animals; in some producing no evident reaction, in others setting up some fever, while again in others its use was followed by the onset of the virulent disease resulting in death. If, therefore, the admixture of serum with virulent blood is followed on inoculation merely by a modified form of the disease it must be concluded that the serum of itself cannot be credited with this result, but that a peculiar quality existing in the animal body and varying in amount from animal to animal must play an important part. Whether this principle is a simple body or is a combination of several bodies cannot at this moment be determined, but for convenience' sake I would suggest that the name "antagones" should be applied to it. The term need not be taken to imply either an antitoxic or a germicidal body, but merely to denote the "defensive" properties which are already existent to a greater or less degree in all animals, or are produced or increased under special stimulation. Since thoroughly "salted" animals and donkeys can be re-inoculated and infection proved to exist in their blood for at least 10 days subsequently, I am inclined to look upon the protection existing in "salted" animals as of the nature of a "tolerance," and to believe that true immunity in horses against this disease is never acquired.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

PERFORATING SHELL WOUND OF THE LEFT CHEST APPARENTLY HEALED; ACUTE STRANGULATED DIAPHRAGMATIC HERNIA; LAPAROTOMY; DEATH.

BY WILLIAM EDWARD HOME,
STAFF-SURGEON R.N.

ON Oct. 28th it was reported to me that a man had been suffering for two days from constipation and colic and that he had been under treatment unrelieved for 26 hours, and I was asked to see him. It soon became clear that he was suffering from acute intestinal obstruction. The localising signs and symptoms were incorrectly interpreted and I believed that the trouble would be found to be in the right iliac fossa. I performed laparotomy, but failed to find the obstruction. The patient died on the 30th. A post-mortem examination on the next morning showed that the left lung was collapsed into the upper part of the left chest, while nearly the whole of that side was occupied by the omentum and a large knuckle of the transverse colon which had escaped from the abdomen through a slit in the diaphragm with its edges rounded, not new cut, and adherent generally to the omentum. I would note that the man lay sometimes on the injured side, but generally he sat up in bed, and he never lay down towards the end. I suppose this position relaxed the edges of the slit. The patient had been wounded at Tientsin four and a half months before by a fragment of shell which penetrated the chest and (as I was told afterwards by a friend) had not been removed. The wound was in the præcordia and had certainly penetrated the lung and probably, also, I submit, the diaphragm, the lesion in which had not healed. The external wounds were reported to be healed two and a half months before. He made almost no complaint to us, and, indeed, I had mistakenly supposed him to be well and had never at all associated the colic with his wound. That others may be warned of the risks which may attend even those wounds which are said to be healed I desire to put this case on record.

H.M. Transport *Jelunga*, Suez.

TWO CASES OF EFFUSION INTO THE SAC OF THE PERICARDIUM, WITH FATAL TERMINATION IN 24 HOURS.

BY FREDERICK WILSON, M.B., C.M. EDIN.

CASE 1.—A young married man, aged 35 years, fell into a river on Dec. 25th, 1899, but felt no ill effects from his immersion till the afternoon of the 28th, when he complained of a stitch underneath his heart and difficulty in breathing. After he had taken a little brandy this went off and he felt better, but not feeling "up to the mark" he went to bed early. About midnight he complained of great pain in the region of the heart and difficult breathing. A medical man was sent for at once, but having some distance to go he was too late, for the young man had expired before his arrival. The patient had, it seemed, become unconscious directly the messenger had departed, and he never regained consciousness. A necropsy was performed on the next day when all the organs were found to be perfectly healthy except for the presence of a little pleurisy on the left side, and when the sac of the heart was opened there was found fully a pint of fluid. In this case there was no opportunity for making a diagnosis.

CASE 2.—A young man, aged 20 years, had been enjoying himself on the morning of his birthday. He had then gone home and had partaken of a very heavy meal. His employment being a miner on the night shift, he went to bed and slept soundly till the time came for him to go to his work. On the evening of Nov. 5th, 1900, he went to work. He did not then complain of illness, but while in the pit he felt sick and had a little vomiting. Nevertheless, he went on with his work all night. When he came up to the surface on the morning of the 6th he was again sick, and when he got home, after taking some tea he vomited again. He then felt better and went to bed. On the same afternoon he became unconscious, but his mother having gone away for a fortnight's holiday assistance was not sought till 10.30 P.M. When I arrived I found him lying unconscious, gasping for breath, and sweating profusely. On careful examination I could find nothing to account for the unconsciousness, and as it was late and I had been informed about the drinking on the previous day I told his friends to keep him warm and to watch him till the morning, when I would look in early. To my surprise I found him on the morning of the 7th pulseless and evidently dying. He was still unconscious but his breathing was easier. I called in another medical man, but we discovered nothing to account for the symptoms which were present. The patient was in such a precarious condition that we did not think it advisable to turn him over to examine him thoroughly, and the omission to do so was, I think, in this case quite justifiable. The patient died on the same evening and I performed a necropsy on the afternoon of the 8th, when I found all the organs of the body healthy except that there was a little pleurisy on the left side, and on opening the pericardial sac I found about a pint of fluid.

Newtown, North Wales.

A CASE OF SPONTANEOUS EVOLUTION IN ARM PRESENTATION.

BY J. BELL, L.R.C.P. LOND., M.R.C.S. ENG.,
ACTING PRINCIPAL CIVIL MEDICAL OFFICER, GOVERNMENT CIVIL HOSPITAL, HONG-KONG.

SPONTANEOUS evolution in arm presentation being rare the following case may be of interest.

A Chinese female, aged 28 years, was admitted to the Government Maternity Hospital having been in labour for 24 hours. The left hand and arm were presenting and were quite black. I was immediately sent for and I saw the patient about 15 minutes after receiving the summons when I found that the labour had terminated naturally. The nurse told me that there was a severe pain and then the head came down followed by the body. The child was at full term and was dead. It was a small child, but was unfortunately not weighed. The mother has had three other children; she was 5 ft. 1 in. in height and weighed 7 st. 9 lb., being about the average height and weight of women of her class.

Hong-Kong.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare —MORGAGNI *De Sed. et Caus Morb*, lib iv, Proœmium

LEEDS GENERAL INFIRMARY

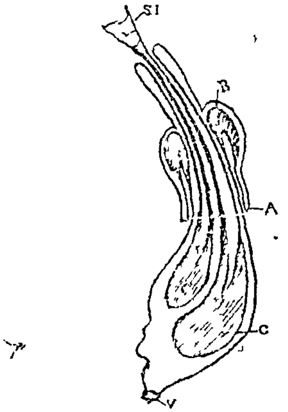
TWO UNUSUAL CASES OF INTUSSUSCEPTION

(Under the care of Mr LAWFORD KNAGGS)

IT is only within recent years that laparotomy has been considered admissible in the treatment of intussusception, but a few cases are on record in which this operation was performed with success even in pre antiseptic days Such a case was recorded in 1835 by Dr J R Wilson[1] of Mississippi, but none of these cases occurred in infants, in whom shock after abdominal operations is so very marked Laparotomy was, however, recommended many centuries ago by Praxagoras Though it is true that inflation or injection may be followed by recovery in a certain proportion of cases, as among the 103 cases collected by Dr F H Wiggin[2] of New York there were 16 recoveries with this treatment, but in the same series there were 23 deaths in cases in which inflation or injection had been employed After laparotomy 21 patients recovered and 43 died, but in most of the fatal cases injection or inflation had previously been employed in vain In the former of Mr. Lawford Knaggs's cases recorded below, the very youthful age of the patient, three months and a half, was greatly against success, though recovery has occurred at a very slightly greater age, as in a case under the care of Mr E. W Roughton[3] in which the age was four months An early record of a retrograde intussusception is that described by Spry[4] One of the most curious suggestions for the treatment of intussusception is that made by John Hunter, who recommended emetics, as he thought that the reversed peristalsis supposed to occur in vomiting might draw out the prolapsed bowel For the notes of Case 2 we are indebted to Dr O H Greenwood, house surgeon

CASE 1. *A double intussusception, laparotomy, reduction, death* —A female child, aged three months and two weeks, was admitted into the Leeds General Infirmary on August 6th, 1899, suffering from an intussusception The symptoms were the usual ones—viz, vomiting, blood stained slimy evacuations, and a tumour in the left iliac region The two former had been present for six days The apex of an intussusception could be felt in the rectum two inches from the anus Two days before admission "the seat" had come down, and after three or four minutes went back by itself This was the only occasion on which this had happened The patient's general condition seemed to be fair

The case was at once handed over by Dr. A G Barrs for surgical treatment, and soon after admission the patient was anæsthetised and the abdomen was opened The reduction of the intussusception was begun from the lower end within the abdomen The apex was gradually pushed up until the empty rectum could be brought into the wound, but it was soon discovered that no real progress was being made The tumour was therefore brought outside It was then found that a retrograde and secondary intussusception was present This had formed from a folding downwards of a portion of the outer layer of the primary intussusception Its length was between four and five inches, and its neck showed as a ring of pale gut encircling the tumour firmly about its middle (A) Reduction of the retrograde invagination was commenced from above Its accomplishment was easy at first, but there was considerable difficulty in unfolding the last three quarters of an inch owing to the swelling that had taken place at the apex (B) When the ascending invagination had been unrolled the primary one was dealt with, reduction being readily accomplished from below in the usual way. The ileo cæcal valve was the presenting part and was the most difficult to reduce On examining the bowel before closing the abdomen the peritoneal covering was found to be the subject of many longitudinal splits, and there were considerable thickening and a good deal of local peritonitis about those portions of the bowel that had formed the apices of the primary and secondary invaginations The child died suddenly four hours after the operation during an act of vomiting when apparently she had rallied satisfactorily and was going on well.



S I Small intestine A, Neck of secondary intussusception B, Apex of secondary intussusception C, Ileo-cæcal valve. V, Anus

CASE 2 *Enteric intussusception caused by an intestinal lipoma, laparotomy, reduction, removal of tumour, recovery* —A woman, aged 29 years, was admitted into the Leeds General Infirmary on April 16th for symptoms of intestinal obstruction Her illness had begun suddenly five weeks before with intense pain in the left iliac region accompanied by diarrhœa and vomiting This subsided, but from that time she had "bilious attacks" with vomiting every other day About 10 days before admission she became much worse and a medical man was called in She was very bad with vomiting, diarrhœa, and pain on April 13th, was about her work on the 14th, and bad again the day before admission Her motions had contained slime and a tarry looking substance

On examining the abdomen the left rectus was at once noticed to be more prominent than the right, and at times was raised markedly above the general surface of the parietes On manipulation a large elongated tumour could be felt extending from several inches above the umbilicus down into the pelvis It was covered chiefly by the left rectus and when palpated it became hard and more defined and the seat of pain, and these changes were accompanied by gurgling The tumour was not tender and the resonance over it was impaired On rectal examination what was thought to be the apex of an intussusception was readily felt through an intervening fold of mucous membrane

On April 17th the abdomen was opened in the median line and a large intussusception of the small intestine was found lying beneath the left rectus The apex lay at the bottom of the pelvis and the neck deep down in the upper part of the abdomen This could only be brought to the surface towards the completion of reduction, which was easily accomplished by taxis applied at the lower end in the orthodox manner It was then found that the presenting part of the intussusception had been an elastic, firm, and nodulated tumour as big as a hen's egg, which, though attached to the wall of the bowel was freely moveable within the intestine in the vicinity of its anchorage There was no congestion of the invaginated bowel or inflammation of the opposed serous surfaces, but there was a general hypertrophy of the intestinal walls both above and below the tumour aneurysm, but later dulness was noticed at the left apex. This was followed by pulsation in the second left interspace. There was some fulness in the veins on the left side of the neck and marked bronchial breathing in the left interscapular region was audible. At no time was there any inequality of the radial pulses or of the pupils. Paralysis of the left vocal cord only occurred four days before death. During the last six months of life dysphagia and the constant coughing up of a glairy viscid mucous greatly distressed the patient. At an early period of the case Tufnell's treatment was tried for seven weeks, but the patient was so intolerant of confinement to bed that it had to be discontinued. The end was preceded by severe attacks of paroxysmal laryngismus stridulus, with a cough like that of whooping-cough. In the attacks the face became purple and the surface of the body livid. On laryngoscopic examination abductor paralysis of the left vocal cord was found. Death occurred in one of the attacks of dyspnœa, four and a half years from the commencement of the symptoms. At the necropsy a tumour of about the size of a fœtal head was found lying immediately above the sac of the pericardium. The whole of the transverse and descending parts of the arch of the aorta were apparently included in the aneurysm. There were evidences of pressure on the trachea and both bronchi but especially the left and on the œsophagus. The left lung was collapsed to about two-thirds of the size of the right lung. The heart was of about normal size and depressed with its long axis lying transversely. Dr. Hall commented on the difficulty of diagnosis in this and similar cases of aneurysm in which at the onset physical signs were wanting or were very obscure. He pointed out that a harsh, clanging cough in a middle-aged man with atheromatous vessels and a history of syphilis were very suggestive of aneurysm. He laid stress on the frequency of paralysis of the recurrent laryngeal nerve, especially on the left side, and emphasised the importance of systematic laryngoscopical examination in all cases of obscure intra-thoracic mischief. This examination as a routine measure was necessary as unilateral abductor paralysis was compatible with a practically unaltered voice. Of 41 cases of aneurysm which he had seen 22 had presented hoarseness and 19 had presented paralysis of one or other vocal cord, usually the left. Dr. Hall alluded to the paroxysmal nature of the dyspnœa met with in cases of intra-thoracic aneurysm, and thought there were not infrequently attacks of laryngeal spasm. Tracheotomy was generally useless, as the main cause of the dyspnœa was direct pressure in the trachea. He regarded the diastolic shock or "thud" as the most reliable auscultatory sign of aneurysm, the presence or absence of a murmur being of comparatively small importance. He had not found tracheal tugging to be of assistance in diagnosis. The combination of loud tracheal breathing and dysphagia, pointing to pressure on the trachea and œsophagus, was, in his opinion, very suggestive of aneurysm. The most recently introduced aid to diagnosis of aneurysm—viz., the Roentgen rays—promised to be of the greatest possible assistance. In discussing the treatment of aneurysm he pointed out that the cases subjected to the Tufnell method required to be carefully selected, and he was not in favour of restricting the diet to the quantity advised by Tufnell. He had found that restriction to 10 or 12 ounces of solids and from 12 to 16 ounces of fluids was sufficient, and as much as 18 ounces of solids might be allowed, but the fluids must not exceed 16 ounces If this plan were adopted drugs should as far as possible be avoided. His experience of the treatment of aneurysm by the subcutaneous injections of gelatin was limited to one case which was not benefited by it. Dr. Hall suggested that the discussion might be profitably directed to the following points:—1. The diagnostic value of the diastolic thud in aneurysm of the aorta. 2 Was tracheal tugging ever a sign of great importance? 3. The range of the Roentgen rays in the diagnosis of aneurysm. 4. If the Tufnell plan of treatment were adopted, how long should it last and should it be continuous or intermittent? 5 What amounts of solids and of fluids were found to answer best? 6 Was it desirable to give iodide of potassium during a course of Tufnell's treatment? 7. Was there any evidence forthcoming as to the utility of chloride of calcium in the treatment of aneurysm? 8. Was Lancereaux's method of treatment by the subcutaneous injection of gelatin a safe and reliable plan? 9. For what condition should tracheotomy be advised in cases of aneurysm of the aorta?

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[1] Transylvania Journal of Medicine 1835
[2] THE LANCET, August 28th, 1897, p 525
[3] THE LANCET Feb 23rd, 18[illegible], p [illegible]
[4] Medical and Physical Journal, No. 11

Sir WILLIAM BROADBENT said that he had seen the case to which Dr. Hall had referred to in July, 1896, and had come to the conclusion that there was an aneurysm of the third part of the aorta, although at that time there was no distinct pulsation. The principal point was the slight extension of dulness on the left of the manubrium and the reinforcement of the aortic second sound at that spot. Tracheal tugging—a sign he never failed to look for—was present and also brassy cough and unequal pulses. The jugulars did not empty on deep inspiration and there was imperfect entry of air into the left lung. He had ordered iodide of potassium. He placed no reliance upon mere symptoms as an indication of consolidation. If consolidation was taking place in an aneurysm the chief indications of this consolidation were a diminution of the diastolic shock and a modification in the ringing second sound. Murmurs were of no significance whatever in aneurysm. He had seen a parallel case as regards the physical signs, but there was no paralysis of the vocal cord. Under iodide of potassium the patient had greatly improved. He had seen him lately. The diastolic shock had disappeared. The dulness was diminishing and the aortic second sound was not remarkably ringing. As regards the points under discussion, the diastolic thud when present was absolutely diagnostic, but its absence in aneurysm of the second or third part did not nullify other physical signs. Moreover, it might disappear when consolidation had taken place. The tracheal tugging was of more interest than importance in his opinion. Skiagrams might undoubtedly be useful in those lesions which were not accessible to physical examination, but he had not yet seen a case in which they had achieved or contradicted a diagnosis made by other means. Turning to the question of treatment, he believed that iodide of potassium answered every purpose and rendered what was called Tufnell's treatment unnecessary. He had never found this extreme curtailment of fluid indispensable. The great opportunity for successful treatment came, not in the early stage of an aneurysm, but later, when its orifice had become narrowed; consequently treatment which had previously failed might be successful later. He had had no experience of calcium chloride or of gelatin. As to tracheotomy, it was of no use when the trachea was directly pressed upon, but free bleeding afforded the greatest relief to breathlessness and pain, and he referred to a case in which the patient had lived for many years afterwards.

Dr. HUGH WALSHAM referred to a case of aneurysm in the Victoria Park Hospital in which the heart was lying transversely in the thorax, in which the Roentgen rays had enabled them to make a diagnosis. This procedure was certainly useful in aneurysms of the transverse and descending arch. He also referred to another case of a woman who was thought to have only aortic regurgitation and who presented no symptoms or signs of an aneurysm which was revealed by means of a skiagram.

Dr. ROBERT MAGUIRE wished again to ask whether anyone had seen a case of aneurysm occurring in the labouring man absolutely cured so that he could return to his work. It was undoubtedly true that those who did light work could be cured in this sense but he doubted if labourers could be restored to this extent. He had seen several cases in which he believed that the constant pressure of an aneurysm upon the œsophagus and trachea which resulted from a patient habitually lying on his back produced a tendency for the aneurysm to burst into these passages. He wished particularly to refer to the results of Lancereaux's treatment. He had treated four cases in this way all with good results. He could not enter into all the details but there was no question that consolidation had been brought about in these cases. The first presented a cough, alteration of voice, paralysis of the left vocal cord, dilatation of the heart, a systolic murmur both at the aortic orifice and at the apex, the cardiac apex being situated in the axilla. After the third and fourth injection there was a marked alteration in these cases. The cardiac murmurs had disappeared, the heart had gone back into its right place, and the area of dulness had diminished. The second and third patients also showed great improvement both in the sound of their voices and in other symptoms. The fourth case showed an improvement in the area of dulness and a great relief in the pain which affected the sixth to tenth intercostal nerves. His method was to inject 100 cubic centimetres of absolutely sterile gelatin of a strength of 2 per cent. made up with seven per 1000 chloride of sodium solution. It must be injected into the intra-muscular tissue and he preferred the buttock, avoiding the sciatic nerve. The skin could be frozen with methyl chloride and the needle could be introduced at least two inches into the muscle Everything must be absolutely sterile. This was a point of the greatest importance. He had had considerable difficulty in finding a description of Lancereaux's methods.[1] Critics had said that the method was not so successful in other hands as it was in those of Lancereaux, and this he thoroughly believed, probably because of the want of care in its execution. He began by doubting the efficacy of the method, but he thoroughly believed in it now. His practice was to give four injections on four consecutive days, then to wait for two weeks and repeat the injections, and then to wait for a further period of time. The question as to whether the treatment was quite safe he was not prepared to answer, but there was no doubt that thorough asepsis and many little points of technique were of the highest importance, and undoubtedly there were several sources of risk of tetanus and sepsis such as might occur in all surgical procedures.

Dr. R. SANDERSON (Brighton) remarked that the Tufnell treatment was certainly not suitable for neurotic persons. The patient referred to by Dr Hall had spent his time in studying the anatomy of the thorax and calculating in which direction his aneurysm would burst. Neurotic cases, he believed, were much better moving about.

Dr. OSWALD A. BROWNE had had the opportunity of making necropsies on a large number of cases at St. Bartholomew's Hospital. In nine out of 35 cases of aneurysm of the aorta the swelling arose from the posterior wall of the transverse portion, and 15 out of 35 compressed the trachea. Five of them compressed the œsophagus also. This went to show how frequently the lesion affected the transverse arch and projected backwards. Death frequently resulted from pressure upon the trachea He did not think that the recurrent laryngeal nerve was so frequently affected. In only three out of the 35 cases was it involved. He referred to a case of aneurysm with slight dulness in front of the sternum. Examination of the larynx showed no signs, but a few days later the patient was attacked with a severe paroxysm of dyspnœa. This was temporarily relieved by bleeding, but the dyspnœa was repeated each day and he died upon the fourth day, and an aneurysm no larger than a tangerine orange was found compressing the trachea Aneurysm of the descending part of the arch generally made its way into the left interscapular space and often obstructed the œsophagus. There was a difficulty in carrying out Tufnell's treatment. He mentioned a case of aneurysm of the abdominal aorta treated by calcium chloride. The man was about 35 years of age; an aneurysm of about the size of a cricket ball could be made out in the abdominal aorta. He was attacked by severe abdominal pain He remained in hospital at rest and was put upon 20 grains of calcium chloride, gradually increased to 30 grains, three times a day. He went out completely well, and when seen two years subsequently was still carrying on his occupation of a tramway conductor.

The discussion was adjourned to Dec. 10th.

CLINICAL SOCIETY OF LONDON.

Thrombosis of the Inferior Vena Cava.—Syphilitic Pyrexia.—Subsequent History of Nine Cases in which the Spleen had been Removed.—Nephritis without Albuminuria.

A MEETING of this society was held on Nov. 23rd, Dr. W. CAYLEY being in the chair

Dr. SIDNEY PHILLIPS narrated a case of Thrombosis of the Inferior Vena Cava, Iliac, and Femoral Veins of acute onset and fatal termination, with symptoms resembling those of perforated gastric ulcer The patient was an anæmic maid-servant, aged 19 years, who had suffered from slight symptoms of indigestion She was suddenly seized with pain in the abdomen, vomiting, and collapse, accompanied by a temperature of 103° F Soon after this (on Dec. 6th) there were swelling and pain in the region of both parotid glands, but this cleared up Next (on Dec. 9th) she was taken with cramping pains and thrombosis of the deep veins in the left calf. Finally, there was swelling (œdema) in the whole of the left lower extremity, followed by abdominal pains and thrombosis in the portal system. Throughout the temperature was not elevated except on the first occasion. The patient died from exhaustion. At the necropsy extensive thrombosis was found in the inferior vena cava and iliac veins and the veins of the left lower extremity. No local or constitutional cause for the thrombosis could be discovered and Dr. Phillips regarded it as a case of primary infective thrombosis. This case showed that parotitis was not, as often stated in text-books, distinguishable from mumps by being unilateral and suppurative —Dr. CAYLEY asked if an examination of the clot in the inferior vena cava had been made.—Dr. SAMUEL WEST referred to a case which he had reported some years ago which resembled Dr Phillips's case in some particulars, only there were no abdominal symptoms suggesting perforating ulcer. The patient was a young girl who was taken with pain in the abdomen followed by swelling of the legs. Shortly afterwards the urine contained a good deal of albumin. This was followed by an attack of shivering accompanied by ascites, indicating thrombosis of the portal system. She died and at the necropsy a clot was found in the inferior vena cava, portal system, and veins of the legs. The thrombus apparently originated in this case from one of the pelvic veins in which a thrombus of older date was discovered.—Dr PHILLIPS, in reply, said that no bacteriological examination of the clot had been made because in the course of the necropsy the vena cava had been injured by the knife, and it was thought useless afterwards to make cultures.

Mr. CAMPBELL WILLIAMS reported a case of Late Syphilitic Pyrexia (intermittent essential fever of syphilis). The patient was a man, aged 43 years, who contracted syphilis in December, 1896 He had the usual sore, enlarged glands, and secondary symptoms. After this he had suffered little with the exception of a sore tongue, which was irritated by an ill-fitting denture. This was quite healed by June, 1898, and he had no further symptoms. He was treated with mercury mainly, alternately with iodides, for a period of two years, and was free from all symptoms for 18 months before ceasing attendance. In January, 1900, he had influenza, and in April he was reported to be very ill from post-influenzal intermittent fever, for which he was being treated with quinine and arsenic. Mr. Williams saw him on April 18th. He had periostitis of the right clavicle and pyrexia. His temperature rose every afternoon and the crisis came in the small hours of the morning. Syphilitic fever was diagnosed, he was put upon mercury, and on April 25th his temperature became normal and had remained so ever since. He was now quite well —Dr. PHILLIPS remarked that such cases were by no means uncommon, and he referred to one which was recorded in the Transactions of the Medical Society of London. In another case which had been under his care a woman who had contracted syphilis 10 years previously developed pyrexia which might be mistaken for malarial fever. He thought that such cases were commoner than was generally supposed. They were apt to be confused with tubercle or to be mistaken for quartan or tertian ague. Some years ago a case had been reported by the late Dr. J. S. Bristowe in the Transactions of the Clinical Society of London of a man who was affected with intermitting pyrexia of obscure origin until on one occasion, when the eyes were being examined, syphilitic choroiditis was discovered. Mercury was then administered and the patient got well —Dr. T. D. SAVILL agreed that these cases were not uncommon and he was surprised that this fact had not found its way into text-books. He was house physician when the case referred to by Dr. Phillips was under Dr. Bristowe's care, and he believed that the drug used was iodide of potassium, not mercury. He commented on the sudden subsidence of the temperature under mercury in Mr. Williams's case, remarking that in his experience the temperature did not fall as rapidly under mercury as under iodide. He recalled a rather remarkable case seen by him at the Croydon Hospital—that of a lad, aged 15 years, who was supposed to be suffering from pernicious anæmia He had an intermittent temperature and this lasted for about nine months, when he died. Post mortem they found very extensive endocarditis and endarteritis, and on opening the skull they alighted upon a large gummatous mass stretching across the frontal region. The clavicle was also involved and striæ were seen in the cornea.—Mr. CHARTERS SYMONDS took exception to the term "essential fever." He thought that in such cases there was always a periostitis or some gummatous deposit which might or might not be discovered but which always acted as a cause for the constitutional disturbance.—Dr. CYRIL OGLE was not quite sure whether the cure by mercury was sufficient evidence to prove such cases to be syphilitic. He referred to a case which he had seen in St. George's Hospital of a patient who had suffered from pyrexia for eight weeks before admission and eight weeks while in hospital. Every second or third day the temperature went up to 103° or 104° F., accompanied by headache, sweating, and sometimes vomiting. Treatment by quinine and arsenic was without effect and repeated examination revealed no cause. Administration of creasote in this case was attended by a disappearance of the fever and he suggested that the pyrexia was probably due to intestinal sepsis arising from some abnormal fermentation within the intestines. Possibly mercury would have the same effect as an intestinal antiseptic.—Mr. WILLIAMS, in reply, said that he had used the term "essential fever" in contra-distinction to that which appeared with the initial rash of syphilis. In regard to the treatment he believed that such cases reacted more quickly to mercury than when treated by iodide. One of the interesting features in this case was the thorough treatment by mercury during 18 months to which the patient had been previously submitted.

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[1] Our readers will find an account of the method in THE LANCET, vol. ii., 1898, pp. 1092, 1294, 1309.—ED. L.

Mr. J. BLAND-SUTTON reported the details of a case in which he had performed Splenectomy for an Enlarged and Wandering Spleen in a woman, aged 34 years. The patient, already the mother of seven children, was two months pregnant at the time of the operation; the abdominal wall being very lax from repeated pregnancies allowed the spleen to tumble freely about, and this caused much inconvenience and pain. The operation was carried through without difficulty; the patient quickly recovered and left the hospital 18 days after the splenectomy. Her subsequent health had been very good. Mr. Bland-Sutton remarked that since 1892 he had performed the operation of splenectomy on nine occasions, two of the patients having died. One was a malarial case with intense leucocytosis and one was a case of malignant disease. Seven of the patients were living and he had taken some pains to ascertain that they were still in a condition of good health. Four of the operations had been done for wandering spleen. Two of them were for curious enlargement unattended by any increase either in the red or white blood corpuscles. In one the spleen had been removed because it was torn during an operation performed for a large abscess the base of which consisted of the capsule of the spleen. One of these cases was particularly worthy of comment. The patient was tuberculous and was transferred from the Brompton Hospital to the Chelsea Hospital on account of a lump in the abdomen which was diagnosed as a wandering spleen. The patient had a cavity in the lung and he (the speaker) was doubtful about performing the operation of splenectomy because in two or three of the recorded cases patients had developed lung disease subsequently to the operation. However, splenectomy was performed and the patient made a good recovery. The spleen, which had been removed, was found to be filled with miliary tubercle, the nodules having been examined by Mr. A. G. R. Foulerton and found to contain tubercle bacilli. The operation had been performed three years ago, the patient remaining well for some time, but at the present time the lung disease was again becoming active. In all the seven cases repeated observations had been made upon the number of red and white blood-corpuscles with great care and no alteration had been discovered in the blood. Indeed, anyone examining these patients would never suspect them to be spleenless.—Dr. CAYLEY remarked that it would be interesting at the necropsy of Mr. Bland-Sutton's cases to see what had made up for the loss of the splenic tissue.—Dr. PERCY KIDD asked if there was much hæmorrhage during the operation. He referred to a patient suffering from leucocythæmia on whom an operation had been performed upon the kidney, on account of pyuria, in spite of the presence of leucocythæmia. Such cases were often attended by considerable hæmorrhage.—Dr. A. F. VOELCKER asked if an accessory spleen had been discovered in any of the cases. If so this would afford an explanation of the absence of changes in the blood in Mr. Bland-Sutton's case. He had made a post-mortem examination on one case in which the spleen had been removed one and a half years previously. There was no accessory spleen in this case and the patient eventually died with syphilitic disease of the liver.—Mr. BLAND SUTTON, in reply, said that he always avoided operating in cases of leucocythæmia. Since his first operation an average of about six cases per annum of enlarged or wandering spleen had been sent in for operation, but if an examination of the blood showed leucocytes they almost invariably died from leucocythæmia within from three to 18 months. His rule was that if the proportion of white corpuscles did not exceed 20 to the 1000 splenectomy might be performed. He referred to a patient, aged 26 years, who had an abdominal tumour which was thought to be malignant disease of the spleen. The proportion of white corpuscles in this case was 20 to the 1000, and although it might be regarded as an early stage of leucocythæmia it was decided to explore. The operation was successful, although there was a little more hæmorrhage than usual; but at the end of 48 hours the patient developed some curious nerve phenomena and the stomach seemed to indicate acute dilatation. She died within 24 hours. There was nothing to indicate hæmorrhage. The case was a private one and a necropsy was refused. During operation he had always looked out for an accessory spleen so as to leave it behind if it were present. He had hunted up one of the late Sir Spencer Wells's old cases—a young woman upon whom splenectomy had been performed 15 years before. He (Mr. Bland-Sutton) had found her to be in good health though she was of slender build.

Dr. W. P. HERRINGHAM communicated a case of Nephritis without Albuminuria. The patient, a boy, aged nearly four years, who was admitted into the Children's Hospital, Paddington-green, for diarrhœa and vomiting on March 29th, 1899, was supposed to be cured, and was sent to the convalescent home of the hospital on May 5th. While in the ward the urine was thrice examined and was found to be natural. The amount was normal. There was no previous history of scarlet fever. From May 5th to July 14th the patient was in good health at the convalescent home, which was visited regularly by the resident medical officer, and where the children were kept under constant supervision. There was no case of scarlet fever at the home. On July 14th dropsy began in the feet and spread to the legs and face. The urine was not albuminous. The patient was sent back to the hospital and for the next six weeks he formed a typical picture of subacute nephritis, but without ever showing any albumin in the urine, which was exceedingly scanty in amount. No formed elements were ever visible under the microscope. On August 29th he died. At the necropsy (made by Dr. L. G. Guthrie) the viscera, including the kidneys, appeared natural. Microscopical preparation (made by Mr. A. E Turner) showed cloudy swelling in a few of the convoluted tubes and albuminous plugs in a great many; in a few of the collecting tubes similar plugs were found. An exudation, apparently of serum or albumin was found in almost all the glomeruli, and there may have been some cellular increase in the capillary tuft. As the child was under hospital observation for three and a half months before the onset scarlet fever might be excluded. The case was believed to be unique. Several cases had been recorded of nephritis without albuminuria following scarlet fever, but though it had been suspected to occur without scarlet fever the condition had never been proved by post-mortem examination. Why the anuria should be so extreme he did not understand.—Dr. WILLIAM EWART asked for details as to the symptoms in this patient and what treatment had been adopted. In some cases of dropsy he had seen very good results from acupuncture and the administration of quantities of water to drink. As soon as the serum exuded from the punctures the urinary secretion was increased and its specific gravity improved. He regarded Dr. Herringham's case as an illustration of a special disease not yet described.—Dr. F. E. BATTEN had seen two or three cases resembling the one narrated. One was that of a child, about four or five years of age, who passed very small quantities of urine, containing very little urea of low specific gravity, attended by generalised œdema. The patient recovered. Another case presented œdema exactly like albuminuric cases. The patient passed urine of low specific gravity containing very little urea The child died and at the necropsy he thought that the kidneys were rather small for the child's age, but the microscope revealed no change of any kind.—Dr. JOHN FAWCETT asked what evidence there was of the exudation in the glomeruli being of an albuminous nature.—Dr. WEST remarked that the condition was not unknown in infancy and in children under two years of age. They presented dropsy and all the symptoms of renal disease. Nevertheless, careful examination revealed neither albumin nor other abnormality in the urine. He had seen several cases but they all got well. He was not satisfied that the dropsy was of renal origin.—Dr. HERRINGHAM, in reply, said that he felt some doubt as to the renal nature of the disease though it had all the symptoms of it. The patient had had no anæmia previously. The œdema was the first symptom and it spread rapidly upwards from the legs. He felt no doubt about the nature of the changes in the kidneys which he had described. They had been seen by others. As regards the treatment by acupuncture he had never seen a patient recover when treated by this method.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Mental Disorders dependent on Toxæmia.—The Use and Abuse of Travel in the Treatment of Mental Disorders.—Application of Electricity in certain Forms of Mental Disease.

A MEETING of this association was held on Nov. 21st, Dr. FLETCHER BEACH being in the chair.

Sir DYCE DUCKWORTH having read a paper on Mental Disorders dependent on Toxæmia (a full report of which appeared in THE LANCET of Nov. 24th, p. 1475) a discussion followed.—Dr. F. W. MOTT paid a high tribute to Sir Dyce Duckworth for his paper and referred to the selective actions of different poisons, instancing in this respect strychnia in its effect upon the spinal motor neurons. He thought that an important contributory factor in the production of insanity which had not been mentioned by Sir Dyce Duckworth was strain, and to this Professor Edinger had called marked attention and had proved that it was a factor in the causation by experiments upon animals. He also mentioned haschish poisoning in Egypt as one of the toxæmic causes of insanity.—Dr. G. H. SAVAGE said that he felt that what delirium was to the general physician acute mania was to the alienist. In consequence of a remark by Sir Samuel Wilks many years ago that one would expect the neurotic person to be more liable to delirium than another, he tried to find out whether that was the case, but at the fever hospitals he found that in many instances no inquiry had been made into the history in this respect. He agreed in the probability that a large number of puerperal cases had a septic origin.—Dr. EDWIN GOODALL said that in some cases of delirious mania bacteria had been found, including staphylococcus pyogenes albus and a diplococcus which corresponded with Fraenkel's pneumonia coccus. Animal experimentation laboured under so many disabilities in this country that little was to be expected, but he suggested that the ecchymoses seen after convulsions might be examined for organisms. He once read in a German paper that malaria was conducive to the cure of mental conditions, and one German physician suggested that asylums should be built on malarial sites. He remembered reading that in one Italian hospital in Constantinople good results in mental disorders were obtained by injection of anti-streptococcic serum.—Dr. CHARLES A. MERCIER said that the interesting point was that toxæmia was the only agent which they were sure would produce insanity—that is to say, it was the only agent by which they could produce insanity at will. Alcohol was a case in point and the insane manifestations corresponded with the amount of alcohol administered. With regard to heredity, how could they trace hereditary predisposition? how could they recognise it? He thought that Dr. Mott would admit that strain had only a localising influence. He rather looked upon the transmitted heredity as an inability to resist and eliminate toxic products. Insanity affected not only the brain but the whole man, and any derangement might be contributory to the mind disease.—Mr. J. F. BRISCOE pleaded for greater attention being paid at hospitals to the alimentary canal and the examination of the motions of patients in the same way as attention was given to urine.—Sir DYCE DUCKWORTH, in reply, said that he took it that the effect of strains was simply to produce a *locus minoris resistentiæ* and that determined the part where the toxin had effect. The question of inheritance of tendencies from parent to child concerned them very deeply and was a matter of enormous importance. He urged his hearers not to dogmatise too much yet and not to say now that all insanity was toxæmic, although it might hereafter be found to be so. Certainly toxæmia played a very large part in insanity and it was on that subject that his contribution had reference.

Dr. G. H. SAVAGE read a paper on the Use and Abuse of Travel in the Treatment of Mental Disorders. He said: As I have found that travel is being ordered for nearly every form of mental disorder it seems to me time to consider whether this all but universal remedy is beneficial or not. First I would consider the reasons for sending persons of unsound mind away for voyages and similar expeditions. Many are sent away simply to get rid of them, as they become very trying both to friends and relatives as well as to the general practitioner; next they are sent away in very many instances to avoid certification. The magisterial interference, though safeguarding the medical man, leads to the inconsiderate removal from home of many patients. Lastly, some patients are sent away for their real medical treatment, and these cases I divide into two groups: those who from general reasons would be sent away—for example, patients who cannot winter in our climate and who in addition have become deranged—and the second group contains those who are sent to distract them from their morbid mental ideas. The medical man is in the habit of ordering for patients what suits himself; hence some medical men who are not good sailors avoid sending patients to sea, while others who are fond of the sea send many on the water. I think that for slight disorders of mind following some local cause, such as love disappointment or domestic grief, travel is good; for the confirmed hypochondriac I do not think it does any good. The cause of the disorder must modify the treatment to some extent. I do not think that melancholia is benefited in many cases by travel. The danger of suicide is increased and I do not think that the forcing of varying fresh sensory impressions on such patients is for their benefit. I believe travel to be useful to many convalescing patients, but here, too, the danger of suicide has to be faced. Those suffering from delusional insanity had better not be sent on voyages—every fresh impression gives rise to fresh suspicion. In conditions of apathy and partial dementia such as follow toxic and similar conditions, taking influenza as a type, the patients are often cured by travel. Probably the most difficult cases to advise upon are those of general paralytics in their earlier stages, for then the friends will not believe that patients so vigorous and so buoyant can be on the road to a fatal malady. They think that removal from the causes of excitement must do good. Again, in the stages of remission many such patients are sent abroad; I can only say that this is done at great risk and I have seen such misery follow that I cannot advise it. I only strongly advise travel when emotional causes have caused emotional disorders of slight degree, when patients are apathetic and neurasthenic, and when they are convalescing from mental disorders. I strongly oppose such treatment in active melancholia and general paralysis of the insane. I have only time to hint at the methods of travel but I would insist upon it that sea voyages are only suitable to a small number of persons and that long railway journeys are good neither for the sound nor the ailing.—Sir HERMANN WEBER agreed that there were dangers in long sea voyages for the insane. Three intimate friends of his had been sent—by others—on long sea voyages. One, an only daughter, suffered from grave melancholia and was sent to sea with an attendant. One of the other two had two attendants and a medical man. Two of them killed themselves on the way by jumping overboard. The third repeatedly tried it, but as he had a medical man and two attendants he was prevented. But he had seen much good result from sea voyages in great mental depression, as in the case of students, and in depression caused by shock. Long sea voyages after influenza, also, he had found beneficial, and with that he understood Dr. Savage to agree. He instanced one case of insanity in a botanist who, in travelling about Switzerland for his health, encountered another botanist who showed him rare ferns, and the result was that his interest was awakened and he was restored to health. In conclusion he referred to a coachman who was mentally deranged. Dr. Savage had the courage to recommend that he be allowed to drive again and the result was his cure.—Dr. E SYMES THOMPSON said that he agreed that long voyages should not be undertaken after the borderland of insanity had been passed; but there were very many cases which stopped short of that where, however, serious mental trouble was threatened which derived great good by voyages. If mental disease was largely a matter of defective power of elimination, surely the value of changed surroundings and climate was great in increasing the eliminative power. He spoke approvingly of Egypt as a health resort owing to the pure desert air and the new surroundings, especially from an archæological point of view.—Dr. ROBERT JONES spoke against the habit of sending general paralytics abroad and gave instances in which the patients had to be sent for back again as they were in such a pitiable condition. He asked Dr. Savage to refer in his reply to the systemisation of the delusions. Dr. Savage had suggested that he (Dr. Jones) should travel with a man who had a particular form of insanity associated with delusions, and when they got some distance on the voyage the man had the delusion that his trouble was due to the medical man and refused to go an inch further. The question of elimination was very important with regard to toxæmia and therefore with regard to insanity. He had derived very great pleasure, indeed, from the contributions of Dr. Savage and Sir Dyce Duckworth.—Dr. L. A. WEATHERLY said that he felt that the question of sending patients for a change of air and scene could not be dealt with generally, but each case must be taken on its own merits. A mode of treatment which was beneficial to one patient might be absolute cruelty to another.—Dr. SAVAGE, in reply, thanked the speakers heartily for taking part in the discussion. Sir Hermann Weber's experience corresponded with his own. When he suggested that Dr. Robert Jones should go away with a patient he (Dr. Savage) had not developed his present opinions. He had suggested the propriety of one lady travelling because she would not go out of doors otherwise.

Dr. H. LEWIS JONES, in a paper upon the Application of Electricity in certain Forms of Mental Disease, said: The treatment of patients with any form of mental failure is not a thing which comes very frequently before one who is engaged in general practice, but from one or two cases which I have had to treat and also from general considerations upon the therapeutic effect of electricity I am extremely glad to have an opportunity of bringing before this meeting certain claims which electricity seems to have for use in the treatment of the insane. The most important development of electricity in the last 10 years has been in the direction of general electrification for general effects, and this line of treatment has had the advantage of being very carefully worked out by a physiologist who is not at the same time a medical man, Professor D'Arsonval. He has shown what a profound effect can be produced upon the general nutrition of the body in this way and has established by measurement the increase of carbonic acid, of body heat, and of urea in animals and in people submitted to general electrification. Clinical experience has also demonstrated the immediate effect which follows general electrification in various forms of debility, and from a consideration of these points I have for long felt that certain forms of mental failure ought to be eminently suitable for treatment in this way. [Dr. Jones here exhibited and demonstrated the simplest modes of setting up general electrification and the electrical bath treatment.] I would recount the following cases. The first was a case in which a patient after influenza lost his memory, became very weak and feeble, and was referred to me by a medical man as showing signs of progressive dementia. In a short time under simple electrical stimulation the patient became completely well. The next case was one of a journalist who completely broke down from overwork and who became unable to attend to business, and entirely altered in his manner and was so strange that on one occasion he was brought home by the police who found him wandering at large. Under suitable treatment by the electrical bath his symptoms all gradually subsided and he became perfectly well and resumed his duties. The third case is of somewhat the same type—viz., the case of a middle-aged man showing increasing inability to do his work or even to get about London as he used to do. He could not walk well; he fell down frequently, and his mental condition was dull and stupid. Under treatment by the electrical bath he has continued to improve up to the present time and he remains under treatment. These patients have all been treated with the electrical bath and the sinusoidal current taken from the mains of the Electric Lighting Company; the effect is simply that of general stimulation under which the appetite improves and the patient gains weight and sleeps better. These cases, which I hope will be supplemented by the recital of a series of instances of people who were definitely insane and treated by Dr. Robert Jones, should go far to support the belief that general electrification can be of very decided service in those forms of mental disease in which a failure or defect of nutrition is the important factor.—Dr. ROBERT JONES then detailed his favourable experience of the electrical bath treatment.—Dr. GOODALL also gave the results of his experience in the same direction. In neurasthenia his experience had not been a long one, but of nine cases five were decidedly improved. The cases in which he had looked for improvement were stuporous cases and chronic cases in which the patients had run down in health.—Dr. ROBERT JONES asked whether the beneficial effects of the water of the bath could be separated from the effect of the electricity, so that they could form an estimate of the value of each.—Dr. LEWIS JONES, in reply, said that it was difficult for him to separate the two factors in the bath, but he had had ample evidence of electricity without water producing increased metabolism and beneficial results. His own experience in reference to mental disorders was necessarily small, but those cases which had come under his notice had been much benefited by the treatment which he had outlined.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—Sub diaphragmatic Abscess complicating Typhoid Fever.—Intussusception of the Vermiform Appendix.—Haab's Electro magnet.

THE fourth ordinary meeting of the session was held on Nov. 22nd, Mr. EDGAR A. BROWNE, the President, being in the chair.

Dr. C. J. MACALISTER and Major R. ROSS, I.M.S., brought before the meeting two cases from the Tropical Ward of the Royal Southern Hospital. The first was a case of Æstivo-Autumnal Fever in which the daily exacerbations had been severe, the temperature registering from 106° to 107° F. in spite of the administration of large doses of quinine. After the administration of two doses of Warburg's tincture the attacks entirely ceased for nearly three weeks. The case was of peculiar interest in that it presented retinal hæmorrhages (the so-called malarial amblyopia), the result of plugging of the retinal arteries with the malarial parasites. The other case was one of Dysenteric Ulceration throughout the whole length of the Colon, from which absorption had taken place, and the patient died from a consequent septic pneumonia. The diagnosis was rendered difficult owing to the absence of diarrhœa or other definite intestinal symptoms.—Major ROSS remarked with reference to the first case that the infection was one by the æstivo-autumnal parasites and that the punctiform retinal hæmorrhages were an example of similar hæmorrhages often found in the cerebrum and meninges in pernicious paroxysms due to this organism. With regard to the second case he stated that there was leucopenia and that doubtful amœbæ coli had been found in the stools—doubtful because the stools were old when examined. He questioned whether there was such a condition as malarial dysentery, properly speaking, but thought that cases attributed to such were due to the concurrence of the two diseases.—Mr. R. J. HAMILTON did not consider that the diagnosis "malarious amblyopia" was borne out by the charts of the field of vision and the description given by Dr. Macalister. There were retinal hæmorrhages evidently, as there might be hæmorrhages anywhere in such a pernicious condition of the blood, and the central scotoma was due to a centrally situated hæmorrhage. But the vision as recorded and the perimetric chart were not those of a toxic amblyopia, which would show evidences of a retro-bulbar neuritis, and a subsequent optic nerve degeneration might be looked for.—Dr. A. S. F. GRUNBAUM remarked that since the discovery of the bacillus of dysentery by Flexner and by Kruse the serum diagnosis of this disease, which had already been shown to be possible, should be resorted to in doubtful cases. The cultures necessary for this method were in Liverpool.

Dr. R. CATON and Mr. THELWALL THOMAS contributed notes of a case of Sub diaphragmatic Abscess complicating Typhoid Fever. The patient, a male, aged 32 years, suffered from enteric fever with defervescence on the twenty-fourth day. He was allowed to get up on the forty-third day, when the temperature at once rose. He was kept in bed for six days and again allowed to get up, when he had a rigor and there was a rise of temperature. No cause could be ascertained until a fortnight later, when a dull area was percussed at the base of the left lung, and with an exploring syringe greenish-yellow purulent fluid was withdrawn from what was thought to be the pleural cavity. An incision was made immediately, a portion of the eighth rib was removed, and a normal pleura was opened. The diaphragm was very near to the ribs and was elevated, and on palpation a hard rounded area could be made out under it. The costal pleura was sutured to the diaphragm, and on incising the diaphragm a firm convex, apparently bony, mass was exposed, through which the knife could not enter except at a small area half an inch in diameter, whence a pint of pus escaped from a cavity five inches in diameter the walls of which were one-eighth of an inch in diameter and firmly calcified. Portions were taken away by bone forceps, but the free oozing of blood forbade further removal and drainage-tubes were inserted. The pus when examined bacteriologically demonstrated the bacillus typhosus in a greenish fluid consisting of fatty granules, cellular débris, and cholesterin. A month later further portions of the eighth rib and four inches of the ninth rib were excised, and on freely incising the diaphragm the remains of the calcified wall were rapidly excised and they proved to be adherent to the liver, the spleen, the stomach, the transverse colon, and the omentum. The recovery of the patient was uninterrupted. The origin of the abscess was unknown; it must have been of a chronic nature, and probably resulted from a liver abscess or a suppurating hydatid cyst which had become recently re-infected with typhoid bacilli.

Mr. KEITH MONSARRAT read a note on Intussusception of the Vermiform Appendix and described the case of a boy, aged four years, who suffered for a month before admission into the Children's Infirmary from acute pain in the right side of the abdomen coming on in paroxysms. When first seen there was intussusception in the region of the transverse colon. At the operation which followed this was found to be secondary to an intussusception of the appendix vermiformis into the cæcum. Both primary and secondary intussusceptions were disinvaginated and the boy made a good recovery. Only on one occasion during the five weeks before operation was any blood passed by the bowel and there was no vomiting at any time. The other recorded cases of the condition were analysed and the symptoms were discussed. Two types of invagination were distinguished, one analogous to ileo-cæcal and the other to ileo-colic invagination in respect of anatomical relations. The development of secondary invaginations was also considered. With regard to treatment he limited himself to the consideration of the best method of dealing with such an intussusception where it was irreducible.—Dr. GRÜNBAUM had never during a series of experiments on peritonitis observed peristalsis in the appendix vermiformis, and he considered that it was improbable that invagination could occur as the result of its movement.

Dr. EDGAR STEVENSON described and demonstrated Haab's Electro-magnet for the removal of pieces of iron or steel from the interior of the eye. This instrument, invented by Professor Haab of Zürich, marked a complete revolution in the unsatisfactory treatment by the small electro-magnets of those serious accidents in which the eye contained a foreign body. With it a particle of iron or steel could be drawn from any part of the injured eye (by merely approaching the eye to the point of the instrument) into the anterior chamber, whence it was easily removed. The instrument was bi-polar, about two feet long, 18 inches in diameter, wound in two sections each containing about 2000 turns of insulated copper wire. It was energised by the city mains at 230 volts and took a maximum current of six ampères, thus giving a total force of about two-horse power and a lifting capacity of about half a ton. Dr. Stevenson demonstrated the lines of magnetic force, showing how long and straight they were compared to the short curved lines given off from Snell's electro-magnet; he also showed a piece of steel being acted upon in a tube of gelatin. The instrument would probably be successful in extracting needles, &c., from other parts of the body.—Mr. THOMAS H. BICKERTON added his testimony to the value of Haab's magnet, and referred to a communication made to the *British Medical Journal* of September, 1898, by Dr. Reginald Bickerton, recording the experience gained of the use of this magnet in Professor Fuchs's clinique in Vienna—viz., "Since this magnet has been in use it has never failed to extract a splinter of iron or steel from the interior of the eyeball, no matter how deeply it had been imbedded."

EDINBURGH OBSTETRICAL SOCIETY.

Election of Office-bearers.—Presidential Address.—Extraversion of the Bladder.—Cleidotomy.

A MEETING of this society was held on Nov. 14th, Dr. R. MILNE MURRAY, the President, being in the chair.

The following office-bearers were elected for the current session:—President: Dr. R. Milne Murray. Vice-Presidents: Senior—Dr. S. Macvie (Chirnside); Junior—Dr. F. W. N. Haultain. Treasurer: Dr. William Craig. Secretaries: Dr. J. Haig Ferguson and Dr. William Fordyce. Librarian: Dr. Haultain. Editor of Transactions: Dr. N. T. Brewis. Members of Council: Dr. J. Halliday Croom, Professor J. A. C. Kynoch (Dundee), Dr. James Ritchie, Dr. T. Farr Armour, Professor A. R. Simpson, Dr. J. W. Ballantyne, Dr. G. P. Boddie, and Dr. J. Lamond Lackie.

Dr. MILNE MURRAY delivered his *Presidential Address*. He alluded to the development of obstetric knowledge and its association with primitive religions. In early times and in primitive peoples the practice of obstetric knowledge would naturally be confined to women. In natural labours their duties would be simple and routine. At first friends and neighbours would perform the kindly office, but soon a separate class would spring up whose special aptitude or experience would inspire the parturient woman with greater confidence. But though the birth of a child was of daily occurrence in a primitive community, yet the progress of pregnancy and labour were shrouded in inscrutable mystery. This mystery and the danger attached to the reproductive process led them to invoke the aid of their primitive religion. The husbandmen noticed the changes in the life, decay, and regeneration of the vegetable world and to them the sun-god was the revivifying influence and the object of adoration. The worship of the generative principle was also present with the shepherd as he noticed the processes of birth, growth, and decay among his flocks and in his family. In various ways and in different localities this idea found special expression in the worship of the sun, the tree, the serpent, and the phallus. These consisted fundamentally in the invocation or propitiation of the generative or procreative principle. Hence arose shrines and temples to tutelary deities where their help could be secured by prayers or their anger averted by sacrificial offerings. It was worthy of note that in ancient Rome the women did not resort to the shrine of Juno, Venus, or even of Demeter, but to that of the chaste Diana, the one virgin goddess of classic mythology. The priest might by an incantation or prayer bring some solace to the woman anticipating with dread her labour with all its peril and suffering. If all was normal the help of the god would be acknowledged with a votive gift; but if disaster or death occurred it was attributed to the anger or curse of an unappeased deity. The priest played the part of physician, and they knew that in Egypt as early as B.C. 3500 there was a class of priest-physicians whose duties were mainly concerned with the bodily ailments of the suppliants and especially with those of pregnant women. The earliest compend of their art was to be found in the Hippocratic writings. This focussed the practice of midwifery at the time of Hippocrates (400 B.C.), and his teaching, crude and fallacious as much of it was, represented most of the obstetric art of nearly 2000 years. The study of anatomy at the beginning of the Christian era under the Ptolemies of Alexandria rectified many of the Hippocratic errors, and the influence of this knowledge was seen in the works of Soranus, Galen, Aretæus, and Moschion. But from the seventh to the sixteenth century obstetric art stood still, till in the latter century the school of Salerno inaugurated the teaching of anatomy, and the light shed its influence on the dark practice of obstetrics. Progress was at first slow, but by anatomists like Vesalius, Berengarius, Fallopius, and surgeons like Paré a scientific basis was laid. Further, while ordinary labour was still attended by women the surgeon was more and more frequently called to difficult cases. The seventeenth century was noted by the great development in practical midwifery rendered possible by the invention of forceps, though their use was not general till the early years of the next century.

In the eighteenth century they met with names of men whose contributions to midwifery would be difficult to over-estimate; in England Smellie, Hunter, and Denman; in France Levret and Baudelocque; and in Germany Roederer helped largely to the establishment of obstetrics as a science and art. There were three special epoch-making contributions during the closing century. In 1818 Naegelé published his work on the Mechanism of Labour which had been called the "Euclid of Obstetrics," and enabled the observer of a labour to become a scientific obstetrician and thus to raise himself above the level of the ordinary midwife. 30 years later another epoch was reached when Simpson discovered that anæsthesia could be used to soothe the suffering without interfering with the efficient progress of labour, and also enabled the obstetrician to apply all the resources of his skill on behalf of suffering motherhood. A third epoch was initiated by Lister when he gave the world the principles of antiseptic surgery. Though much had been done for their science and art, yet there were still problems to be solved. Among these were the true significance of menstruation and its relation to ovulation and conception; the function and destiny of the corpus luteum and that perennial subject the structure of the placenta; the true duration of pregnancy; the cause of labour; the nature of the process concerned in the involution of the uterus and the cause of eclampsia. In virtue of the labours of those before them they claimed that for every strictly obstetrical complication which could arise, with perhaps the exception of eclampsia, they had at their disposal a procedure with which they could meet it—that, in fact, there was scarcely a peril which could befall a woman in travail out of which they had not the means of rescuing her. This applied strictly to obstetrical complications and did not include accidental complications, as grave disorders of the heart, the lungs, and the kidneys. Yet in their land nearly 5000 women perished every year in the perils of childbed. Between the years of 1847 and 1856 the average annual death-rate from puerperal fever was 1·89 per 1000; during these years chloroform was coming into use and antiseptics had been scarcely thought of. Between 1875 and 1884 the mortality from the same cause rose to 2·28 per 1000 births. By this time anæsthetics were in wide use and antiseptics were taught and practised to a great extent. Between 1886 and 1895 the mortality had now risen to 2·46 per 1000 and anæsthetics and antiseptics had been almost universally practised. Attempts had been made to account for this great proportion of septic deaths in labour by the error of practice of ignorant midwives. But they were not more numerous and more densely ignorant now than they were 50 years ago. It was different with maternity hospital practice. In the early part of this century the hospital mortality was frightful, but now, as in 1896-97 at the Rotunda Hospital, it was reduced to 0·13 per cent. Why, then, were the results of private practice so far behind those obtained in hospitals such as the Rotunda, and becoming worse and worse in spite of accurate scientific knowledge, improvements in instrumental appliances, and increased practical skill? The explanation would be found in, first, the misuse of anæsthesia, and, second, in the ridiculous parody which in many practitioners' hands stood for the use of antiseptics. With the advent of anæsthesia interference in labour had become more frequent and because it involved no additional suffering operations were undertaken, when really unnecessary, on the demand of the patient or for the convenience of the practitioner. And so complications arose and the dangers of labour increased. Normal labour was a natural process which was best left to itself and the less the patient was disturbed with the paraphernalia of obstetrics before or after the better. But the moment they interfered it became a complex and dangerous process and it was simply because this was constantly ignored that the death-rate of childbed was what it was to-day. The fact must be recognised that the simplest obstetric operation demanded not one whit less of care as to antiseptic precautions than was required of one before opening the abdomen. A bruised or lacerated maternal canal was quite as susceptible to microbic attacks as the peritoneum and probably more so. The practical obstetrician must realise his responsibility that labour was a natural process which in the great majority of cases it was criminal to disturb. Every interference increased the inherent danger a hundredfold, and under this consciousness the obstetrician must bring with him to the lying-in room all that was possible of those principles of antiseptic surgery which had been at the bottom of the triumphs of modern gynæcology. Then they would not have long to wait for the lightening of the dark cloud which hung over them now.

Dr. BERRY HART read a paper on Extroversion of the Bladder. This condition and its allied lesions resulted from fissures occurring in the mesial line between the navel and perineal body. They varied in extent and depth and thus might only affect the skin, resulting in mere cutaneous cicatrices, or they might go deeper and expose the anterior surface of the bladder, or deeper still, and the urethra and posterior surface of the bladder would then be laid open. Similar lesions were the cause of epispadias and sub-symphyseal exstrophy, while the bones might be affected and split pelvis be present in some cases. They were all the outcome of developmental deficiencies and it was of consequence to trace their origin to very early fœtal life. The bladder did not arise from the allantois except at its very apex. It originated from a division of the caudal segment of the primitive gut into two parts by coronal folds; the anterior was the bladder and the posterior was the rectum. Dr. Hart discussed the questions of the tail-gut, entodermal cloaca and cloacal membrane, and especially the relations of the cloacal membrane to gastrulation. Extroversion of the bladder and allied conditions were due to a yielding or separation of the cloacal membrane; the immediate cause of this yielding was not yet known.

Dr. J. W. BALLANTYNE read a paper on Cleidotomy. This was the term applied to the division of the clavicle, and in all or nearly all its indications it was accessory to craniotomy or basilysis. Dr. Ballantyne related a case where after basilysis in a flat and small pelvis there was delay and difficulty owing to the arrest of the shoulders at the brim. One clavicle was cut through with a pair of long strong scissors, and this allowed the shoulder to fall in with consequent diminution of the circumference. The shoulders were then easily delivered by passing a blunt hook into the opposite axilla. Some difficulty was experienced with the passage of the child's hips through the brim of the pelvis. The diminution on the bis-acromial diameter would probably be about half an inch. Dr. H. R. Spencer first wrote about the division of the clavicle when it was necessary to diminish the width of the child's shoulders; he had found it very useful. Different obstetricians, as Phänomenoff, Knorr, Guérard, and others, had since written about this operation. The operation was easily performed by a pair of long straight strong scissors; they were passed up under cover of two fingers of the left hand and the bone with the skin covering it was easily snipped through. The two parts of the clavicle would be felt to over-ride at once if the section had been complete. There was really no danger of wounding the maternal parts, and even the subclavian vessels of the infant need not be injured if reasonable care be taken. On a dead infant Dr. Ballantyne measured the bis-acromial circumference and found it to be 27 centimetres, with the clavicles compacted on the chest it was 25 centimetres, with one clavicle divided 23 centimetres, and with both 22 centimetres. The indication for the operation was any disproportion between the size of the shoulders and the pelvic canal, and perhaps also to hasten labour in cases requiring urgent delivery.—Dr. MILNE MURRAY, Dr. J. FOULIS, Dr. HAULTAIN, and Dr. W. FORDYCE made remarks on the paper.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—The second meeting of the session of this society was held on Nov. 21st, Mr. W. B. Holderness, J.P., the President, being in the chair.—The following gentlemen were elected members of the society:—Mr. F. Treves, surgeon extraordinary to Her Majesty the Queen, Mr. J. Harrison Scott, and Mr. S. Osborn; Mr. R. H. Paramore, house surgeon to the Windsor Royal Infirmary, was elected an honorary member.—Dr. A. J. Anderson showed the following patients:—1. A patient, aged 70 years, from whom he had Excised a third of an inch of the left Vas Deferens for retention of urine due to enlarged prostate. The use of the catheter was discontinued two days after the operation, though it had been necessary two or three times a day before, and the urine had since passed without the slightest trouble. 2. A man, aged 72 years, from whom he had removed a large Tumour of the Testis. The growth of the tumour was accompanied by a good deal of hectic fever which disappeared after the operation. The tumour was exhibited.—Dr. J. K. Watson showed the following case and specimen:—1. A case of Injury to the Elbow-joint. There was much limitation of flexion and extension, though pronation and supination were perfect. There was much pain due to involvement of the ulnar nerve in the callus. 2. A specimen of a Perforating Gastric Ulcer. The case occurred in a girl, aged 21 years, who had previously only complained of a few dyspeptic symptoms. Death occurred 27 hours after perforation.—Dr. C. R. Elgood showed a case of Ulceration of the Epiglottis presumed to be tuberculous.—Dr. E. B. Hulbert, by permission of Mr. J. R. Lunn, of St. Marylebone Infirmary, showed (1) a specimen of Sacculated Aneurysm of the Abdominal or Thoracic Aorta; (2) a Heart affected with Ulcerated Endocarditis (both the mitral and aortic valves were involved); and (3) several Drawings and Photographs of uncommon diseases, including Osteitis Deformans, Charcot's Disease, Tabetic Feet, Syringomyelia, Arthritis of the Temporo-Maxillary Articulation, and Tuberculous Disease of Various Joints.—Dr. W. F. Lloyd gave a demonstration upon Polarimetry. Having first pointed out the meaning of plane polarised light and demonstrated the movements supposed to take place in the ether by means of a pendulum he described the construction of a Nicol's prism and explained the rotation of the plane of polarisation. He then demonstrated by means of models the structure which the carbon molecule was supposed to have when associated with the power of rotating the plane of polarisation. Having pointed out the importance of the polariscope in the detection of β oxybutyric acid he described and exhibited a polarimeter, demonstrating the rotation of the plane of polarisation in diabetic urine.—Dr. A. J. Anderson read a paper on Drain-Poisoning in Private Practice. After alluding to Mr. Pridgin Teale's remarks on this subject as early as 1878 he said that in the matter of sanitation we were still far behind other countries, especially America. He next referred to the evils resulting from *jerry-building*, instancing cases of bronchitis, pneumonia, whooping-cough, and rheumatic fever. As examples of well-known diseases caused by sewage emanations, diarrhœa, gastro-intestinal disturbance, and certain forms of sore-throat simulating diphtheria were mentioned, and he thought that cholera, enteric fever, erysipelas, pneumonia, puerperal fever, and diphtheria had a heavier incidence on persons exposed to their baneful influences. He laid great stress on the importance of self-education in the matter of drainage and the absolute necessity of a personal supervision of the work of plumbers, builders, and even architects. He finally instanced several cases which had come under his notice where some insidious disease had been clearly traced to drain-poisoning and called attention to the lowered state of vitality, entailing neuralgia and other minor ailments observed in those who were more slowly poisoned by sewer-gas.—An interesting discussion followed, in which Dr. E. Casey, Mr. J. Startin, Mr. J. H. Tomlinson, Mr. H. E. B. Porter, Dr. Hulbert, and Dr. G. E. Hale took part.

Ipswich Clinical Society.—A meeting of this society was held on Nov. 15th, Mr. C. K. Moseley being in the chair.—Dr. B W Brogden showed a case of Hodgkin's Disease The patient was a girl, aged 19 years. The glandular swellings affected both axillæ and both sides of the neck, chiefly in the posterior triangles. Some were of the size of large plums. The parotid, sublingual, and submaxillary glands were unaffected; there was no pain or tenderness or sign of any breaking-down process. There was no abnormality in the abdomen or thorax. The girl was markedly anæmic, the blood showing considerable diminution of the red corpuscles, and she suffered from amenorrhœa. Iron, arsenic, and iodide had so far caused no improvement Dr. Brogden mentioned two other cases, both ending fatally.—Mr. J. R. Staddon and Dr. H. H. Brown also mentioned cases.—Dr. Brogden showed an old man from whom he had successfully excised the upper jaw for a large Epitheliomatous Growth affecting the Antrum.—Mr. Wynne Davies showed: (1) A woman, aged 50 years, who had quite recently cut a Lower Canine and Two Lower Incisor Teeth; and (2) a middle aged woman with a Chronic Ulceration at the Angle of the Mouth, probably a rodent ulcer.—Mr. Sinclair showed: (1) A case of Chronic Irido-cyclitis in a young girl without any history of a constitutional cause; (2) a case of Chronic Interstitial Keratitis in one eye of a healthy young woman with complete absence of congestion; and (3) a case of Vascular Pannus without Granular Lids under treatment with infusion of jequirity.—Mr. Moseley read notes of a case of Acute Peritonitis. A man, aged 32 years, was attacked after a hearty meal with abdominal pain and sickness. He vomited two or three times and had several loose motions. This went on during the two following days, and he was first seen on the fourth day, when he said that he had one of his old "bilious attacks, but that it was lasting longer than usual." He was very ill. His tongue was dry and his pulse was uncountable. His temperature was 100°F His abdomen was retracted all over and was tender on deep pressure. He was given a quarter of a grain of morphia. Five hours later the pulse had improved, but his condition was otherwise unaltered. Later in the evening he vomited once and hiccough came on, and the lower part of the abdomen was found to be tympanitic. At midnight Mr. Moseley performed laparotomy. Foul gas and some thin pus escaped from the peritoneal cavity; the intestines were everywhere moderately distended; the appendix was soft and swollen and contained a hard mass within it. It was removed. The intestine in its neighbourhood was acutely inflamed and it showed numerous patches of gangrene. The patient died five hours after the operation.—Mr. Moseley, Dr. H. H. Brown, and Mr. J. F. C. Hossack commented on the case.

Chelsea Clinical Society. — An ordinary meeting of this society was held on Nov. 20th, the President, Dr. W. Ewart, being in the chair. — Mr. J. Foster Palmer showed an Unusual Organism, believed to belong to the class of Myriapodes, which had been expelled from the urethra of a male patient.—Mr. E. D. Vinrace showed a Foreign Body also expelled from the Urethra of a male patient. The history of the case was that the patient, who was suffering from symptoms of vesical irritation, had passed for himself a bougie made from an ordinary candle. The foreign body in question was composed of phosphatic material embedded in what appeared to be paraffin wax.—Mr. Noble Smith read a paper on the Conservative Treatment of Tuberculous Disease of the Joints. He described the principles of efficient local fixation of the diseased parts as carried out at the City Orthopædic Hospital. He advocated operation upon the bones in the neighbourhood of diseased joints in the early stages of disease as a means of rendering excision unnecessary, and he expressed doubts as to the necessity of amputation in almost every case of tuberculous joint disease. Mr. Smith exhibited two patients. One was a child, aged two and a half years, in whom extensive disease of the tarsus had existed for which amputation had been recommended while efficient fixation had been neglected. Removal of some diseased pieces of bone, fixation with a simple iron splint, and appropriate and persistent full feeding had been carried out for some months. The sinuses had healed up and the general condition of the child had greatly improved. There was free movement of the ankle-joint and there could now be no question of amputation. The child had also suffered from diseased bone in the face and left hand, but these places also were healing, or had healed up, and the child was becoming quite robust. She seemed likely to be completely cured. The second patient exhibited was an adult male who was suffering from caries in the mid-dorsal region. The disease seemed to have been arrested, although at one time, prior to complete fixation of the spine and good feeding, the disease had been so advanced that the patient had upon two occasions coughed up pieces of bone, evidently from the spine. Mr. Smith urged that complete fixation of joints, removal of diseased bone without the excision of joints and in the majority of cases without even opening joints, together with full and nutritious feeding, constituted the most successful line of treatment.—A discussion followed in which the President, Dr C. A. Morris, Dr. Vincent Dickinson, Dr C. J Harrison, Mr. Vinrace, and Mr. R Nitch Smith took part.

South-West London Medical Society.—A meeting of this society was held on Nov. 14th, Dr. Gilbert Richardson being in the chair.—Dr. S. H. Habershon read a paper on the Diagnosis of Gastric Ulcer, with some remarks on its Treatment and Prognosis. He opened the subject with a short description of the incidence of the disease at various ages, showing by tables the absolute liability of each period of life. He emphasised the fact that some special cause for gastric hæmorrhage, as well as a special liability to perforating gastric ulcer, existed in young females. In males the liability to the disease gradually rose from infancy to old age. Enumerating the difficulties of diagnosis Dr. Habershon divided the cases into four classes: 1. Cases simulating acute dyspepsia or acute gastric ulcer in which the typical symptoms were wanting and the true nature of the case was suddenly revealed by gastric hæmorrhage or perforation. There was a class also in which the disease was entirely latent and the first important symptom of which was sudden perforation. 2. Anæmic gastralgic cases in which pain occurred not only after food but after any exertion or fatigue. 3 Neurotic cases of irritable stomach, where there was often an exaggerated account of pain, sometimes accompanied with incessant vomiting. 4. Cases of gastric ulcer in the pyloric region, the symptoms of which were always anomalous and where pain occurred at irregular intervals, which was sometimes relieved by food. In these cases vomiting was not always present and hæmatemesis was not a constant symptom. Gastric dilatation was almost always present in the late stages of the disease. Dr. Habershon emphasised the importance and difficulty of diagnosis in these cases and made some remarks upon the methods of examination of the stomach in neurotic cases, laying stress upon the help in mapping out the outlines of a dilated stomach given by the bell sound and the conduction of the second cardiac sound. Dr. Habershon closed with some remarks on treatment, medical and surgical, and upon the indications which aided in making a prognosis.

BOURNEMOUTH MEDICAL SOCIETY.—A meeting of this society was held on Nov. 14th, Dr. Arthur Ransome, F.R.S., the President, being in the chair. There was a large attendance of members.—The resident medical officers of the National Sanatorium for Consumption and Diseases of the Chest, of the Royal Victoria Hospital, and of the Royal Boscombe and West Hants Hospital were elected honorary members during their term of office, and seven new ordinary members were elected.—The President read a paper on Aseptic or Anti-Microbic Medicine. He recalled the fact how widely spread was the anti-microbic principle in medical practice and gave instances of the means adopted by nature to prevent the action of microbes. He thought that the aseptic or anti-microbic treatment might be arranged under the following heads, which were considered in detail: (1) those which were intended to keep the organisms at bay, to prevent them from approaching a wounded surface or from entering any of the portals of the body; (2) those which were designed to meet and kill the organisms or to destroy their virulence either on their approach or after they had affected an entrance; and (3) those which were concerned with strengthening the natural defences of the body against the inroads of pathogenic microbes.

CLINICAL SOCIETY OF MANCHESTER.—An ordinary meeting of this society was held on Nov 20th, Mr. F. A. Southam, the President, being in the chair.—Dr. A. T. Wilkinson showed some cases of Abdominal Affections.—Mr. E. Stanmore Bishop showed a large Fibro-myomatous Uterus.—Mr. Francis Riley read the notes on a case of Cerebro Spinal Meningitis and showed the patient.—Mr. J. E. Platt presented a case in which Popliteal Aneurysm had been successfully treated by ligation of the Femoral Artery.—Dr. E. S. Yonge gave a short demonstration on some of the more recent Devices for examining the Larynx in Children.

ROYAL METEOROLOGICAL SOCIETY.—The opening meeting of this society for the present session was held on Nov. 21st at the Institution of Civil Engineers, Great George-street, Westminster, Dr. C. Theodore Williams, the President, being in the chair. Among other papers read was one by Mr. W. H. Dines on the Weekly Death-rate and Temperature Curves, 1890–99. He exhibited diagrams showing the death-rate of the 33 great towns of England and also curves of the temperature at Greenwich. Mr. Dines was of opinion that from the health point of view the English climate was one of the best in the world, and this was proved by the relatively low rate shown in these curves. A pleasanter climate might well be found, but the majority of health resorts to which Englishmen went in the winter had a higher death-rate than London had at the same season and a far higher death-rate than any of the country districts of the British Isles.

Reviews and Notices of Books.

Malaria according to the New Researches. By Professor ANGELO CELLI, Director of the Institute of Hygiene, University of Rome. Translated from the second Italian edition by JOHN JOSEPH EYRE, M.R.C.P., L.R.C.S. Irel., D.P.H. Camb. With an Introduction by Dr. PATRICK MANSON, Medical Adviser to the Colonial Office. With Maps and Illustrations. London, New York, and Bombay: Longmans, Green, and Co. 1900. Price 10*s.* 6*d.*

THE history of all the recent researches in connexion with malaria—from the original discovery of the malarial blood parasite by Laveran in 1880 up to the time of the latest investigations establishing the mosquito-malarial theory—makes up one of the most original and interesting chapters in the record of modern scientific investigation. It has revolutionised our views in regard to malaria. Researches which have been worked out with so much patience and subtle skill, have established a causal connexion between malarial disease in the human being and the anopheles mosquito not only as a carrier but as an intermediary definitive host of the malarial parasite during an important phase of its life-history. If the correctness of this view be admitted it seems to follow that the mosquito must be the only means by which malaria is transmitted. The germs of malaria external to man do not live in the soil, but in the body of the mosquito. The story is so curious and interesting that it reads as if it might be a product of the scientific imagination. But it is nothing of the kind; the mosquito-malarial theory has been worked out by an inductive method of reasoning and on the lines of scientific observation and experiment. That the theory may be still incomplete in some respects is only tantamount to saying that progress in all inquiries of a complex nature must be more or less slow and gradual if such inquiries are to include all the facts and phenomena and to account for or to explain such of them as may be really, or only seemingly, in conflict with the theory. The subject has been, and is still being, keenly cultivated, and all things considered it is remarkable how much has been already accomplished. Important additions of a confirmative kind are so frequently being added to our stock of knowledge that even the volume under review does not contain them all.

The causes and consequences of malaria more or less concern everybody, especially the people of the British Empire, who are the most cosmopolitan people in the world. So much has been written regarding the results of the latest investigations that a knowledge of them has become, as it were, common property. Our readers, of course, are acquainted generally with the main facts, and such of them as are more directly concerned with the study or treatment of malarial diseases have kept themselves *au courant* with the progress of our knowledge in this direction. The subject is not merely a matter of scientific interest to members of the medical profession and to the naturalist and to the microscopist. It has a far-reaching practical side to it. The confirmation of the mosquito-malarial theory has not only demonstrated the importance of using quinine for the cure of malaria-infected subjects, but it has already led to the employment of new methods of prophylaxis as regards the genus of mosquito concerned—such as the use of larvicidal agents in pools and puddles, to prevent mosquitoes from breeding in them, and other plans—in addition to those designed for the protection of man against being bitten by them.

All this, with much besides, has been set forth in a very lucid and comprehensive way in Professor Celli's work which has the merit, moreover, of being written in a scientific spirit. There have been a large number of labourers in this field of scientific investigation. The Italian school has always occupied a conspicuous position in regard to the study of malaria and its members have maintained that position, as Dr. Manson tells us, by being the first to confirm Major Ross's brilliant investigations, and by throwing themselves energetically into the hygienic measures which these researches plainly indicated. The name of Professor Celli has long been honourably associated with a number of other well-known Italian authorities whose names occupy a distinguished position in connexion with the scientific study of malaria and its prevention. Professor Celli now appears as the author of an excellent piece of scientific literary work based upon and setting forth the latest researches and the lessons which they inculcate, and suggesting the best methods of applying prophylaxis.

The work is divided into two parts. The first deals with epidemiology, the second with prophylaxis. It is illustrated by many excellent plates, maps, and plans and is furnished with an exhaustive bibliography of Roman malaria. In Part I. the etiology, the sources of malarial infection, the life of the malarial germs in the environment—in short, the whole life cycle and natural history of the malarial parasite,—the vehicles of malarial infection, and the causes of predisposition or of immunity towards malaria, are well worked out. In Part II. the means to be directed against the infective cause and against the predisposing causes of paludism are discussed in a sound and practical way. How clear Professor Celli can be here is well shown by the translation of his article in the *Policlinico*, which we publish on page 1603.

Die Krankheiten der Warmen Lander. (*The Diseases of Warm Countries*) By Dr. B. SCHEUBE Second revised edition. Jena: G Fischer. 1900. Super Royal 8vo. Pp. 662. Five charts, seven plates, and 32 illustrations in the text. Price 15 marks.

A GLANCE at the work that has been done in the matter of tropical medicine during the four years which have elapsed between the publication of the first and second editions of Dr. Scheube's book shows to what a remarkable degree interest has been roused of late in this department of science. Three journals dealing with the hygiene and diseases of warm countries have appeared, schools of tropical medicine have been established, conferences have been held, and commissions have been appointed to study particular diseases. From another point of view, however, the activity recently displayed by German investigators in this field forms a significant commentary on the ardour with which their country is prosecuting colonial enterprises, and tells plainly of the toll which must be paid in sickness and death by every country which aspires to a "Weltpolitik." Whatever complications may be introduced into the world of commerce and politics by German competition we cannot but welcome German cooperation in the work of combating tropical diseases, especially when it takes the form of such a volume as the one before us. The book is rendered remarkable by the grasp of his subject displayed by the author, by his extensive knowledge of its literature, and by the lucidity of his descriptions. Not less noteworthy is the sense of proportion which prevents him from devoting an undue amount of space to the subjects with which his name is specially associated—a very unusual trait in the writer of a handbook. The author divides his subject matter conveniently into six sections: 1 General infectious diseases—plague, malaria, leprosy. 2 Intoxications—pellagra, lathyrismus, snake-poisoning. 3 Affections due to animal parasites. 4. Diseases of organs—a somewhat vague term which includes not only tropical dysentery and hepatic abscess, but also the sleeping sickness of negroes, amok-running, and lata. 5 External diseases, such as prickly heat, ainhum, mal de Pinto. 6. "Cosmopolitan" diseases.

The first section is, of course, the most important It begins with a succinct account of the bubonic, septicæmic, and pneumonic types of the plague, and discusses in a few lines the intestinal form, which the author considers a distinct variety. As regards the so-called pestis minor he is inclined to disagree with Mr. Cantlie and to look upon it as a form of climatic bubo and as having nothing to do with the plague. Until the bacteriology of climatic bubo has been worked out, however, it is impossible to speak positively on the subject.

The diagnosis between dengue and influenza, particularly in some epidemics of the latter, is scarcely so easy as the author suggests. The pains in the limbs, the principal characteristic of the former, are, he says, absent from the latter, but a wonderfully close imitation of them is sometimes provided. In the prophylaxis of malaria the author rightly lays stress on the observance of those precautions in the matter of diet, clothing, and architecture which experience has shown to be of value even though they may prove to have been based on an erroneous theory of the etiology of the disease. In the attention paid to the mosquito as an etiological factor these precautions may perhaps be neglected. Into the question of diet Dr. Scheube enters at some length. He commends the practice which obtains in the Dutch East Indies of lunching in native style—i.e., largely on rice and curry—and dining as a European. Whatever the theoretical merits of this plan may be, we doubt if its practical application in the mid-day "rice-table" of the Dutch hotels in Java is an example to be followed except by the fortunate possessors of a Dutch digestion.

The predisposing cause of blackwater fever the author considers to be chronic malaria; the exciting cause may be a fresh attack of fever sufficiently severe alone or when accompanied by the administration of quinine to break down the weakened blood corpuscles. In a suitable case quinine alone may, if given in doses large enough, have the same effect. Unless there be a special idiosyncrasy towards the drug (cases have been observed in which small doses in healthy persons invariably caused hæmaturia) he does not consider that the hæmaturia is set up apart from malaria As regards frambœsia Dr. Scheube treats Mr. Hutchinson's suggestion of the relationship between yaws and syphilis somewhat cavalierly. "To confound frambœsia with ...... syphilis," he says, "is scarcely possible," on the ground that the two diseases can co-exist, and that syphilitic persons in all stages of their complaint can be affected with frambœsia, and *vice versâ* The etiology of amok-running is still quite obscure, while to regard lata, which Van Brero defines as "an induced imitative impulsive myospasia," as a neurosis which renders the patient exceedingly susceptible to suggestion seems to be as far as we can go at present in the direction of etiology.

A curious feature of Dr. Scheube's book is that he has excluded cholera from consideration altogether, on the grounds that it is a disease of tropical countries, not of "warm lands," and that it is described in every text-book and handbook of special pathology and therapeutics. After admiring the masterly way in which most of the tropical diseases have been discussed, the first of these *two* reasons sounds rather quaint, while a glance at the copious literature appended by the author to the chapters on these diseases makes us wonder why in the second reason so invidious a distinction should be made in the case of cholera. Some useful charts will be found at the end of the book which give the geographical distribution of malaria and blackwater fever, of beri-beri, leprosy, filariasis and ankylostomiasis, and some exquisite photographs of leprosy, elephantiasis, and gundu.

Dr Scheube's work is not only an important addition to the literature of tropical diseases but will be found very useful both as a text-book and as a book of reference. It is one of the most satisfactory books that we have read for a long time.

The Climatic Conditions necessary for the Propagation and Spread of Plague. By BALDWIN LATHAM, M. Inst. C.E., M. Inst. M.E., &c. Reprint from the *Quarterly Journal of the Royal Meteorological Society*, Vol. XXVI., No 113, January, 1900. Edinburgh: Printed by R. and R. Clark, Limited. Pp. 57. Illustrated.

THE object of this paper is to find a direct relationship between emanations from the soil and the incidence of plague. By means of a most painstaking and instructive series of charts the author proceeds to prove that the periodicity observable in the mortality from plague in Bombay and other populous centres presents a most striking similarity to the periodicity manifested by soil emanations at corresponding periods. When dealing with facts the author is on safe ground, especially when these facts concern meteorological and statistical questions. The deductions, however, which he draws show a want of appreciation of the laws which govern bacterial life and bacterial distribution. He believes, for instance, that ponderable organic units in the form of plague and tubercle bacilli, as well as the specific germs of malaria and certain lung diseases, can be carried in the gaseous emanations from the soil and thus may infect both man and animals. The climatic conditions which control vapour tensions at the surface of the soil—and consequently the upward or downward direction of the gaseous current—must clearly influence in some degree the health of the human organism and its powers of resistance, and possibly that of the intermediate hosts which participate in the distribution, but it is impossible to believe that the periodicity of plague mortality is directly due to a similar periodicity in the upward current of soil vapours containing the bacillus pestis.

Mycosis Fungoides. By JAMES GALLOWAY, M.D. Aberd., and J. M. H. MACLEOD, M D. Aberd. London: H. K Lewis. 1900 Pp. 26. Two Coloured Microscopic Plates.

THIS is a reprint from the *British Journal of Dermatology*. It is a clinical and pathological study of three cases of this rare, interesting, and generally dangerous disease. In two of the cases the patients are still living; the third patient is dead. Examination of the blood showed that in Case 1 it was fairly normal, there being no leucocytosis and no esinophilia as some authors have described. Injection of Coley's fluid was tried in one case with some amelioration of symptoms, there being less pruritus and a diminution of infiltration. One case began with intense pruritus and redness, another with the formation of a small red patch without any symptoms, but the patches increased in number and size rapidly. The third case was under the care of Dr. Stephen Mackenzie. The eruption was at first dry, scaly, and pigmented, followed by slightly raised infiltrations, which ulcerated. No visceral disease was found at the post-mortem examination. Careful histological examination led the authors to the conclusion that the infiltration was chiefly due to connective tissue cell proliferation, first in the upper third of the corium and later spreading downwards, and that the process was that of an infective granuloma. In the epidermis in the early stage there was proliferation of the prickle-cell layer and in the later absorption of it from the upward pressure of the granuloma. In the bacteriological examination the authors were aided by Dr. J. W. H. Eyre. They found organisms, including a variant of Friedländer's bacillus, but their general conclusions were that all the organisms present were accidental and not pathogenic.

The whole essay represents much careful and laborious work, and is therefore a valuable contribution, although the authors, like their predecessors, have not been able to solve the pathological problem offered by this terrible disease.

House Drainage and Sanitary Fitments. By GERARD J. G. JENSEN, C.E. London: The Sanitary Publishing Co. 1900. Crown 8vo, pp. 257. Price 5*s.* net.

ATTENTION to details is generally found to be the secret of success in every undertaking. Possibly there are few subjects where neglect of apparent trifles is so fraught with danger to the community as in work connected with the sanitary surroundings of our dwellings. Mr. Jensen's little book is devoted to detail, and though he tells us little or nothing that is new, still it may be regarded as a valuable addition to sanitary literature. Technicalities being as far as possible avoided, it is rendered as acceptable to the layman as is compatible with the subject. The book is really a compendium or commentary upon the various materials and fittings commonly used in sanitary work and points out their uses, their several defects or advantages, and explains why the author arrives at his conclusions. To the student or those engaged in work of this nature the book will be found exceptionally handy for reference, it being well supplied with simple tables giving various formulæ which are constantly required but too often neglected. There are plenty of capital illustrations and plans and their value is enhanced by a good index.

It is a pity that Mr. Jensen has admitted, although with evident reluctance, the combined slop-hopper and housemaid's sink among his illustrations, unless for the purpose of condemning it. If the use of a slop-hopper is unavoidable it should be fixed in a separate apartment away from that in which drinking-water is drawn. Also, with regard to his condemnation of waste water-closets we would go further and say that such a disgusting arrangement should be abolished altogether. In any situation where they might be considered necessary a dry earth catch (not a pail) could be used with advantage.

Bacteria, especially as they are related to the Economy of Nature, to Industrial Processes, and to the Public Health. By GEORGE NEWMAN, M.D., F R S. Edin., D.P H. Cantab Second Edition. London: John Murray. 1900. Pp 397. Price 6*s.*

BACTERIOLOGY grows apace and it is therefore not surprising that original editions of text-books upon the subject have soon to undergo revision and expansion. The first edition of the book before us was issued in 1899 and was reviewed in THE LANCET of Nov. 25th, 1899, p. 1448. We commended it and regarded Dr. Newman's contribution as a valuable addition to the "Progressive Science Series" although we joined issue with him on certain points. In the present edition he has omitted some of the statements upon which we animadverted, while other statements he has modified in accordance with our criticisms. The present edition is an advance on the first edition chiefly in that it contains new chapters on tropical diseases, the bacterial treatment of sewage, and the industrial application of bacteriology. These new chapters are very well written and are fully in accordance with the results of modern inquiry. He describes, for instance, the recent experiments by Dr. Frank Clowes on the efficiency of coke-bed filters, a work which is undertaken, of course, on behalf of the London County Council. Again, he refers to the interesting observations of Dr. A. C. Houston on the bacteriological aspects of this method. The deposit which accumulates on the coke fragments used in the beds at Barking and Crossness proved to contain 1,800,000 bacteria per gramme. Since this quantity of typhoid bacilli, according to Dr. Houston, weighs only 0 0000147 gramme, it is evident that the numbers of living bacteria do not in themselves account in any way for the deposit. Dr. Clowes found that the deposit consisted largely of woody matters. The chapter on Tropical Diseases is quite fresh and is interleaved with microscopical illustrations of, amongst others, the bacillus of plague and the bacillus of leprosy. A brief account of the rôle played by the mosquito in the propagation of malaria occurs as a reference to recent investigation. The chapter on Disinfection is instructive and though exhaustive enough in a popular work it might usefully have been made to include some of the newer chemical substances now contained in the category of disinfectants and antiseptics On page 375 it is stated that "potassium permanganate is of course the chief substance in Condy's fluid." We believe that the manufacturers have denied this again and again, and it is fairly common knowledge now that Condy's green fluid is *sodium* manganate, while the red fluid is *sodium* permanganate It is not easy to write correctly upon bacteriology in popular language, but we think that Dr. Newman has succeeded very well in presenting a clear and intelligent account of the present position of the science. If it had been otherwise there would have been no call for a second edition.

Transactions of the Society of Anæsthetists. Vol. ii, 1899. London: The Medical Publishing Company. Pp. 231. Illustrated.

THE second published volume of these Transactions contains 11 papers or contributions to discussions. While points of interest occur in all of these some lack the originality which usually reveals itself in transactions of a learned society. If transactions are worth publishing they should contain no papers which are without some claim to originality. Professor Ramsay, who, by the way, is misnamed in the contents, deals with Pure Anæsthetics, and although his views concerning the best ways of preventing decomposition in chloroform are not accepted by all practical chemists his paper will be read with interest. The trend of expert opinion seems at present towards believing that the impurities in chloroform are responsible less for the acute than for the remote dangers incident to that anæsthetic. The discussion upon the question, "What anæsthetic should be selected in various conditions?" is one of great interest It is perhaps to be regretted that there were not more speakers who could find a use for all anæsthetics, each in its particular and appropriate place. The mere personal predilection is generally of less importance to the casual reader than the thought out arguments of men, which serve to guide him in difficult cases Dr. H G. Turney's paper on Post-Anæsthetic Paralysis is extremely good. Although much attention has been paid to this subject abroad, notably in Germany and in France, very little material of value has appeared in this country The addition of an index is distinctly an improvement to the present volume. No one who devotes himself to anæsthetics can afford to ignore the Society of Anæsthetists or its Transactions.

LIBRARY TABLE

An Outline Sketch: Psychology for Beginners. By HIRAM M STANLEY. Chicago The Open Court Publishing Company; London Agents. Kegan Paul, Trench, Trübner, and Co 1899. Small demy 8vo Pp. 44. Price 2s—This little book appears admirably to fulfil the author's intention of an introduction to psychology. It is written in a clear and interesting style and has practical exercises introduced into the text which will be useful both to teacher and to pupil. It may be commended to the notice of any beginner in the study of the elements of psychology, although it is in no sense a manual on the subject, and only gives the rudiments which should first be thoroughly grasped if a student is to obtain a lucid insight into this difficult and fascinating subject

The Insane in Private Dwellings and Licensed Houses. By J. F. SUTHERLAND, M.D, F.R.S Edin. Edinburgh: E. and S. Livingstone. 1897. Demy 8vo. Pp. 60 Price 1s.—Dr. Sutherland has produced a very instructive brochure on the advantages of the boarding-out system as it is carried out in Scotland, where it has been in use for 40 years, greatly to the advantage of the insane, to say nothing of a vast financial saving. The system has not apparently commended itself so highly to the authorities in England, where only 6 per cent. are boarded out as against 23 per cent in Scotland. It would seem to us that this method of treatment might be made more use of, at all events as an auxiliary measure for relieving the overcrowded asylums of some of their harmless chronic patients, whose removal would make room for more acute cases which should be admitted to asylum treatment without the delay which so frequently occurs under existing circumstances. The whole subject is one of great importance and all guardians of the poor and others concerned in the accommodation and treatment of lunatics should make themselves acquainted with the contents of this book Dr. Sutherland lays stress on the fact that since 1857, with an average of 2000 pauper insane in private dwellings, only one grave injury has taken place—a result which certainly compares favourably with the results obtained in asylums. The author's position as Deputy Commissioner in Lunacy for Scotland has given him ample opportunities of forming an authoritative opinion on the subject, and his remarks on central and local supervision and other details in the working of the scheme deserve careful attention. Dr. Sutherland estimates that a judicious extension of this system in England would result in an annual saving of £200,000. He thinks that instead of 5000 something like 17,000 patients might be provided for in this way.

Local Government Law and Legislation, 1899 By W. H. DUMSDAY. London: Hadden, Best, and Co. 1899. Demy 8vo Pp 279.—To all whom these Acts of Parliament concern the above volume, which is well arranged and well indexed, should prove of great value. The book is divided into four parts: Part I. recites the Public General Acts of 1899 with a few explanatory notes which might in some cases have been enlarged with advantage. Part II. consists of a Digest of Cases in the Courts alphabetically arranged. Part III gives a list of Miscellaneous Orders and Circulars for the year ended Sept. 30th, 1899, with remarks on the same Part IV. is a table of Public Bills in Parliament affecting local authorities which did not become law. The work is designedly a supplement to other text-books and should find a place on the shelves of the busy men who are obliged to keep themselves well informed on the current changes in legislation, as it will obviate the necessity of searching all the original digests and reports and therefore will prove a great saving of time and labour

The Pathological Statistics of Insanity. By FRANCIS O. SIMPSON, L R C P Lond., M R C S Eng London: Baillière, Tindall, and Cox. 1900 Royal 8vo. Pp 140. Price 10s. 6d. net—As its title implies this work consists largely of tables of statistics and the author is to be congratulated on the admirable manner in which he has dealt with the facts at his disposal The system on which the observations have been made is that suggested by Mr. W. Bevan Lewis and is most exhaustive. Pages 1 to 48 give Mr. Simpson's conclusions drawn from the consideration of an immense number of post-mortem records made in the West Riding Lunatic Asylum. The suggestion which the author makes that those interested in insanity should pursue their investigations on somewhat similar lines is worthy of careful attention as it is only by the comparison of a very large number of such observations that any results of real value are likely to be obtained Pp 43 to 131 contain a series of tables giving minute measurements of the cranium and brain in different classes of lunatics, with percentages of the abnormal conditions which are found in them, and should be of great use to all medical men interested in lunacy, more especially to those who have opportunities of making necropsies. In the section devoted to General Paralysis the author makes some interesting remarks on the rôle of syphilis as a factor in the causation of this disease, and adduces arguments in support of his contention that its influence has been greatly over-estimated. He says that "in only two males out of 95 paretics examined was any trace of exudative syphilitic process discovered, the lesion in each case being a gumma." It appears that general paralysis is much more prevalent in the north than in the south of England and that the type of the disease is more acute, cases rarely lasting for two years and frequently only for six months. Mr. Simpson does not advance any theory to explain this condition, but states that in his opinion alcoholic and sexual excesses and gonorrhœa are the most important etiological factors. The notes on the Breaking Strain of the Ribs are instructive, confirming Meyer's remarks that there is a tendency to increased fragility in the insane but not in paralytics. Induration of the white substance of the brain is, according to Mr. Simpson, of very rare occurrence and is neither pathognomonic nor pathogenetic of any form of epileptic insanity.

Writ in Barracks. By EDGAR WALLACE. London: Methuen. 1900. Pp. 121. Price 3s.—Mr. Wallace dedicates his little book to "the rank and file of the Army Medical Corps, amongst whom I spent six happy years of my life." Comparison with Kipling is inevitable, but we maintain that Mr. Wallace has no reason to shirk comparisons. His ballads deal mainly with South Africa and being in the Royal Army Medical Corps he naturally saw a good deal of the less attractive side of war, a note which is struck in the first ballad. Most of the others are good and one—"The Prayer"—is very good.

The Tale of a Field Hospital. By FREDERICK TREVES, F.R.C.S. Eng. London: Cassell and Co. Pp. 109. Price 6s.—This little book, beautifully got up in all the glory of morocco binding, uncut edges, and rubricated headlines and initials, sets forth in Mr. Treves's breezy style the pathos, the heroism, and the sorrows of war. The field hospital was No. 4 Stationary Hospital, so called, we presume, on the *lucus a non lucendo* principle, because it accompanied the Headquarters Staff of the Ladysmith relief column. Some of the matter has previously appeared in the pages of the *British Medical Journal*, but the book as a whole is simply an amplified record of notes taken on the spot. A perusal of its pages will serve only to increase our admiration for the grit of the British army from the highest to the lowest, but we may be pardoned for saying that the most interesting deed of heroism to ourselves is the account in Chapter xxix. of how Major Babtie won the Victoria Cross. The book is well illustrated with reproductions from photographs, and among all the pain and sorrow of the recital the photograph of "Hairy Mary" is enough to bring a smile to the most dolorous countenance. She looks exactly like a mammoth in the rough.

DISPOSAL OF AMPUTATED LIMBS.—At the meeting of the Cardiff Board of Guardians held on Nov. 20th the subject of the disposal of the amputated limbs of pauper patients was again discussed. It was stated that several of the limbs had been buried in the workhouse grounds, others had been interred with the bodies of paupers, and some had been sent to the pathological department of University College, Cardiff. One of the guardians said that a Protestant man complained bitterly on discovering that his amputated arm had been buried with the remains of a young Roman Catholic woman. After a long discussion it was decided that the patients should in future be consulted in the matter.

# Analytical Records
FROM
THE LANCET LABORATORY.

STRENBO.

(THE STRENBO CO., 64, CORPORATION-STREET, MANCHESTER.)

THE proximate analysis of this extract was as follows: moisture, 28·81 per cent.; ash, 17·44 per cent.; organic matters, chiefly proteids, 53·75 per cent. The total nitrogen was 8·04 per cent. According to the precipitate obtained on adding saturated zinc sulphate the albumose amounted to 10·12 per cent., while the peptones shown by the coagulation produced on adding bromine water amounted to 3·46 per cent. Considering these results with the fact that only 11·87 per cent. of the organic matters proved to be soluble in alcohol it is pretty clear that "strenbo" contains something more than the mere stimulating constituents of meat. Indeed, the view we take of these results is that this preparation is just as acceptable for its real nutritive value as for its stimulating properties. It contains a small amount of unaltered albumin (0·17 per cent.) and the insoluble proteids amounted to 1·30 per cent. The composition of this preparation is based evidently on the knowledge that ordinary beef-tea is little else than a stimulating fluid, for "strenbo," though it possesses stimulating properties, possesses, too, what is more important, real nutritive properties.

KOLE-SPAR.

(UNIQUE TRADING CO., WARWICK-STREET, ROTHERHAM.)

"Kole-Spar" is described as "the world-renowned coal-saver and consumes all the vitality there is in coal." One package costing 6*d.* saves, it is said, one quarter of a ton of coal. Our analysis disclosed the black glistening mixture to be carbon, common salt, and a little sulphur. The common salt amounted to nearly 85 per cent. In view of this analysis the following statements may be easily accepted: "Kole Spar can be handled by a child with impunity. It can do no harm to persons or grates and furnaces." In view of this analysis also the following claims may well be doubted: "Kole Spar destroys coal gas ...... prevents soot and cinders ...... prevents smoke ...... will make a poor quality of coal do the service of the first quality." All we can say is that these latter claims do not coincide with our experience, and that, if they did we should be inclined to think that common salt would be just as good as, while it certainly is much cheaper than, "Kole Spar." The preparation is decidedly novel; we have never heard of it before, but the current high price of coal probably accounts for its introduction.

LIQUID SOMATOSE.

(THE BRITISH SOMATOSE CO., 165, QUEEN VICTORIA-STREET, LONDON, E.C.)

Compared with somatose powder an increased palatability and an easier form for administration are the chief claims made in regard to this preparation. We have reported previously upon somatose powder which, for all practical purposes may be said to contain as its chief constituent albumose. This is evident from the fact that the proteids present are practically thrown entirely out of solution on the addition of a saturated solution of sulphate of zinc. Liquid somatose is a brown fluid with a pleasant meaty flavour which may be referred to the addition of a small quantity of meat extract. Liquid somatose is sterilised and we have found it to keep for days without perceptible change in condition or taste, even when kept at incubating temperature. Our analysis gave the following results: water, 44·97 per cent.; mineral matter, 7·49 per cent.; organic matters, 47·54 per cent. The proteids thrown out by sulphate of zinc amounted to 36·20 per cent. The nutrient value of albumose has already been pointed out in these columns and liquid somatose contains a very rich proportion of this soluble proteid. The mineral matter contained some amount of common salt. This preparation should be found to be of decided value in the sick-room.

(1) HIGHLAND MALT WHISKY; AND (2) COGNAC BRANDY.

(INNES, SMITH AND CO., 83, HIGH-STREET, BIRMINGHAM.)

We have examined the whisky with the following results: extractives, 0·48 per cent.; mineral matter, 0·015 per cent.; alcohol, by weight 39·30 per cent., by volume 46·59 per cent., equal to proof spirit 81·64 per cent.; acidity reckoned as acetic acid 0·024 per cent. The spirit shows excellent characteristics; it is mild and smooth to the taste, and its flavour is evidently derived from malt. There was no suspicion of *undesirable alcohols* or of the presence of injurious by-products. It is therefore well adapted for medicinal purposes. The Cognac brandy gave the following results on analysis: extractives, 0·725 per cent.; mineral matter, 0·005 per cent.; alcohol, by weight 38·22 per cent., by volume 45·41 per cent., equal to proof spirit 79·57 per cent.; acidity reckoned as acetic acid, 0·039 per cent.; volatile ethers (equal to alcohol) 2·02 parts, per 10,000 by weight. This is a well-matured spirit, soft and acceptable to the palate. It shows also a due proportion of volatile "wine ethers." Though somewhat sweet to the taste it contains no sugar or sweetening agent, the sweetness being due probably to the normal products of distilled wine subsequently mellowed by age. The spirit being undoubtedly pure and of satisfactory origin is accordingly suitable for use by invalids.

(1) SELAMA MINERAL WATER AND (2) SOAP.

(AGENTS, BARCLAY AND SONS, 95, FARRINGDON-STREET, LONDON, E.C.)

Selama water, drawn from a spring in Algeria known as Lake Moullah spring, presents a somewhat remarkable composition. It is practically a 1 per cent. solution of common salt, but with this mineral is associated an important quantity of silicic acid. Calculated as silica the amount is over 1 part per 10,000 parts of water. On this account the water slightly attacks the glass of the bottles containing it. It is said to possess certain medicinal properties, but to be more especially useful as an application to cuts or wounds or in eczema. It is said also to allay *irritation* and *inflammation* arising from insect bites or other causes. We make little doubt that this property is due to some extent to the silica present, since, as is well known, the silicates are powerful antiseptics. Silicate of soda is used, for example, for preserving milk. The other peculiar constituents of the water doubtless add to its antiseptic value in this respect. We have received a pamphlet recording several cases of skin disease under the care of a medical man in Algeria in which distinct benefit was claimed to have been gained by the external application of this water. The water has been tried *elsewhere, it is* said, with similar results. A soap is prepared containing, it is stated, 20 per cent. of "Selama" water. We do not understand how this can be unless the water was first concentrated, since the soap is very hard and practically dry, although it is of excellent quality.

EAU MINERALE NATURELLE DU BASSIN DE VICHY (SOURCE GUERRIER).

(GUERRIER PÈRE ET FILS, ST. YORRE, PRÈS VICHY, AND E. G. AFFLECK, 36, LIME-STREET, LONDON, E.C.)

According to our analysis this is a mildly alkaline water slightly charged with an excess of carbonic acid gas. The water is particularly soft to the taste. It is related to the celebrated Vichy water which, on account of its alkaline and saline constituents, is recognised to be of value in gastric catarrh and irritation. The sample before us gave the following results upon analysis: total saline constituents, 3·23 grammes per litre, comprising 2·50 grammes of carbonate of soda, 0·35 gramme of common salt, and 0·38 gramme of other salts chiefly of calcium. The water gives distinct evidence of lithium and traces of arsenic. Our analysis is not completely in accordance with that printed upon the label of the bottle in regard to the amounts; we found a smaller proportion of the salts indicated. As it is the water presents an interesting composition, especially in regard to the comparatively rarer constituents, manganese, strontium, phosphate of soda, arseniate of soda, and lithium. It was free from organic matters. It is probably serviceable in certain disordered conditions of the alimentary tract and in increasing the alkalinity of the blood. It is doubtless also of some tonic value owing to the manganese, iron, and arseniate and phosphate of soda present.

VICHY QUINA WINE.

(T. BAUDET, VICHY, AND E. G. AFFLECK, 36, LIME-STREET, LONDON, E.C.)

The analysis of this wine gave the *following* results: extractives, 13·46 per cent.; mineral matter, 0·35 per cent.; sugar, 6·92 per cent.; alcohol, by weight 14·82 per cent., by volume 18·25 per cent., equal to *proof* spirit 31·99 per cent. The wine is said to contain the natural salts of Vichy water. The reaction of the wine, as we expected, was acid, whereas *the salts of Vichy* water are alkaline, consisting *chiefly* of carbonate of soda. We cannot agree that whatever medicinal effects may be ascribed to the salts of Vichy water *the same effects* may be *also* ascribed to this preparation. Even were *it so* the proportion of *salts* present, as shown in the above analysis, is very small. The wine has a *flavour suggesting both cinchona* bark and *coca leaf*. We failed, however, to extract and to *recognise cocaine*, but we obtained a residue which gave the reactions of the active constituents *of* cinchona bark. The wine is described as "vin hygiènique, tonique, et fortifiant."

SOZOIODOL.

(H. TROMMSDORFF, ERFURT.)

We have received a beautiful crystalline specimen of the sodium salt of this interesting compound from the above firm. Sozoiodol, which, to give its chemical name, is di-iodo-para-phenol-sulphonic acid, forms an interesting series of salts with the metals, but the sodium salt seems best adapted for medical use. It forms an excellent antiseptic dusting powder. It may be regarded as an efficient substitute for iodoform, with the favourable difference that it possesses practically no objectionable iodous odour.

New Inventions.

THE "MARVELE" MILK BOILER OR STERILISER.

THIS is a very simple and effective device for the satisfactory boiling or sterilising of milk or other fluid. It consists of two saucepans one inside the other, the larger one being provided with studs inside which keep an open space uniformly between the inner and outer pan. The outer pan serves as a hot-water jacket, so to speak, to the inner pan. The inner pan is pierced with two holes so that the liquid contained in it will find its level in the other pan. Steam is generated fairly rapidly in the outer pan, which soon heats the contents of the inner pan. By this method the risk of burning milk is reduced to a minimum. *This alone is* a very important advantage, for milk if left to boil in an ordinary saucepan invariably gets burnt and acquires an unpleasant taste. The "Marvele" milk-boiler affords a very satisfactory way of *sterilising milk* or of cooking other fluids. It is possible even to concentrate milk in this boiler without the formation of products having a disagreeable taste. The inventor is Mr. Jacob Brown, of 130, South-street, Longsight, Manchester.

THE LANCET.

LONDON: SATURDAY, DECEMBER, 1, 1900.

WHATEVER obscurity may have originally surrounded the outbreak of peripheral neuritis which has now attained the proportions of an epidemic in Manchester and Salford and a large area around these towns, it is now certain that the mischief has arisen from the presence of arsenic in beer. We publish in our issue to-day a special account of the outbreak by Dr. T. N. KELYNACK, who has encountered many interesting cases amongst the very poor people attending the out-patient department of the Salford Royal Hospital, while others have been under his observation in the wards of the Manchester Royal Infirmary. Apparently the mischief has been going on for some months. The cases have been looked upon as simply "alcoholic multiple neuritis" The real cause of the neuritis, however, was traced eventually by Dr. E S. REYNOLDS to arsenic in beer, and Mr. C. H. TATTERSALL, medical officer of health of Salford, has called the attention of the Health Committee of Salford Corporation in his recent report to the large amount of sickness in the district from this cause. It was clear that the cases were of an altogether exceptional type and the conviction soon became irresistible that the symptoms were due to some special irritant or irritants taken in food or beverage. Most, if not all, of the patients were drinkers of beer in some form or other and accordingly the suspicion fell upon beer, and startling as it may appear arsenic was subsequently found in beer in easily detectable quantity. The clinical aspects of the outbreak are well described by Dr. KELYNACK to whose report there is appended an instructive analytical report by Mr. WILLIAM KIRKBY, F L S. Mr. KIRKBY, as will be seen, has found quantities of arsenic in various beers ranging from mere traces up to as much as 0·28 grain per gallon the results being expressed in terms of white arsenic or arsenious acid. These results relate to beers which were examined because they were suspected, but we have yet to learn the extent to which arsenical beer is being sold.

The outbreak is so serious that a very comprehensive investigation must be made. Suffice it to add for the present that Mr. KIRKBY has also turned his attention to certain specimens of brewing sugars; and the result of his inquiry has been that in glucose he found four parts of arsenic per 10,000 parts of the sugar, and in the "invert" sugar—i e, sugar obtained by boiling cane sugar with acid—he found three parts of arsenic in 10,000 parts of malt substitute In a communication from Professor DELEPINE and Mr C H. TATTERSALL which we also print in our present issue, it will be seen that these gentlemen report the presence of arsenic in beer, glucose, "invert" sugar, sulphuric acid, pyrites, but not in the hops, preservatives, gypsum, water, whiting, maize, sago, or tapioca. These results are conclusive and may well cause alarm. The surprise is that wholesale poisoning has not previously occurred. One thing is certain, and that is that for years past brewers have employed both glucose and "invert" sugar for brewing beer. Further, these sugars or malt-substitutes have been obtained by acting upon starches and cane sugar with sulphuric acid. Further, again, and still more important is it to bear this in mind, ever since sulphuric acid was made from arsenical pyrites arsenic has been a common impurity of the acid. Under these circumstances it is surprising that peripheral neuritis traceable to arsenical poisoning due to the drinking of modern beers made from malt substitutes has hitherto not been observed even in individual cases. It is hardly conceivable that poisoning from this cause can have previously reached the dimensions of an epidemic, as in the present instance. It is said, however, that very large consignments of "invert" sugar from America have recently been employed by brewers in this country, and this may possibly throw some light on the present unfortunate occurrence, which may be attributable to transatlantic sources hitherto unused.

The whole story illustrates the great dangers that may arise from the introduction of substitutes in the course of the preparation of foods and beverages. It would appear that the use of malt substitutes is a matter of expediency rather than of economy. It is a mistake to suppose that the use of "invert" sugar, glucose, or cane sugar is cheaper than their equivalent of malt. Beers brewed with sugar are more brilliant and stable than beers brewed with malt alone. Moreover, the beers so obtained are of a lighter character and have a more distinctive flavour. The materials used for the preparation of glucose in this country are maize, sago, and rice. These are boiled with dilute sulphuric acid, either with or without pressure, the starch in them being thus rapidly hydrolysed into dextrine and maltose, which in turn are rapidly displaced by glucose. The resulting acid liquid is neutralised with whiting and the main portion of the gypsum thus formed is allowed to subside. The liquid after filtration is finally concentrated. It is clear from the details of this process that any arsenic occurring in the sulphuric acid would remain in the syrup or in the ultimately crystallised product. Arsenical poisoning has before been traced to the use of sulphuric acid in the course of manufacturing certain preparations intended for human consumption. About five months ago, for example, we reported that arsenic had been found as a common impurity of phosphate of soda, which impurity had been derived from the sulphuric acid employed in the manufacture, and it appeared also that phosphate of soda formed the basis of a popular effervescing drink. The consumption of phosphate of soda, however, is comparatively trivial and unimportant, whereas in the case of beer the danger of employing impure sulphuric acid in the elaboration of products intended for human consumption on a large scale is specially obvious. It seems to us that this epidemic affords a fresh and startling argument for the interdiction of substitutes, unless very definite steps be taken to secure the absolute purity of such substitutes. It is noticeable that the Pure Beer Committee of four years ago did not suggest the awful possibility of an epidemic of arsenical poisoning arising through the use of malt substitutes in beer. This

Committee was directed to inquire into and to report upon, the question whether legislation is required "*to prevent the use of deleterious substances in the manufacture of beer*; and whether the materials of which beer may be composed can be defined by law without undue interference with the liberty of brewers to use wholesome materials in brewing." The italics are ours Of course, the Committee directed its attention mainly to the wholesomeness of the substitute, without paying apparently the slightest regard to the processes by which such substitutes are made and the possibilities of poisonous materials gaining access to them It seems to us that the Committee has missed an important aspect of the subject of inquiry But it is curious how exactly the words contained in the reference to the Committee apply to the present unfortunate epidemic of arsenical poisoning in Manchester and its neighbourhood.

The question remains when and where will the mischief cease? Legislation, we most emphatically agree, is undoubtedly required "to prevent the use of deleterious substances in the manufacture of beer" The interests of the public health urgently call for it, and it is the immediate duty of the Government to institute a thoroughly exhaustive inquiry The question must be settled as to who is culpable and what course must be adopted to render a recurrence of disaster absolutely impossible

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THE discussions which are now constantly taking place in Ireland in reference to university education and the feeling that important changes, fraught with far reaching consequences, may at any time be brought forward, are having a most baneful effect on higher collegiate work in that country As a natural result of the present uncertainty the sons of many Irishmen who would under ordinary circumstances be educated at home are being sent to English or Scottish Universities, because their fathers, remembering how suddenly they, through Mr DISRAELI'S action in destroying the Queen's University of Ireland in 1879, were left as graduates of a non existing university, are determined that their sons shall not through coming legislation be treated in a similarly scandalous way Again, owing to the same causes, the present Queen's Colleges, which are in all respects Government institutions, are being starved Friendly statesmen of both political parties feel that as soon as they attempt to propose increased grants for any of these educational centres the Nationalist Members of Parliament will offer every form of opposition until the Roman Catholic demands have been met

The annual grant paid by Parliament to the Queen's Colleges of Belfast, Cork, and Galway remains the same in amount as it originally was when in 1849 these institutions were established by SIR ROBERT PEEL, but this endowment is totally inadequate to cope with the increased demands now made for teaching new subjects which were not required in former years We can best illustrate this by examples from the medical faculty In two of the colleges there is no separate professorship of physiology, the chairs of anatomy and physiology being combined; in Belfast the same state of matters existed until 1893, when, through the munificence of Mr DUNVILLE D L, the chair of physiology was established and endowed In none of the three colleges is there any endowment for a professorship of such an important subject as pathology, the lecturer receives the students' fees But in Belfast, there is a pathological laboratory. Again, in none of the three colleges is there a chair of public health, and the attempts to meet the demands of the times in this department—so useful to the nation—are certainly anything but efficient There is no provision in any of the departments of the medical curriculum for demonstrators or assistants, they must either be dispensed with or the professors must provide them out of their own resources New laboratories are needed in many of the departments, such as biology and pharmacy In the Belfast College in the year 1891 the Board of Works commenced, under the sanction of the Treasury, the erection of a building for the department of chemistry, but after spending £5500 the Treasury declined to give the remaining £3200 for the completion of the building unless a local contribution was made towards the object The Government's action was intended, no doubt, to prove a strong stimulus to local activity, but it has unfortunately resulted in the chemical department of Queen's College, Belfast still remaining in an unfinished condition With the great progress in medical science one new department after another has to be established and the necessary expenditure incurred has to be met by the College authorities out of the same small annual financial grant that they were receiving years ago, for the Government absolutely refuses to make any new and additional endowment

The argument that Ireland should rise to its obvious duties and contribute more to the funds of the local colleges has force, but, on the other hand, the reply is an obvious one The inhabitants before they will give money to the local colleges, must be assured of the stability of the institutions, and of the probable permanence of the policy in accordance with which they were founded The fact that these colleges are State colleges militates against them The Belfast citizens, for example have no voice whatever in the government of Queen's College, Belfast There is no senate or board of governors (as is the case in the Owens College, Manchester, and in Birmingham) in which some of the leading citizens have a share, and consequently it is only natural that they do not take that special personal interest in the College which they certainly would had they some responsibility for its management Even under the existing circumstances the citizens of Belfast have given thousands of pounds to the College, and being proud of their rich and prosperous city, they would certainly do more towards endowment if they felt sure of their ground But that is what they cannot feel The State established the Queen's Colleges in Ireland and entirely controls them It should equip them properly, and it does not Medical science in particular suffers under the present conditions, because the enormous progress that has recently taken place in medicine calls for increased endowment

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WE should hardly be disposed to reckon office boys as a class among pioneers of sanitary progress To an individual of this order, however, seemingly belongs the honour of having initiated a widespread and much needed agitation for sanitary reform in no less a place than the Royal borough of

Windsor. In June of last year the youth in question handed to representatives of the local press a report by the medical officer of health of the borough, Dr. E. CASEY, which was to be presented and considered at the next meeting of the Windsor Town Council. After that meeting the press accounts, which set out Dr. CASEY'S report in full, caused great astonishment to certain members of the town council, who learnt for the first time that the medical officer of health had been calling attention to the grossly insanitary condition of a large group of cottages in Windsor, but that all his observations on this subject had been omitted when his report was read at the town council meeting. Inquiries followed, from which it appeared that, failing specific directions from the Sanitary Committee, discretion as to what parts of reports by the medical officer of health should reach the town council and the public was habitually exercised by the town clerk. Application was then made by certain residents to the Local Government Board for inquiry.

As a result, that Board has lately issued a report, which we review more fully elsewhere in our present issue, by Dr. H. T. BULSTRODE, who has not only locally investigated the current methods of sanitary administration, but has studied in detail the various sanitary shortcomings of the borough. This report has created, as no doubt it was intended to create, a great stir in Windsor. The inhabitants have had brought to their notice that their town is lacking in many essentials to the healthy life of a modern community which can be provided as easily for their ancient borough as for newer towns of much less importance. For example, the borough is without an isolation hospital or a disinfecting apparatus, and this notwithstanding the special need for measures to control infectious disease in a place which is at once a Royal residence, a military station, and a resort for visitors from all parts of the world, while it is also close to one of the most famous public schools of the country. In addition, Windsor has now been given officially to understand that its sanitary administration in ordinary day-to-day matters has been weak in the extreme; that the by-laws of the place are unknown even to officials of the town council; that their town abounds in nuisances due to accumulation of refuse near to dwellings; and that the conditions under which the poorer classes live are in many cases about as bad as they can be. Rows of houses which by reason of their dilapidation, inside and out, and of their unwholesome surroundings should long ago have been condemned as unfit for habitation, have year after year been permitted to be occupied, notwithstanding representations more or less forcible by the officers of the sanitary department. So persistent have been the influences exerted against improvement in such matters that these officers have come to look upon reform as hopeless, and, in the words of the report, have "become disheartened" and have learnt to adopt "apologetic attitudes." Notwithstanding much indignation which has been expressed at Dr. BULSTRODE'S indictment, there are signs that it has had effect. Already, it would seem, something has been done by way of amendment by the town council, which, we are glad to learn, has after the recent elections been reinforced by new members who have pledged themselves to comprehensive measures of reform. Having regard to the circumstances set out in Dr. BULSTRODE'S report, the resignation of the town clerk, which was recently announced, is, from the view of sanitary progress, not wholly to be regretted, notwithstanding that Mr. LOVEGROVE has doubtless in other respects established substantial claim to the gratitude of the people of Windsor. Concerning the fate of the office-boy we are ignorant; but as a happy accident enabled him to inaugurate great benefit to his fellow-citizens we should be glad to learn that he has been rewarded.

Readers of THE LANCET of 1885 will find in Dr. BULSTRODE'S official report ample justification of the action which in that year we felt it our duty to take when we brought before the public the backward state of sanitary affairs in Windsor. As a result of careful inquiries by a Special Commissioner of THE LANCET we then called attention to a number of conditions urgently demanding remedy, which, 15 years ago, could readily have been applied by a town council willing to exercise a reasonable amount of determination and common-sense. In particular we urged on the local authorities the need for careful investigation of the unhealthy and degrading conditions under which a large portion of the people in Windsor were living and for efforts to ameliorate them. The Rev. ARTHUR ROBINS, then rector of Holy Trinity, Windsor, whose acquaintance with the moral and social conditions of the Windsor poor was intimate, aided our efforts by the most determined advocacy, but our warnings, we fear, in the long run had small effect. In particular, the house-to-house survey which we suggested as the first essential to sanitary progress was not adopted. The town council had learnt "how not to do it," and continued content in applying that knowledge. Their officials at that time indeed furnished us with admirable examples of the "apologetic attitude" which since has so impressed the inspector of the Local Government Board. We recall these facts in no spirit of self-complacency, but because they may serve to remind the people of Windsor and their representatives, now suffering from another public exposition of the shortcomings of the borough in a sanitary sense, that the best way in the long run is to face, and not to ignore, the difficulties which beset reform. We are glad to learn from local sources that there is a prospect that in future the ostrich-like policy from which Windsor has suffered in the past will be definitely abandoned.

Annotations.

"Ne quid nimis."

BACTERIOLOGY AND RELIGIOUS RITES.

THE fact that bacteriology is quite a modern science, whereas religious rites and ceremonies date back as far as historical records will allow us to go, sufficiently explains the want of harmony between them. It would, indeed, have been a proof of marvellous prophetic intuition if those who first initiated religious ceremonies had foreseen and prepared for discoveries to be made many centuries later. Several of our correspondents have expatiated on the risk attending the promiscuous use of the communion cup. This, however, is far from being the only risk of this description. The holy water in Roman Catholic churches is quite as serious a matter. The shallow shell-shaped receptacle is placed barely three feet or so from the floor, so that the dust stirred up by the feet or shaken off from the persons who pass by readily falls into it. Innumerable *fingers*, not always *scrupulously* clean, are dipped into the water. Also, it is just at the moment of danger and trouble that the faithful are most prone to resort to their church for prayer and consolation. Coming straight from the sick bed of some loved parent or friend, can we expect that the hands are always thoroughly disinfected before they touch the holy water? In Spain especially, and during the great cholera epidemic of 1885, we have noted that the holy water was absolutely dirty and living organisms could be seen with the naked eye, so what the microscope would have revealed may well be imagined. Now the fingers convey this water to the forehead and breast of the devotee, and of course the mouth might also be touched with the same fingers. But we do not see that there would be any lack of reverence shown if this holy water was changed more frequently, nor are we aware that it would be a sacrilege to mix it with some strong antiseptic solution. Again, at the Ahmed Mosque of Constantinople there is a small piece of the black stone brought from the Kaaba of Mecca. Against this piece of stone the true believers come and rest their heads for a considerable time. By so doing it is supposed that various illnesses can be cured, and as there are certain affections that can be favourably affected by the force of suggestion the results sometimes attained seem to confirm this superstition. But though a hard stone is less dangerous than water and germs of disease deposited upon its surface would soon be oxidised, still patients following each other in rapid succession might convey to one another pathogenic microbes. The same may be said with regard to the kissing of the toe of the bronze statue of St. Peter at St. Peter's, Rome. Would it be too much to ask that this stone, this bronze toe, and other similar objects of reverence and adoration should be frequently wiped with a rag moistened in an antiseptic solution? Why should science and religion be divorced one from the other? If we have been endowed with the intelligence to foresee a danger, may we not, with all due reverence, take the necessary precautions to ward off this peril. With regard to the communion cup, Count Leo Tolstoy, in his recent novel "Resurrection," decribes the celebration of the Liturgy in the chapel of a Russian prison. Here the priest cuts the bread into little pieces and dips them in the cup containing the wine. Then with a spoon he places the piece of bread and wine into the penitent's mouth. Thus there is no drinking out of the cup and it would be much easier to have a clean spoon for each communicant than a separate cup. This is the general practice of the Orthodox Greek Church and one which lends itself better to sanitary precautions than that of the English Church and her sister communions as we have already pointed out.[1]

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

"IT is desirable that further help up to a minimum of £25,000 may be given before Dec. 15th next" is the concluding sentence of a special appeal which has been issued with the third annual report of the Prince of Wales's Hospital Fund for London. Although the report is a very satisfactory one from the point of view of work done the receipts do not reach the progressive standard which the needs of the hospitals call for. This is especially regrettable at a time when the hospitals of London are suffering from a lack of financial support by reason of the heavy drain upon the charitable purse in other directions. The total sum distributed in 1899 amounted to £42,000, with a total cost of management and collection of about 3½ per cent. Of this sum £26,000 have been given as annual grants and the remainder as donations. Deducting from the total sum £1000 which were given to convalescent homes, and the balance of £41,000 compares with £31,500 of the previous year. The sum collected in the Diamond Jubilee year was £56,826. The report of the distribution committee states that arrangements have been made for the re-opening of 45 beds next year. This number added to the figures of the two previous years gives a total of 287 beds made available to the poor of the metropolis by the agency of the fund. As the demands upon the hospitals will be greatly increased by reason of the returned sailors and soldiers from South Africa, independently of the ordinary increase which now takes place year by year, every effort should be made to obtain the sum which the executive committee of the fund appeal for; and now that the fund has shown itself after three years of usefulness to be able to work with a minimum of expenditure not only subscriptions and donations but legacies ought to fall to its share. With regard to the important question of the rating of hospitals the report of the general council of the fund states that "in the course of the present session a petition will be presented to Parliament by the Central Hospital Council calling attention to the heavy rating of hospitals. In support of this, on behalf of the fund, a petition has been forwarded in accordance with the instructions of the executive committee, expressing the sympathy of all concerned, and their desire to see the rating of all recognised London hospitals abolished." Included in last year's list of subscribers and donors are the following annual subscriptions:—The Prince of Wales, £105; the Princess of Wales, £25; Princess Victoria of Wales, £5; the Duke and Duchess of York, £21; Princes Albert and Edward of York, £2 2*s.*; Princess Victoria of York, £1 1*s.*; the Duke and Duchess of Fife, £50; the Duke and Duchess of Teck, £10; Captain Prince Louis of Battenberg, R.N., £1 1*s.*; Princess Louis of Battenberg, £1 1*s.*

THE APPOINTMENT OF HONORARY MEDICAL OFFICERS TO INFIRMARIES.

IT is much to be regretted, at a time when *esprit de corps* of the profession is in the ascendancy, that antiquated methods of election of honorary officers to our infirmaries should still exist. When a body of subscribers, as well as presidents, vice-presidents, and boards of management, have to be solicited for votes it is canvassing, and canvassing of a distasteful nature which might deter well-qualified candidates from entering the field. We would be the last to deprive anyone of the franchise or to remove any privileges which subscribers may enjoy, but surely these persons might depute the election of honorary officers, when occasion requires, to a body elected by themselves. At an annual meeting when the subscribers are assembled after electing president, vice-presidents, and board of management, surely an elective body could be appointed from among the subscribers to act for the following year, and such subscribers, together with the board of management, would form a body suitable for the purpose. In some cities and towns we believe that this has been done and that it works well; why cannot every town that is proud of its hospital do the same? We are prompted to make these remarks in consequence of the election of an honorary medical officer to the Royal Albert Edward Infirmary, Wigan, which took place on Nov. 14th. Three eligible gentlemen had been nominated and provision had been made for taking a poll if necessary. One of the candidates (Dr. F. Rees) who had the unusual privilege of addressing the subscribers (electors), questioned the right of many of the gentlemen present as representatives from the works (because it was alleged the working men themselves had not elected them) to vote, and some acrimonious remarks were made. He also moved the adjournment of the meeting, but this was defeated by a large majority. An allegation having been made that the board of management had not allowed the proper representatives of works to be on the list or register of representatives sent in each year, the chairman of the board of management said that he had no knowledge of any name being on the list of voters that ought not to be on. He understood from the secretary that the names of the works' representatives were sent in at the proper time and put on the register, and he took it from a business point of view that those names were those of the nominees of the works from which the money came. As far as the board of management was concerned he did not agree with the speaker (Dr. F. Rees) that these men had been improperly elected. It was for the men at the works to put the matter right themselves. He thought that the method of electing a medical officer was not very dignified and it might very well be left with an elective body. It would be more dignified for the profession and more useful to the institution. The election afterwards proceeded by a show of hands, the successful candidate having a large majority. A poll, however, was demanded, but on the proxies being handed in it was withdrawn.

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[1] THE LANCET, Oct. 13th, 1900, p. 1088

AN INTERESTING ACTION FOR MALPRACTICE AGAINST A DENTIST.

THE last issue of the *British Journal of Dental Science* contains a short account of an important action tried before a jury in the Lord Mayor's Court against a dentist for alleged negligence. The facts of the case, as gathered from the report and also a letter from the defendant, are briefly as follows. The tooth in question was a mandibular molar. The cavity in this was dressed with carbolic on a Tuesday and on the following Thursday the nerve canals were cleaned out and filled with a dressing of carbolic acid and iodoform. A cement filling was inserted and the plaintiff was told to return if any pain or trouble occurred, which he did not do. It was only intended to retain this tooth for a few weeks. The same night pain commenced and by the following morning when seen by his medical man there was so much swelling as to cause trismus His temperature was stated to be 104° F. and it was also said that it was impossible to remove the tooth. The face was poulticed on the outside for three days and incisions were made both inside and outside the mouth. The tooth was allowed to remain for three weeks and even during this time no attempt was made to remove the filling. The dental surgeon who gave evidence in support of the plaintiff stated that it was wrong practice to put a cement filling in a tooth if the nerve was dead, and stated that such teeth required to be dressed with antiseptic wool sometimes two or three times before being filled. He also stated that with a temperature of 104° it would have been wrong to administer nitrous oxide and to remove the tooth. Other evidence was given on both sides and a verdict was returned for the plaintiff with £40 damages. This case is of great interest because if such a decision could be upheld there are few dentists who would not be liable to be mulcted in damages in performing such an operation, since septic inflammation must always be regarded as a possible complication. The operation as performed by the dentist was a perfectly justifiable one; he cleared the pulp canals of septic matter, placed in a dressing of antiseptics, and sealed them with a plastic filling which he would have removed if pain had occurred. This was stated to be wrong practice by the dentist called in support of the case, but it is nevertheless the method adopted by the best dental practitioners of the day, while the method stated as correct by the dentist is one which, perhaps, may be regarded as a relic of the past. In our opinion the defendant was in no way to blame. A temperature of 104° is no bar to an anæsthetic if an operation is necessary. Still further, there is no reason whatever that should have prevented the removal of the tooth. If a consultation had taken place between the dentist and the medical practitioner in all probability the tooth would have been removed at an early date and the burrowing of pus prevented. The treatment, too, of applying poultices to the outside of the face is open to much criticism. In the report before us there is no mention of an appeal having been applied for, but it is to be hoped that the case may be heard of again before a higher court and with evidence given by a practitioner holding not only dental but also medical qualifications.

GLASGOW UNIVERSITY CLUB, LONDON.

THE winter dinner of this club will be held at the Café Royal, Regent-street, on Wednesday, Dec. 5th, at 7.30 P.M., Professor Sir Hector C. Cameron, M.D. Glasg., in the chair. Lord Lister and Surgeon-General J. Jameson, C.B. (Director-General of the Army Medical Service) have promised to attend, and amongst the club guests will be Major Babtie, R.A.M.C., whose conspicuous bravery at the battle of Colenso in the early part of the present war secured for him the Victoria Cross. Major Babtie, who is a graduate of Glasgow University, has just returned from South Africa, and we anticipate that his welcome home by his old friends and fellow-students is likely to be a hearty one. Members who intend to be present at the dinner should communicate immediately with the honorary secretary, Mr. Norman MacLehose, 13, Queen Anne-street, Cavendish-square, W.

THE DIAGNOSTIC VALUE OF KERNIG'S SIGN IN CEREBRAL AFFECTIONS.

DR. PAUL ROGLET in his *Thèse de Paris* (1900) makes an important contribution on the pathogenesis and the diagnostic value of Kernig's sign in cerebral affections. In 1884 Kernig described the presence of a certain clinical sign as characteristic of meningitis—viz., the inability to extend the knee fully when the patient was seated in bed with the thigh extended at right angles to the trunk. The cause of this functional inability was due to a contracture of the flexors of the knee. When the patient, however, was allowed to lie on the back this contracture disappeared and complete extension of the leg at the knee-joint was possible. Dr. Roglet made a careful series of observations on this point in 35 patients and has concluded that the sign is not exclusively present in meningitis but may be met with in other forms of cerebral irritation. In 85 per cent. of cases of meningitis, whether due to meningococci, pneumococci, streptococci, or staphylococci, it was easily elicited. In tuberculous meningitis it is somewhat less frequent. It makes its appearance when the disease is well-established, but it varies in intensity from day to day, and a case is recorded by Dr. Roglet where it was found to be present in a patient convalescing from cerebro-spinal meningitis. Spinal meningitis need not be present co extensively with cerebral to give rise to this sign, for in one fatal case at least of meningitis followed by necropsy no indication of spinal implication could be found though the sign was easily elicited during life. The pathogenesis of this sign is thus explained. In a normal and healthy subject seated in a bed and with the legs fully extended and at right angles to the trunk the flexor muscles of the knee are stretched to their utmost and their elasticity is thus completely exhausted. If, however, owing to some irritation of the spinal (motor) nerves supplying these muscles, there is produced an increase in the tonicity (hypertonicity) of the muscles the result is that the elasticity of the muscles is lessened, their length is diminished, and their fullest extension is no longer possible. Indeed, under such conditions as meningeal and nervous irritations, not only does this result appear in the form of Kernig's sign, but the attempt to suddenly extend the knee (and with it the flexor muscles of the knee) results in a momentary augmentation of the irritability of the muscle and a consequent slight increase of the contracture. This last condition is familiar to us under the forms of ankle-clonus and rectus clonus, both of which may result from cerebral lesions followed by descending degenerations of the pyramidal tract.

BRITISH CONGRESS ON TUBERCULOSIS.

THE British Congress on Tuberculosis will be opened in London by the Prince of Wales on Monday, July 22nd, 1901, and will be continued on the following days of the week. The Congress will have four sections—pathology, medicine, State medicine, and veterinary medicine—which will meet on the mornings of Tuesday, Wednesday, Thursday, and Friday, and Saturday will be devoted to excursions. Further particulars can be obtained from the honorary secretary-general, 20, Hanover-square, W. The subscription for members of the Congress will be £1, which will include a copy of the Transactions. A fund is being formed to defray the expenses connected with the Congress, which must be considerable; it already amounts to £500, but at least five times this amount will be required.

THE HOUSING OF THE POOR IN BERLIN.

IN Germany, as in England, the development of modern industries has caused a widespread migration of the rural populations to the large towns. The result has been overcrowding, which is denounced by all the sanitary authorities of the Empire as a great public danger. Of course, the rents have gone up by leaps and bounds, and now the poor man can hardly lodge himself and family. Dr. Schwalbe, of the Berlin Statistical Bureau, calculates that a man with an income of £45 per annum has to give 24 10 per cent. of this income for rent. A man whose income varies from £45 to £75 pays 22 11 per cent. of his income for rent, while a person with an income of £1500 only pays 9 20 per cent. for rent. At Hamburg the position is even worse, for there out of incomes of from £30 to £60 no less than 25 5 per cent goes for rent, while some 30 years ago the proportion was only 18 8 per cent. Under such circumstances it is not surprising to hear that no inconsiderable section of the population is homeless. A census was taken in 1895, and then it was found that in Berlin 77 2 per 1000 men and 39 2 per 1000 women had no permanent home. Herr A. Braun, a member of the Berlin Sanitary Board, says that children of both sexes are often obliged to sleep in the same room as their parents and that lodgers are sometimes taken in and the children have to sleep in the same beds as these lodgers. Modesty and decency cannot survive under such conditions. The average infant mortality in Berlin is 31 5 per cent, but while it is only 8 6 per cent in the wealthy districts it is 52 27 per cent in the poorest districts. The vital statistics of Breslau, of Munich, and of other towns all tell the same tale; and not only is the health of the populations affected but their moral condition is likewise deteriorating. The herding together of the factory hands in large towns has, we are told by more than one authority, produced a state of barbarism and bestiality that exceeds anything known before. There is a self evident analogy between these complaints from Germany and the terrors of Hooliganism in England. The poor agricultural labourer may be stupid and dull, but if the poorer sections of the labouring population of the large towns are more quick-witted their temptations are much greater and they become much more vicious. This is a sanitary and a social problem arising from modern industrialism which must be faced by all great commercial communities, whether English, French, German, or American.

MEDICAL OFFICERS FOR THE HIGHLANDS AND ISLANDS OF SCOTLAND.

WE publish three advertisements which have appeared in a Shetland paper.—

WANTED by the School Board of Walls, Sandness, &c., Shetland, a certificated Teacher (Male or female), for FOULA Public School, Salary £70 per annum, with house and garden rent free. Applications with testimonials to be lodged with the Clerk of the Board, on or before 3rd December next

WANTED by the Parish Council of Nesting, &c., Medical Officer for Lunnasting, Whalsay and Skerries Salary, £25 per annum, to include medicines to Paupers, with fees for Vaccination prescribed by Sect 2 of the Vaccination Act, and fees for quarterly visits to Pauper Lunatics in private dwellings —JOHN IRVINE, Clerk.
Whalsay, 14th Nov., 1900.

WANTED, by the Parish Council of Nesting, &c, Medical Officer for Nesting District. Salary, £15 per annum to include Medicines to Paupers, with Fees for Vaccination prescribed by Sect. 2 of the Vaccination Act, and fees for quarterly visits to pauper lunatics in private dwellings JOHN IRVINE, Clerk.
Whalsay, 14th November 1900

They show very well the relative values which are placed upon the services of a medical man and a teacher certificated to teach elementary education. Now though we do not for a moment suggest that the teacher's salary is any too much, for even including the house and garden it is only about as much as a butler gets, yet the contrast between the sum which the teacher gets and that allotted to the medical man is absurd. The teacher has regular hours; his clients come to him; and he is not compelled to rise at all hours in all weathers to find his way across bogs and seas with life or death perchance depending on his actions. Presumably he will get at least a month's holiday and no one will have to do his work while he is away, for there will be no work to do. We can only implore candidates for the medical posts to make very sure of three things which we have already insisted upon before—notably in our issue of Nov. 10th—namely, fixity of tenure, a free annual holiday, and adequate salary.

INSANITY AND GLYCOSURIA.

DR. DAVID BLAIR of the Lancaster County Asylum states in the *Journal of Mental Science* for October that glycosuria, though it might be expected *a priori* to be common, is really quite rare, among the insane inmates of public asylums Dr. Hale White found traces of sugar in the urine in only 2 6 per cent of the patients in the Surrey County Asylum Glycosuria is relatively prevalent among nervous and highly emotional races, while it is rare in stolid and unemotional nations such as the Chinese. Worry and anxiety in highly intellectual individuals will produce temporary glycosuria. In lunatics who, having already passed through the storms and stresses of emotion during the prodromal stages of insanity, are thereafter admitted into asylums the causes favouring glycosuria are passing, or have passed away, and hence sugar in the urine is seldom met with. Two cases illustrative of the above facts are recorded, one that of a young woman who had been jilted by her lover and the other that of an elderly woman, aged 52 years, who had been troubled with domestic worry, in each of which the period of acute emotional suffering and melancholia was attended with glycosuria, which, however, vanished as the melancholia passed off. In 10 per cent of recent cases of melancholia glycosuria has been met with, while in mania it is said not to have occurred once. Dr. Blair has specially examined the urine of several epileptic lunatics but never once detected sugar. In no case of insanity treated with thyroid extract, could any sugar be detected in the urine, although the thyroid extract administered contained a small amount of lactose. No special treatment is needed for glycosuria in the insane except careful dieting and the practical exclusion of sugar and carbohydrates from the food.

NEW EDITIONS OF SCIENTIFIC WORKS.

IN another column will be found a letter from a correspondent under the above heading, suggesting that publishers when issuing a new edition of a scientific work should contemporaneously issue an appendix containing merely the alterations and additions to such work. Those, he says, who could afford to buy the complete edition would still do so, while those who possessed a former edition but could not afford the new one would buy the appendix. We are not so sure of the position as is our correspondent. The issue of an appendix would be a very good thing for the purchasers, but we have to consider not only the purchasers but also the publisher, to say nothing of the author, who, except in the case of a popular novelist, makes, as a rule, less out of the book which is the creation of his brains than anyone else. To print a book with alterations included in the body of the text and another book with those alterations printed separately, including all cross references such as, for instance, "Page 15, line 30, for 'to' read 'at,'" would necessarily entail two different settings of type and a proportionate increase in expense. On the whole, then, we do not think the plan feasible. While on the subject of new editions we should like to point out that it would be a great convenience if publishers would print upon the fly-leaf of any new edition the dates of the issues of former editions. One firm at least, Messrs. Macmillan, do this, and they deserve credit for so doing, but we should like to see the practice general.

THE FLUCTUATIONS IN OUR POPULATION.

AT a meeting of the Royal Statistical Society, held on Nov. 20th at the society's rooms, 9, Adelphi-terrace, Strand, W.C., a paper on the Distribution of Population in England and Wales, and its Progress in a Period of 90 Years from 1801 to 1891 was read by Mr. T. A. Welton, F.C.A. The writer commenced by depicting the position in 1801, when London contained not more than 922,000 inhabitants, and the next largest place (Manchester) about 91,432. There were 112 towns outside London with populations descending from that figure to 4000, and amounting in all to 1,400,762. The remaining towns distinguished in the tables ranging as low as 1000 inhabitants, contained 774,255 inhabitants, and there were populous industrial areas extending over 346,796 acres, and containing 227,593 inhabitants, besides which portions of the areas surrounding towns, but not actually parts thereof, were also populous. The bulk of the country was, however, thoroughly rural, over 34,000,000 acres being inhabited by 4,721,252 persons out of the total population of 8,892,536. At this date 36 per cent. of the people lived in towns of 1000 inhabitants and upwards, but in 1891 64 per cent. of the people lived in towns exceeding 4000 in population. The writer pointed out that there was a decline in rural populations since the year 1851, following a severe check to their increase in the period 1841 to 1851. This contrasted strikingly with a specially great increase of rural population in the years 1811 to 1821, the period marked by the cessation of the continental war. In sympathy with both phenomena, the less progressive towns greatly slackened in their increase during the 50 years 1841 to 1891, and showed a special tendency to increase in the years 1811 to 1821. As respects the more progressive places, there appears to have been latterly a slackening in the rates of increase of the older centres, say, towns which in 1801 had not less than 2000 inhabitants, but a fully sustained increase in the populations of those rising places which had not attained importance in 1801.

THE RELATION BETWEEN CARDIO-VASCULAR AND RENAL DISEASE.

THE *Philadelphia Medical Journal* of Oct. 27th contains a useful paper by Dr. A. O. J. Kelly on this intricate and at the same time practical question. In the advanced stage of granular kidney, when the nutrition of the heart begins to fail and the circulation becomes embarrassed, cardiac symptoms—cardiac asthma, œdema of the lungs, gastro-intestinal disturbances, oliguria, and anasarca—are most prominent and the pulse loses some of its high tension. To the cardiac hypertrophy dilatation supervenes and the right ventricle undergoes changes similar to those of the left. The mitral valve may become incompetent from dilatation and a murmur may arise. Thus primary heart disease is simulated. On the other hand, valvular disease may in its turn simulate renal disease. Owing to cardiac debility the murmur may be temporarily absent and albumin and casts may occur in the urine. Given, then, a patient with failure of cardiac compensation, hypertrophy and dilatation of the heart such that it is well-nigh impossible to determine which side is especially involved, and albumin and casts in the urine, with or without murmurs—is his affection primarily cardiac and secondarily renal, or *vice versâ*? The question is extremely difficult to settle off-hand. But in the majority of cases the diagnosis can be made by bearing in mind that in congestion of the kidney the casts are usually hyaline and that the amount of albuminuria varies with the state of cardiac activity, increasing and decreasing with impairment or improvement in the action of the heart. Again, if the urine remains albuminous despite the subsidence of signs of congestion of the liver, the spleen, and the serous cavities, if the specific gravity falls, and if in addition to hyaline a few granular casts and possibly some erythrocytes are found, there is evidently nephritis. The therapeutic test is of great importance. If the administration of digitalis which is urgently indicated produces marked improvement with disappearance of casts and albumin from the urine the condition is renal congestion, but if with cardiac improvement they do not disappear nephritis is present. This conclusion can be confirmed by examination of the cardio-vascular system now that compensation has been more or less restored. In the treatment of renal disease the cardio-vascular condition will need careful attention. In the stage of hypertrophy the well-known hygienic rules should be followed. Dr. Kelly advises the use of proteids in moderation. Some easily digested meat should be taken once a day. Eggs are very suitable. The only medicine required is an occasional saline purge to lower blood-pressure, but when cardiac failure begins medication is called for. Dr. Kelly strongly recommends nitro-glycerine in conjunction with caffeine—$\frac{1}{100}$th of a grain of the former in tablet or solution and three grains of the latter simultaneously three times a day. The nitro-glycerine not only lowers arterial tension but reduces the albuminuria, but it should be borne in mind that the pressure is not to be reduced to normal; some increased pressure is desirable. Caffeine acts as a gentle cardiac stimulant and as a diuretic. By means of this treatment Dr. Kelly has obtained good results. Dyspnœa, vertigo, and headache disappear, even in advanced cases. It is well to continue the treatment for from four to six weeks and then to interrupt it for a week or 10 days if the condition of the patient permits this. This treatment will also ward off an attack of uræmia (shown to be imminent by headache, vertigo, restlessness, foul breath, coated tongue, and diarrhœa). When there is no decided cardiac debility Dr. Kelly believes that digitalis does more harm than good; it is indicated when marked cardiac dilatation and failure of compensation arise. It should be given in large doses and if good results be not obtained within four days strophanthus should be substituted. Strychnine is very efficacious, not only on account of its general effect, but also because of its action on the heart.

THE PARISH OF ST. GEORGE-THE-MARTYR, SOUTHWARK.

IN his annual report to the Vestry of St. George-the-Martyr, Southwark, Dr F. J. Waldo, the medical officer of health, calls attention to the fact that during 1899 diarrhœa caused a greater mortality in the parish than any other zymotic disease, 102 deaths being attributed to this cause. Of this number 75 were under the age of one year, 21 were between one and five years, and six were at the age of five years and upwards. In addition to these 102 deaths from diarrhœa there were 39 deaths from gastro-enteritis. The predominance of mortality from diarrhœa over that due to other zymotic diseases was not peculiar to the year 1899, but was maintained throughout the eight years 1892 to 1899. Dr. Waldo has come to the conclusion that epidemic diarrhœa is due to the organic pollution of street-dust by horse dung and the consequent contamination of food by this dust when blown about. In country districts, he says, road-dust is practically free from horse dung and summer diarrhœa is hardly known. In the great majority of cases town children contract diarrhœa through the agency of milk, an obvious remedy for which state of things is to be found in the sterilisation of milk. Dr. Waldo also describes an interesting series of cases of typhus fever in which the disease was perpetuated at least from October, 1898, to February, 1899. The difficulties which arose in connexion with the former use of the crypt of St. George's parish church as a place of interment or deposit of bodies have now been overcome. By the end of 1899 upwards of 1400 bodies had been removed from the crypt and re-interred at Brookwood Cemetery, near Woking, the crypt being thereby cleared down to the floor level, which was afterwards cemented. As the parish of St. George-the-Martyr is now merged in the new borough of Southwark, the present report is the last one which Dr. Waldo will make to the vestry.

THE ESTABLISHMENT OF SANATORIA FOR PHTHISICAL PATIENTS.

THE scope of preventive medicine is widening day by day, and there are indications that in the near future diseases which are at present, in so far at least as practice is concerned, outside its limits will be brought within its sphere of active influence. For the moment attention is being turned prominently towards tuberculosis and the next 12 months are likely to witness some very material progress in this direction. In the annual report of almost every medical officer of health throughout the country the importance of this matter is accentuated, and although there is almost unanimous testimony against the compulsory notification of this disease there is an equally unanimous feeling that much may be done by proper preventive measures. County councils are, we are glad to see, taking a share in the work, and the county medical officer of health of Lancashire has recently issued a report upon the subject. In this report Mr. Edward Sergeant points out that during 1899 there were 2305 deaths from phthisis in Lancashire, and giving an average duration of three years to each case of phthisis he concludes that there may be some 6000 or 7000 phthisical persons living in the county, irrespectively, of course, of unrecognised cases The extent to which these unrecognised cases may prevail is illustrated by the fact that of the adult bodies examined after death some 38 per cent, according to the investigations of Dr. Thomas Harris of Manchester, show signs of healed tuberculosis of the lungs. Mr. Sergeant also refers briefly to sanatoria in several parts of Europe and to the testimony of experience to the effect that by treatment in well-managed sanatoria from 25 to 50 per cent. of the patients can be cured or more or less benefited. From these premisses he deduces that if the phthisis mortality in Lancashire could be reduced even by 25 per cent some 500 lives would be annually saved, and placing a pecuniary estimate of £159 upon each life, he shows that by this means alone about £75,000 per annum might be saved. In connexion with this question of sanatoria Mr. Sergeant refers to the law in force in Germany for effecting insurance against old age and sickness—a law which, he thinks, has not been without a material influence in bringing about the foundation of certain sanatoria, in the year 1898 from 3,000,000 to 4,000,000 marks being set aside by 33 societies towards the provision of such institutions. The key to the position may, indeed, perhaps be found in the fact that "half of the applications for sick pay between the ages of 20 and 29 among the insuring classes of Germany are because of tuberculosis." Finally, Mr. Sergeant raises the point, which we may consider subsequently in the columns of THE LANCET, as to whether sanitary authorities have power under the Public Health Act, 1875, to provide sanatoria, or whether the Isolation Hospitals Act, 1893, affords similar powers to county councils.

THE ADMINISTRATION OF THE OATH IN ENGLAND.

IT was to Mr. W. P Sinclair of Liverpool, whose death was recently announced, that we are indebted for the fifth section of the Oaths Act, 1888 (51 & 52 Vict. cap 46). The deceased gentleman represented Falkirk in the House of Commons, and when in 1888 the late Mr Bradlaugh brought in an Act to amend the law as to oaths Mr. Sinclair obtained permission to introduce the now famous section. As a Scotchman and a Presbyterian he, with many others of his fellow-countrymen and co religionists, was naturally annoyed at being asked, every time that he claimed to be sworn with uplifted hand, if that was the form of oath binding on his conscience His attention had been called to the letters and articles published in THE LANCET during the year 1888 and previously and had he experienced any opposition to the fifth section he would have called the attention of his fellow-Members to the grave objections we had then urged against kissing the book, the mode of adjuration adopted in England and Wales and Ireland, but not in Scotland or in the Channel Islands where the uplifted right hand is the form. There was, however, no opposition, the section being passed as follows: "If any person to whom an oath is administered desires to swear with uplifted hand, in the form and manner in which an oath is usually administered in Scotland, he shall be permitted so to do, and the oath shall be administered to him in such form and manner without further question." This not only relieved Scotchmen and Presbyterians from being asked any questions, but, as will be seen, though this is not yet generally known, it relieved any and every person taking an oath or swearing to an affidavit under any circumstances whatever from kissing any book, whether Gospels or Pentateuch. It was a melancholy illustration of the proverbial uncertainty of the law that this Act, and especially this section, should have been, for years after it became law, unknown to lawyers themselves. Medical and other witnesses were illegally and rudely denied their lawful claim to be sworn as the Act permitted them by magistrates and by legal (not medical) coroners, and it required a circular from Mr. Asquith, then Home Secretary, to bring these recalcitrant gentlemen to their senses and to their duties. As the House of Commons meets next week it seems fitting that the attention of its members, whose proceedings are considered to be a model for others to follow, should be called to the preferable mode of taking the oath. No doubt the grievance of kissing the book is little felt in the House of Commons, and especially in a new Parliament. The renovation of the legislative chamber comprises new wigs for the clerks at the table and probably it includes also an ample supply of new copies of the Gospels and of the Pentateuch. The Speaker, the first commoner in England, is the first to kiss probably an absolutely new book. The contrast between this and courts of law is manifest. Nevertheless, we would urge that the handling and kissing of a book in any assembly and under any circumstances is an uncleanly procedure. In a recent issue we felt it our duty to allude to the question of the communion cup as a possible means of infection. The danger of kissing the book in coroners', police, sessions, or assize courts is greatly accentuated by the fact that medical witnesses are asked to do this after the book has already been kissed by numberless witnesses of the lowest class, including from time to time some infected with loathsome diseases. This fact was recognised by Lord Justice Collins, who, when presiding at the Central Criminal Court, ordered a book to be destroyed after it had been kissed by a witness suffering from syphilis. We have frequently pointed out the dangers of the English mode of administration before and have urged the adoption of the Scotch form. We could add much in favour of the latter form on the grounds of greater impressiveness and more solemnity, but we must leave this to others.

FARQUHAR, NORTH, AND CO. v. LLOYD.

THE case of Farquhar, North, and Co. v. Lloyd, tried before Mr. Justice Wills, in which the plaintiffs obtained a verdict for £1900 damages against the *Daily Chronicle* for libel, illustrates somewhat forcibly the dangers which a newspaper may encounter if in the discharge of its duty to the public it reports legal proceedings and ventures in addition to comment upon them. The plaintiffs, being manufacturers of tinned provisions, had sold goods to a tradesman who had refused to pay for them, contending that they were defective and that had he sold them they would have proved dangerous to the public. He appears to have been successful upon these contentions on being sued in the county court for the price of the goods. The *Daily Chronicle* in dealing with the case must from the verdict of the jury be taken to have erred in its criticism, in that it suggested that the stock of the plaintiffs, beyond those articles sold to the retailer referred to, would be found in an equally defective and dangerous condition. This the *Daily Chronicle* presumably inferred, not only from the particular goods having been found to be unfit for consumption, but also from the attitude adopted by the plaintiffs in endeavouring to enforce payment for them by legal proceedings—a step which certainly lent colour to the suggestion that the goods were in their view fit for trade purposes, although they maintained that they would have exchanged the defective tins for sound ones had they been asked to do so. By what particular process the jury that tried the action for libel fixed upon £1900 as the sum due to the plaintiffs it is useless to inquire; they possibly thought that with the costs added the defendant newspaper would lose the round sum of £2000. Granting, however, that the article in question exceeded the limits of fair comment upon the proceedings in the county court, it appears to us that the damages were excessive. Damages so large could only have been awarded with justice where it was proved beyond doubt that damage approximating to the sum awarded was caused by the publication of the comments objected to, and not by the publication of the facts proved in the trial upon which comment was made, and which must have been reported in many newspapers besides the *Daily Chronicle*. The dangers arising to the poorer classes of the public from the sale of inefficiently preserved provisions are great and real. We ourselves frequently lay stress upon them, and it would be a matter of regret if the freedom of the press honestly to criticise and to censure were to be curtailed by the fear of a verdict for unreasonably large damages following the slightest error made in dispensing such censure and criticism. This is our view, and it is no answer to it to say that the proprietor makes a profit by the publication of the newspaper containing such criticism and censure and that he need not publish either the newspaper or the criticism unless he chooses. To deny that the newspaper proprietor or the newspaper writer has in any case a duty to the public, or that he ever aims at the fulfilment of that duty is to indulge in silly cynicism. Both have a duty, and if they go too far in performing it they must suffer. But it is to the public good that they should not be made to suffer unreasonably.

THE RULE OF THE PAVEMENT.

WEAK, nervous, and elderly people are often made very uncomfortable by the overcrowding of the London pavements in the more frequented parts, while busy men are driven to despair by the obstacles to direct walking. Of late the inconvenience experienced has been increased by the fact that the people of London are, on the whole, less orderly and well-mannered than those of a previous generation. The deterioration of public manners of the men, and especially of the boys, in the street is a subject of constant remark amongst those whose memory carries them back only 10 or 15 years. Formerly the observant Londoner on visiting a country town was often struck by the fact that in the provinces the people as a rule walked about without any regard to rule, and he noticed that although the pavements or "side-walks," to use a convenient Americanism, were less crowded there was much more trouble in avoiding collisions with foot-passengers than was the case at that time in any part of London. We regret to say that London is now as bad as, or worse than, any country town. The unwritten rule of the pavement—that a pedestrian should walk on the right side—is a most valuable one, and has not only convenience but some prestige of antiquity to support it. It does not, however, date back beyond the last century, and it is not, so far as we know, possible to determine the origin of the rule. It probably came slowly into general use in London. Dr. Johnson while at breakfast in the Highlands one morning told Boswell that when his mother lived in London there were two sets of people, "those who gave the wall and those who took it," and that when he returned from London to Lichfield his mother had asked him to which set he belonged. "Now it is fixed that every man keeps to the right," said Dr. Johnson, "or if one is taking the wall another yields it and it is never a dispute." This, according to Dr. Johnson, was the state of things in 1772. All well-behaved and peaceable people took the right side, but the rule was not absolutely established at that date, for some few people still "took the wall." Why it was a sign of pride and of a quarrelsome disposition to "take the wall" when to "go to the wall" was synonymous with misfortune is a question for philologists; we are concerned only to insist that in the present crowded state of the streets of London order and method should be duly observed by pedestrians. Even those who object to religious education ought if they be good citizens to discourage rowdyism, and the hustling on the pavements of some of the crowded streets of the metropolis is hardly to be differentiated from rowdyism. The rule of the pavement should be taught in the board schools and it would be by no means a bad test question to put to all candidates for the London School Board to ask them whether they are or are not in favour of such teaching.

SIR ARTHUR SULLIVAN.

MUSIC, in so far at any rate as it conduces to happiness, is a great therapeutic agent, so we make no apology for referring in these columns to the loss which British music has sustained by the death of Sir Arthur Sullivan. In serious music he sometimes rose to great heights, as witness the fine chorus in *The Golden Legend*, commencing "The night is calm and cloudless." But where he shone pre-eminent was in his faculty for writing really humorous music. Take for examples the delicious burlesque solemnity of the entry of the judge and the fugal chorus of jurymen, "He'll tell us how he came to be a judge," in *Trial by Jury*; the introduction of the opening notes of the great G minor fugue given to the bassoon in the Mikado's song concerning punishment; and Arac's Handelian *aria di bravura* about his armour in *Princess Ida*. Sullivan's orchestration was always fitting and appropriate, and although *Ivanhoe* was not a success yet it contained at least one gem, the song "O moon, thou art clad in silver," with its delicate accompaniment given to flutes and muted strings. He was many-sided: he could write a song (notably, "Orpheus with his lute"), he could write a madrigal, or, to be more accurate, we should say a ballet or Fa-La, he was unrivalled at a patter song, and the music to "When the night wind howls," in *Ruddygore*, was a *danse Maccabre* which made the hearer shudder. By his art he lightened many weary hours, and though his works live after him it is sad to think that the hand which wrote and the brain which conceived them are stilled.

THE DENTAL HOSPITAL OF LONDON.

THE subject uppermost in the minds of those who attended the annual dinner of the staff and past and present students of the Dental Hospital of London, which was held on Nov. 24th at the Hôtel Métropole, was the approaching completion of the new hospital in Leicester-square. The information afforded on this head by a trustee and vice president of the hospital, Mr. F. A. Bevan, was very encouraging. He had recently visited the premises and could assure the present students that in a few months they would be able to conduct their studies in a building worthy of the best traditions of the institution. The benefits which this charity has conferred on a needy public may be best realised from the statement made by Mr. F. G. Hallett that during the past year over 68 000 cases had been treated at the hospital at a cost of less than £3000 Further proof of the need of increasing the accommodation of the hospital and the school was afforded by the fact that the numbers of students entering for the hospital curriculum continued to increase. Last term a larger number of students had joined the school than had ever joined before. How the work was carried to the successful issue which the past history of the hospital had shown in the old utterly inadequate building was a matter of surprise to all concerned Mr. C. S. Tomes, F.R S, urged the students and all those present who were interested in the well-being of the institution and the success of the school not to relax their energies towards increasing the fund for the new premises so that there might be no feeling of anxiety as regards the financial situation. It was a gratifying feature of the subscription list that old students had rallied round their *alma mater* by giving substantially to this fund. It was abundant proof that they appreciated the educational value of the hospital. More money, however, was needed. The dinner was well attended, amongst those present being many representatives of the various London medical schools.

THE Queen has given to Sir William Mac Cormac, Bart, K.C.V.O., President of the Royal College of Surgeons of England, Her Majesty's Royal licence and authority to accept and to wear the Cross of Commander of the Legion of Honour, conferred upon him by the President of the French Republic in recognition of services which he rendered to the French wounded during the war of 1870–71, as well as to the International Medicine Congress held during the recent Paris Exhibition. Sir William Mac Cormac is to be congratulated on this most recent addition to his many honours, and doubtless this recognition of his services by the French Republic will be highly appreciated by him.

PROFESSOR W. H. CORFIELD'S Harveian Lectures on "Disease and Defective House Sanitation," of which translations into French and Hungarian have already been published by the Royal Society of Public Health of Belgium and the Hungarian Society of Public Health respectively, have now been translated into Italian by Dr. Soffantini of Milan, and are being published, with the illustrations, in *Il Monitore Tecnico*.

THE first annual dinner of the Otological Society of the United Kingdom will take place on Monday, Dec. 3rd, at 7 30 o'clock, at the Café Monico, Sir William B Dalby, the President, in the chair Amongst the guests expected are Sir Thomas Smith, Sir R Douglas Powell, Sir Felix Semon, Mr. T. Pridgin Teale, Dr. F. W. Pavy, Dr. T. Barlow, Mr. T. Bryant, Mr. W. Watson Cheyne, and Mr. H. T, Butlin.

To mark their esteem and personal appreciation of the late Mr. Thomas Cooke, F.R C.S. Eng., some of his friends and past pupils recently presented to Mrs. Cooke a portrait of her late husband, together with a piece of plate Dr. Dundas Grant was chairman of the committee, Dr. David Walsh acted as honorary treasurer, and Mr. Wyatt Wingrave was honorary secretary.

MR. HERBERT F. WATERHOUSE, F R C S Eng., has been appointed Dean to the Charing Cross Hospital Medical School, *vice* Dr. Montague Murray, whose term of office has expired

DURING the week ending Nov. 22nd there were 39 fresh cases of plague in Mauritius and 25 fatal cases, making the total of deaths from plague 33

H.R.H. the Princess Louise, Duchess of Argyll, has joined the committee of the Coal Smoke Abatement Society.

MEDICAL WOMEN IN HUNGARY.—A woman has for the first time been allowed to take a medical diploma in Hungary.

UNIVERSITY COLLEGE, BRISTOL.—The annual meeting of the governors of this college was held on Nov. 21st under the presidency of the Bishop of Hereford. The report, which showed a satisfactory year's work, stated that 542 students had attended the classes during the year and added that the council viewed with much satisfaction the amalgamation of the Bristol Royal Infirmary and the Bristol General Hospital for the purposes of clinical instruction —The new wing of the college, comprising a large hall, a library, a laboratory, and class rooms, was opened at the end of September. The total cost of the building was £7500, towards which £6000 have been subscribed —The University Entrance Scholarship of the value of £50 open to medical students has been awarded to Mr. Samuel C Hayman.

ARSENICAL POISONING FROM BEER-DRINKING.

Notes by T. N. KELYNACK, M D. VICT., M.R.C P. LOND.,
MEDICAL REGISTRAR (LATE PATHOLOGIST), MANCHESTER ROYAL INFIRMARY; ASSISTANT TO THE PROFESSOR OF MEDICINE, THE OWENS COLLEGE, HONORARY MEDICAL OFFICER, PENDLETON BRANCH OF THE SALFORD ROYAL INFIRMARY.

Analytical Report by WILLIAM KIRKBY, F.L.S.,
LECTURER ON PHARMACOGNOSY, THE OWENS COLLEGE, MANCHESTER.

Notes by PROFESSOR SHERIDAN DELÉPINE,
PROFESSOR OF PATHOLOGY IN VICTORIA UNIVERSITY (OWENS COLLEGE);

AND C. H. TATTERSALL, L R.C.P. LOND; M.R C.S. ENG.,
MEDICAL OFFICER OF HEALTH OF SALFORD.

FOR some time past the number of cases of "peripheral neuritis" in Manchester and Salford has been rapidly increasing, and recently they have reached "epidemic" proportions. This at first was not unnaturally thought by some to be due merely to increased drinking associated with the recent elections and rejoicings in connexion with the war. But soon it was found that not only were the cases extremely numerous but that they presented features unusual in so-called "alcoholic peripheral neuritis." Large numbers came under observation in the various union infirmaries and flooded the out-patient departments of the hospitals. For some time past I have been seeing many amongst the very poor people attending the out-patient department of the Salford Royal Hospital at Pendleton. Some few have also been under observation in the wards of the Manchester Royal Infirmary. The patients are generally "beer"-drinkers, although some admit partaking of spirits in addition. Both men and women are affected, the latter often suffering severely. I have seen no distinct cases in children, although large numbers of poor children have been attending our out-patient department at Pendleton.

Complaint.—In most instances the patients have sought assistance on account of the weakness and pains in the limbs. They describe their sensations as like "pins and needles," "numbness," "pricking," "like walking on hot bricks," or "scalding." Some complain chiefly of their difficulty in walking. In more advanced cases they declare themselves as "paralysed" and are quite unable to get about. In some few cases the pains are more general. One woman came complaining that she and her mother had "rheumatism all over." Many seek advice on account of the "rashes" and "itching" of the body, but generally the poorer patients affected have not been particularly observant of the pigmentation. In some persons, however, the increasing darkening of the skin has been the chief feature to attract notice. Not a few complain of "smarting of the eyes," "a cold in the head," "running of the eyes and nose," or even "influenza." One woman complained bitterly that her eyes were always "running and scalded her cheeks." Many have "gone hoarse." In some few cases a history of nausea and vomiting has been given. Not a few say that their hands and feet are getting thick "and the skin crumbling." Numerous cases have presented herpetic and other skin eruptions.

General aspect.—This in a well-marked case is very characteristic. Frequently, but by no means always, the appearance is "alcoholic." The face is usually dusky, the eyes watery, and often with tears visibly overflowing. Sometimes there is distinct puffiness about the eyelids. Walking is usually difficult and the patients progress in a gingerly or ataxic manner. In bad cases there is much general wasting. The temperature in severe cases may be raised. In an affected district one can readily recognise the subjects of this remarkable malady from their tearful expression as they stand at their doors or shuffle about the house and loiter at street corners.

Cutaneous system.—In almost every case the skin is more or less involved. 1. Pigmentation is the most conspicuous feature. This may be general. It varies greatly in intensity in different parts of the body. As in Addison's disease, it is frequently most marked on exposed parts, over pressure areas, and in the normally pigmented situations. In tint it often resembles a "vagabond pigmentation," and has, I believe, not infrequently been put down to "dirt." One of the sisters in the infirmary tells me that one patient on admission was washed three times without visible improvement. Many of the female patients have been much disconcerted at their growing duskiness. The pigmentation varies from a mere "browning," as from exposure to sun, to an almost dull black in pigmented regions, like the areola. In many the distribution is irregular. The face is often comparatively slightly involved. I have, however, seen very dark pigmentation of the eyelids. The neck is often very brown. The pigmentation is usually best marked in the axillæ, groins, areola, and abdominal wall. It is frequently intense around the umbilicus. Scars and old cicatrices are usually non-pigmented. The appearance of the skin is often curious; numerous very small round islands of skin but little pigmented may be seen in the midst of the deeply-pigmented areas, giving the body a "spotted" appearance. It is well, however, to point out that in many of the very marked "neuritic" cases the pigmentation is so slight as to be readily overlooked. 2. Herpes has been met with in a large number of cases. Dr. R Forsyth and Dr. Hitchon, medical officer of health for Heywood, tell me that they have had quite an "epidemic" of herpes in their practice. 3. Erythematous eruptions have been present in a large number of the cases. 4. A papular eruption has also been common and usually associated with much itching and discomfort. 5. In many a "branny" desquamation can be observed. The shed epithelium may be pigmented. I have seen it so plentiful as to give rise to a conspicuous deposit on the bed-sheet. One woman I saw at Heywood with Dr. Hitchon complained to me of the "crumbling away" of dirty skin from her chest. The same patient said that her hands were so hard and cracked that she found it impossible to keep them clean. 6. The cuticle becomes thickened, especially in the hands and feet. Many have particularly complained to me of this. Some have found that their hands get so "thick" that they cannot well close them The thickening is generally most marked over the heels and balls of the toes, but the hands are also frequently much affected, especially over the thenar and hypothenar eminences and around the knuckles. In some cases the thickening of the hands may be general. Patients have spoken to me of the way in which they have detached the thickened skin from their feet. When they continued to walk about I have observed distinct "blisters" in the areas of keratosis. 7. The nails become hard, thick, and brittle, and one man tells me the nail "came off by itself." Some patients have remarked that the nails grow with unaccustomed rapidity and the cutting of them is very difficult. I have not observed any very marked change in the hair. 8. Boils have been met with in such situations as the vulva.

Nervous system.—Sensory symptoms of almost every degree are marked in practically every case. These vary, ranging from slight numbness to the most intense pain. Patients often dread to be touched and sometimes cannot bear even a sheet to rest on the feet. Cramps may be severe. Curiously enough, the chief sensory disturbances are generally limited to the extremities well below the knees and elbows. In not a few cases I have found the patients limiting the area of pain and discomfort to the hands and feet. Sometimes a slight movement of the leg or jar to the bedstead will make the patient cry out in anguish, the pain shooting upwards along the nerve-trunk, and, from the description given by the sufferer, seeming to resemble closely the shooting pains in "locomotor ataxia." In some cases the patient has been thought to be suffering from "sciatica." Occasionally the pain and anguish may be intense. When visiting some of the cases with the medical officer of health of Heywood I found one poor woman in such agony that her medical attendant had been obliged to administer morphia. I have seen many cases in which the area of the pain and character and distribution of the erythema in the feet closely resembled the affection termed "erythromelalgia." In many the border of the erythematous portions has been more or less clearly defined and usually running along the borders of the feet. Sweating has often been well marked, but is by no means constant. The degree of motor involvement varies greatly. Some patients insist on moving about, although often with a shuffling, unsteady gait. They readily get tired and stop to rest, leaning for support on anything convenient. When sitting down many reach their chair with a "flop," and in rising are obliged to assist themselves with their hands. Tremors are often present and are evidently not always due to the alcohol. The ocular muscles are apparently not affected, and so far I have not met with any distinct case of paralysis of the intercostal muscles and diaphragm. Manifestations of trophic disturbance are present in all cases. The reflexes vary considerably. The superficial reflexes are often exaggerated even in long-standing cases. The "knee-jerk" is diminished or abolished in the greater number of cases, but I have met with it distinctly increased in severe cases. Hitherto I have not been able to take the electric reactions. Although mental derangement has been met with in many cases these have generally been in the excessive drinkers and it has been more or less of the usual "alcoholic" character, and in some of the cases cerebral disturbance has been apparent.

Respiratory system.—The mucous membrane of the respiratory passages is much congested in many cases. If the nose is not found "running" usually moisture from serous discharge will be seen immediately within the nostrils. The "catarrh" often involves the larynx, and very many of my patients have complained of "huskiness" and alteration in their voice. In some few it has been so marked that the patients could only phonate with difficulty. The lungs apparently do not suffer directly, at least to any extent, but I believe it will be found that some deaths have occurred from respiratory failure due to paralysis of the diaphragm.

Circulatory system.—Some of the beer-drinkers present the usual evidence of cardiac enlargement and muscle failure, but in the cases arising in strictly moderate indulgers there seems to have been no direct action on the circulatory apparatus. It is important to bear in mind, however, that the irritant may be capable of setting up "neuritis" of the vagus.

Digestive system.—The tongue is often "furred" and in some instances presents an appearance best described as "silvery." The mucous membrane of the mouth is not pigmented. In mild cases the appetite may be fairly good. I have not met with true ulceration of the gums or fauces. There may be slight catarrh of the pharynx. Salivation has not been marked in the cases I have seen. Nausea and sickness are present in not a few, but I have been surprised to find that many severe cases have never had any vomiting. Diarrhœa is exceptional; many cases are constipated. Colic is practically never complained of, but some have experienced epigastric pain and slight general abdominal discomfort.

Urinary system.—This presents but little evidence of derangement. One man complained of some "smarting" during micturition, and some have said that they passed urine more frequently. In severe cases the urine may be high-coloured. Generally no important alteration in the urinary secretion has been noticed. We hope to be in a position at a later date to give the results of our investigations regarding the urine.

Clinical varieties.—From a study of the clinical cases it is easy to distinguish two chief groups: (1) those which were manifestly "alcoholic," and (2) those which both from a consideration of their history and from their general appearance were manifestly not excessive indulgers in alcoholic drinks. Not a few of the cases, I am convinced, belong to this group. Among the sufferers in the Heywood outbreak I saw several. One was a young woman who had taken "stout" for many years, about a pint daily. There were no reasons to believe that she was in any way to be considered intemperate. She had certainly been "affected" for six months by the prevailing malady, although not in a severe form. In a later communication I hope to deal with the special clinical types.

Nature of the poison.—For long these cases have been looked upon as simply "alcoholic multiple neuritis." Later it became manifest that it was of an altogether exceptional type, and then it was realised that this was almost certainly due to some special irritant or irritants in the liquors taken. Finally, Dr. E. S. Reynolds, assistant physician to the Manchester Royal Infirmary and visiting physician to the Manchester Union Hospital, made the startling discovery that arsenic existed in the beer. This fact was announced to the profession at the meeting of the Manchester Medical Society on Nov. 21st, and the public first learnt of it from the newspapers of Nov. 23rd.

Duration of the malady.—It is very difficult at present to ascertain how long this arsenical poisoning has been going on. Probably for very many months. Certainly it has existed in this district in "epidemic" form for at least two months. Many of my Salford cases date their symptoms back for about nine or ten weeks. On Nov. 12th I saw in consultation with Dr. J. W. Crawshaw of Weaste a very marked case where the patient, an intelligent woman, aged 39 years, dated the commencement of her pigmentation, which was intense when I saw her, to June, which time she was able to locate exactly, as she was at the Isle of Man from June 1st to 9th, and observed the brown discolouration starting on the left side of her neck a week after her return. Dr. Crawshaw writes to me to the effect that "for some time before she went away she had noticed a troublesome watery discharge from the eyes and nose." We may therefore, I think, conclude that this form of poisoning has been going on for at least six months. It was remarkable that the cases generally occurred in "beer"-drinkers. In Heywood, however, consumers of "stout" have also been affected. The poorer classes have been the chief sufferers. Generally they have owned to taking "fourpenny beer," but some have taken "sixpenny" and others "bottled beer." Salford has suffered severely, while some districts of Manchester, so far as I can at present ascertain, have been hardly affected. But the cases are by no means limited to Manchester and Salford. Those I have seen in Liverpool, Heywood, and Warrington are similar to those in Manchester and immediate district. Our researches go to show that many of the important large towns in the district are affected, and even the villages would seem not to have escaped. This fact has made us most desirous of placing the results of our investigations before the profession, so that steps may be immediately taken throughout the country to insure that the painful experience of Manchester may not be repeated elsewhere.

Localising the source of the arsenic.—Directly the cause of the poisoning became apparent I immediately sought the coöperation of Mr. Kirkby, of the Pharmaceutical Department of The Owens College, and Dr. R. Forsyth, medical officer to one of the largest firms of brewers in Salford. We have the satisfaction of knowing that as the result of our labours the source of the introduction of the arsenic into the "beers" was localised within a few hours of the announcement of the nature of the poison to the public, and early on Nov. 23rd we informed the medical authorities of Manchester and Salford and the brewers themselves of our discovery, and also Dr. Dreschfeld, senior physician to the Manchester Royal Infirmary. Dr. Forsyth has rendered us invaluable help and the brewers have afforded every facility for the investigation of all the materials used by them in the making of the affected "beer." We have also received much assistance from Dr. Harold Bailey who has obtained samples of the "beer" taken by many of the affected patients.

Treatment.—A word or two of caution and suggestion may be added in regard to the treatment of the sufferers. Now that the nature and source of the irritant has been ascertained it may be hoped that all necessary steps will be taken to arrest the "malady." Affected cases will, however, for some time to come call for careful management. In every case it will, of course, be found necessary absolutely to forbid the use of all drinks which may be suspected to contain arsenic. I also believe it will be found best to withhold every form of "spirit." Rest must at once be enforced and severe cases sent to bed. I know from what I have myself seen that many are now aggravating their sufferings and lengthening their illness by neglecting to insure rest for the affected tissues. Immediate steps should be taken to provide for the poor sufferers an adequate number of nurses in towns where these cases have occurred, and especially in those places where unfortunately no hospital is at present available. For many of the cases it will be desirable to arrange for a long course of massage. A recently published treatise on medical treatment states that for "alcoholic neuritis preparations of arsenic are sometimes valuable." It is to be hoped that this suggestion is not being acted upon with regard to any of the cases now under consideration. Realising the far-reaching importance of the subject we have felt it to be our duty to the profession and to the public to publish our results at the earliest possible moment, but we hope to be able to deal with certain further matters of much scientific and medico-legal importance in a subsequent communication

Report on Beers and Brewing Sugars implicated in the Outbreak of Arsenical Poisoning in Manchester and Salford.

With a view to elucidate the mystery concerning the epidemic of arsenical poisoning in Manchester and Salford Dr. T. N. Kelynack obtained for me samples of beer which was habitually drunk by five patients under observation, the said samples being bought by the patients themselves or by their relatives under the direction of a medical man. There was no difficulty in detecting arsenic in these samples. Through the kindness of Dr. Forsyth and of one of the largest and most influential brewers in the district Dr. Kelynack obtained three samples of beer bottled in August, October, and November. In these also arsenic was found in varying proportions. Having ascertained (*a*) that the people under treatment were drinking beer contaminated with arsenic, and (*b*) that the beer was actually leaving the brewery with the arsenic in it, it was clear that all possible sources of contamination between the brewery and the consumer could be safely ignored. A brief review of the known constituents of this beverage indicated that the most probable source of the poison would be found in some article in the production of which sulphuric acid is used, as this frequently contains arsenic as an impurity. I accordingly asked for, and was most courteously supplied with, samples of calcium sulphate (used for water hardening) and "invert sugar." The first of these was quite pure, but the second was charged with considerable quantities of arsenic. Immediately upon ascertaining this (the morning of Friday, Nov. 23rd) Dr. Kelynack was informed and he at once communicated the intelligence to the medical officers of health for Manchester and Salford and to the brewers concerned.

Immediately upon the fact becoming known another very prominent firm of brewers came to my assistance, and with the combined help of them, Dr. Forsyth, Dr. Harold Bailey, Dr. Crawshaw, and others Dr. Kelynack and I are now able to publish the subjoined lists of figures which at present require no comment from a chemical point of view. It should, of course, be distinctly understood that in determining such minute quantities of arsenic the figures can at the best be approximations to the truth. Every figure, however, is the outcome of at least three experiments and in many cases of six experimentt. The quantities are given in terms of arsenious acid (As_4O_6) because the dose of this is probably the most familiar to practitioners.

Beers, &c.

1	Beer	From patient	0 14 grain per gallon.
2	,,	,, ,,	0 14 ,, ,,
3	,,	,, ,,	0 07 ,, ,,
4	,,	,, ,,	0 07 ,, ,,
5	,,	,, ,,	0 02 ,, ,,
6	Porter	,, ,,	0 08 ,, ,,
7	Beer	From brewery	0 28 ,, ,,
8	,,	,, ,,	0 18 ,, ,,
9	,,	,, ,,	Faintest trace.
10	,,	,, ,,	0 01 grain per gallon.
11	,,	,, ,,	0 04 ,, ,,
12	,,	,, ,,	0 09 ,, ,,
13	,,	,, ,,	0 09 ,, ,,
14	,,	,, ,,	0 14 ,, ,,
15	,,	,, ,,	0 14 ,, ,,
16	,,	,, ,,	0·10 ,, ,,
17	,,	,, ,,	0·20 ,, ,,

The above beers, &c., were examined because they were suspected. Now, however, we are turning our attention to the beers which are being sold from day to day, and concerning these we shall report in the near future.

Brewing Sugars.

1.	Invert sugar	3 parts in 10,000 parts.
2	Invert sugar	3 parts in 10,000 parts.
3.	Invert sugar	Nil.
4.	Glucose	4 parts in 10,000 parts.
5	Glucose	Faintest trace.
6.	Glucose	Faintest trace.

I have the best reason for believing that Nos. 1, 2, and 4 have a common origin.

That arsenical impurity should result from the employment of sulphuric acid in the manufacture of these sugars is not greatly to be wondered at when it is remembered that the greater proportion of the acid is obtained from iron pyrites. But the recurrence of such a sad state of things as now exists in this district must be obviated in the future by the establishment of a test for arsenic to which all sulphuric acid that is to be used for the manufacture of food and drinks must conform, just as in the case of that which is used in medicine.

I must tender my thanks to Mr. Roy for his assistance, and to Messrs. Jewsbury and Brown for the use of their laboratories and for other facilities afforded me in prosecuting these investigations.

WILLIAM KIRKBY, F L S.,
Pharmaceutical Chemist; Lecturer in Pharmacognosy in the Owens College.
Manchester, Nov. 27th, 1900.

NOTES ON RECENT BEER POISONING IN SALFORD, WITH A TABLE OF ANALYSES.

On Nov. 9th Mr. R. D. Cran, the Poor-law medical officer of the Regent District of Salford, reported a large amount of illness of a paralytic nature in his practice which he had concluded was due to beer-drinking. On that day five samples of beer were obtained and forwarded to the public analyst and a further ten samples a few days later. He, however, failed to find anything to account for the illness. It had been noticed for some time that deaths from "peripheral neuritis," "multiple neuritis," and "alcoholic neuritis" were more numerous than usual and inquiries had been made among a few friends who had not noticed any excess in illness of this character in their practice.

The increase in deaths from this cause commenced in the third week in July, from which time to the present the weekly figures have been: 3, 0, 1, 1, 1, 2, 2, 1, 2, 4, 2, 1, 2, 3, 3, 4, 5, 2, and 2, making a total of 41. In addition, during the same period there were 25 deaths certified to be due to "alcoholism," or a total of 66 in the past four months, as compared with 22 in the first seven months of the year, 39 in 1899, 31 in 1898, and 27 in 1897.

Immediately following Mr. Cran's notification an inquiry was commenced into the circumstances of all the cases that could be heard of, and it was soon abundantly clear that the one thing common to all was beer-drinking—not necessarily to excess—and it was further ascertained that the cases were not confined to the drinkers of beer from one particular brewery.

On Nov. 16th we consulted together and concluded that the only probable causes of the peculiar sickness were: (*a*) metallic poisoning (lead or arsenic); (*b*) poisoning by higher alcohols accidentally present in the beer; and (*c*) poisoning by some unknown bacterial product. Samples of beer were obtained on Nov. 19th from a shop to which one case of illness could be clearly traced for purposes of experimental investigation.

On Nov. 20th we heard that Dr. E. S. Reynolds had found arsenic in a sample of beer and that his observation had been confirmed by Professor J. Dixon Mann, and we had no difficulty in satisfying ourselves of the presence of arsenic in our samples. Specimens of every article used in the brewery concerned were obtained and examined, arsenic being found in one sample of glucose (out of three) and in a sample of inverted sugar on Nov. 22nd. It was ascertained that both these substances were purchased from the same firm of sugar manufacturers. Their works were visited on the 23rd and samples of everything used were examined, and it was found that the only sulphuric acid used was loaded with arsenic. The sulphuric works were visited on the 24th and it was ascertained that the sulphuric acid was the ordinary commercial sulphuric acid prepared from arsenical pyrites. In all 62 samples of various kinds were examined for the presence of arsenic; the portions of these analyses are given in the accompanying table. The results show that there is no arsenic present in any substance which cannot be traced to the use of this impure sulphuric acid by this particular firm.[1]

Professor Harold Dixon, F.R.S., of the Owens College, has made an examination of the sulphuric acid, glucose, and beer, and he reports as follows: "The sulphuric acid was found to be highly contaminated with arsenic. I can say with certainty that it contains more than 1·4 per cent. by weight of arsenious acid. The glucose contains a very considerable quantity of arsenic. Owing to the limited time at my disposal I am not prepared to speak with the same certainty as to the exact percentage of arsenic present, but there is strong evidence that this glucose contains fully 0·5 per cent by weight of arsenious acid The quantity of arsenic in the beer is small and it would require a considerable time to make a quantitative analysis, about the presence of arsenic in appreciable quantity there can be no doubt"

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[1] Although immediately after hearing of the discovery of arsenic by Dr. Reynolds we suspected for obvious reasons brewers' sugar as the source of arsenic we thought it necessary to continue our investigation of all the ingredients entering into the composition of beer. We had not only to prove the presence of arsenic in sugar, but also to prove its absence in all the other articles. In addition to this we took steps to ascertain the exact amount of arsenic present in certain samples of beer and in the corresponding samples of glucose and sulphuric acid, in order to satisfy ourselves that there was enough arsenic in the sulphuric acid to account for the whole mischief. In Mr. Wynter Blyth's book on "Foods, their Composition and Analysis," fourth edition, p. 542, the results of analyses of arsenical glucose by Ritter, and by Clonet ("Annales d'Hygiène Publique," xlix., January, 1878) will be found. Our results do not agree with those of Ritter, for we found a large amount of arsenic in some of the whitest glucose.

Table of Analyses.

No	Material	Arsenic.	No	Material	Arsenic.
	Firm A			*Firm D*	
α	Beer	+	2	Hops	–
β	"	+	3	"	–
γ	"	+	24	Glucose	–
8	Hops	–	26	Inverted sugar	–
9	"	–			
10	"	–		*Firm E*	
11	"	–	4	Hops	–
12	"	–	5	—	–
21	Glucose	–	6	—	–
22	"	–	7	—	–
23	"	+	40	Inverted sugar	+
24	Inverted sugar	+	41	"	–
28	Malt.	–			
29	"	–		*Various other beers*	
30	"	–	I	—	–
31	"	–	II	—	–
32	"	–	III	—	–
33	"	–			
34	"	–		*Firm F, Brewers' sugar manufacturers from whom sugars used by Firm A and E are obtained*	
36	Preservative.	–			
35	Gypsum	–			
27	Water	–	44	Glucose	+
	Firm B		45	—	+
13	Hops	–	46	—	+
14	"	–	47	—	+
15	"	–	48	—	+
16	"	–	49	—	+
17	"	–	50	Inverted sugar	+
18	"	–	51	"	+
19	"	–	42	Sulphuric acid	+++
20	"	–	43	Sulphurous acid	–
38	Glucose	–	56	Whiting	–
39	"	–	52	Maize meal	–
	Firm C.		53	Sago flour	–
1	Hops	–	54	Tapioca flour	–
37	Glucose	–	55	Cane sugar	–

From these results it is evident that arsenic is contained in the beer in sufficient quantities to account for chronic arsenical poisoning The symptoms of the cases inquired into are also quite consistent with this view—viz, running of the eyes and the nose, pigmentation of the skin various rashes, including peeling of the hands and feet, paralysis, analgesia myalgia, pins and needles in the hands and feet, and diarrhœa (in one case) Other cases have been heard of where the individual has suffered from vomiting and diarrhœa and has at once ceased drinking the offending beer, no further symptoms occurring Further, every case we have followed up (about 100) can be traced to beer in the brewing of which glucose or sugar from one manufactory were used As this firm supply about 200 breweries, to a greater or less extent, in the North of England and the Midlands, it is not surprising to find that similar cases of illness are occurring in other districts

It is due to the sugar manufacturers to say that we understand they have issued a circular to their customers advising them of the facts and requesting them not to use any of the materials already supplied Our thanks are due to the brewers for the facilities which they have given for the prosecution of our inquiry, and there cannot be the slightest doubt that they are entirely innocent of any negligence

We cannot conclude without referring to the very great assistance which we have received from Dr Coutts, F I C, who has carried out the great bulk of the analyses In conclusion, we think we have proved the correctness of Dr Reynolds's opinion that this outbreak of disease is due to arsenical poisoning from beer drinking, that the presence of arsenic in the beer is due to the use of contaminated glucose and inverted sugar by the brewers; and that this contamination of sugar is caused by the use of very impure sulphur acid by the sugar manufacturer prepared from arsenical pyrites It seems to us very necessary that the use of sulphuric acid in the preparation of articles for consumption should be placed under strict supervision

SHERIDAN DELEPINE
Salford, Nov 27th 1900 O H TATTERSALL

*** We have received photographs of the octahedral crystals of arsenious acid obtained from 40 cubic centimetres of the specimen of beer marked γ in the table, and from three grammes of the specimen of glucose marked 44 —ED L

THE NEW PROPHYLAXIS AGAINST MALARIA. AN ACCOUNT OF EXPERIMENTS IN LATIUM

BY PROFESSOR ANGELO CELLI

(*Specially translated for* THE LANCET *from the Supplemento al Policlinico, Anno VI, N 51*)

THE modern theory of the propagation of malaria by means of mosquitoes had scarcely been confirmed experimentally when, in my lectures in May and June of 1899 and shortly afterwards in book form[1] I gave an exposition of the new epidemiology and the prophylaxis following from it This, I pointed out in order to be completely successful must be directed against (1) the causes bringing about infection, either by (*a*) destroying these (by disinfection of the blood of malarious persons and by the destruction of mosquitoes) or (*b*) by preventing their entrance into the human organism (by protection of dwelling houses and of the exposed parts of the body); and (2) against the predisposing causes (organic, physical, and social) In view of the arduous nature of any attempt to battle against the latter set of causes I endeavoured (even before the commencement of the malarial season of 1899) to put into practice those only of the prophylactic measures which have for their aim the suppression of the direct causes of the epidemic that is to say, the causes bringing about infection I was even then persuaded, and am now more than ever convinced, that a complete and certain prophylaxis by disinfection of the blood by means of quinine is practically impossible, although Koch, and later Gosio, and at first Grassi also, believed in its efficacy. And I had likewise come to the conclusion, through my own and Casagrandi's researches,[2] that although the destruction of the mosquito in the aquatic and the aerial stages of its existence is in itself not a difficult thing, this is not practicable on a large scale, chiefly because there is not the same immediate material advantage in killing insects which are injurious to man that there is in destroying those which are injurious, for example to the grape vine

My first prophylactic experiments of 1899 had consequently for their object the testing of the means best adapted to prevent the bites of mosquitoes and the resulting penetration of the malarial germ into our bodies On one hand I made experiments with various substances, such as ointments soaps, and odours calculated to drive away mosquitoes, and satisfied myself that they were of little use, even the best of them, as, for instance, those with turpentine for their basis, either because of their ephemeral effect, especially in the open air, or because of the negligence of those employing them On the other hand, I adopted the method of mechanical protection of the houses and of the exposed parts of the body, not omitting at the same time the disinfection of the blood by an assiduous attention both to relapses and to primary fevers, and the destruction of any mosquitoes which might accidentally penetrate into the houses. It will be well to refer here once more to the experiment which I made in the æstivo-autumnal season of 1899 on the two railway lines, notoriously malarious, of Prenestina-Cervara and of Pontegalera. I shall therefore give a brief *résumé* of the official report dated Dec. 13th of last year.[3] On the first-mentioned of these two lines we selected for experiment the linemen's cottages numbered 4, 5, 6, 7, and 8, and on the second those numbered 19, 20, and 21. We covered the windows with frames of tulle,[4] thus allowing air and light, but no mosquitoes to pass. At the top of the staircase a door with a similar frame was placed the better to protect the bedrooms. This door, as well as the outer ones, was made to close automatically so as not to demand too much of human apathy. The entrance door, as being more liable to injury, was furnished with wire gauze instead of muslin. We advised the inmates to sleep with the windows open so that the air, filtered as it were from insects, might pass in freely. For the protection of persons employed on night duty we used cowls like those of bee-keepers, provided with a circular mask of wire gauze and having attached to it below a veil tucked under the coat, at the ends of the sleeves of which very wide gloves of chamois skin were tightly sewn on. A vigilant outlook was daily kept for mosquitoes in order to find and eventually to capture them in the houses. Every family was provided with a powder for burning in case by any chance a mosquito should make its way in The neighbouring linemen's cottages and the stations of Cervara and Pontegalera served as controls. On the Prenestina-Cervara line Cottage No. 6 served the same purpose, the inmates being negligent and refractory and allowing mosquitoes to enter constantly. Some of the latter were found infected so that we were able to predict the epidemic which afterwards developed attacking 12 out of the 14 inhabitants. Among the controls on the Cervara line 24 persons contracted malaria and at the station of Cervara, renowned for its malaria, all were attacked. In the control zone of Pontegalera, two persons who had acquired immunity from having had the disease previously escaped infection. On the other hand, in the linemen's cottages which were protected, out of 24 persons four were attacked, but these were on night duty and took no heed of our instructions. Three of them were ill for a long time, two from tertian, spring and autumn varieties respectively, and one from quartan fever. In spite of quinine administered promptly and abundantly they relapsed several times and their blood contained a large number of gametes—that is to say, of those parasitic forms most dangerous for contagion. At the same time their wives and children living in the protected houses along with them enjoyed immunity from the fever. The disease did not therefore spread through a whole household in the usual way, and *for the first time since the construction of these lines of railway the families of the railway servants were able in highly malarious localities to pass the whole summer and autumn in the Campagna without contracting fever.*[5]

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[1] Malaria According to the New Researches (Longmans Green, and Co.)

[2] Per la Distruzione delle Zanzare, Mem I Annali d Igiene Sperimentale, vol ix, 1899

The result of these experiments, which were the first of their kind in malarial districts, very greatly impressed Manson,[6] who came to see my field of experiments at Cervara,[7] and they induced the directorate of the Adriatic Railway Company to extend the system in Latium from Prenestina to Salone and on the Castelgiubileo line; and also into Southern Italy near the station of Ofantino in the Province of Foggia.[8] The Southern Railways Company in its turn determined to extend the same experiments to the most malarious of the linemen's cottages on the lines of Terracina, Anzio, and Pontegalera, here in Latium, and to those near the station of Albanella in the province of Salerno. The conduct of the former of these two experiments was entrusted to me, the other, in Southern Italy, to Grassi, who was member of a consultative committee appointed for the purpose by the same railway company.[9] In like manner the Sicilian railways have also extended to the sections of their lines lying in malarial zones the same system of prevention. I must, however, limit myself to an account of the results of the new prophylaxis as obtained in Latium, where, encouraged and taught by the experience of last year, I attempted to defend against malaria in the season which is now drawing to a close, not only the railway servants, but also the caretakers in the Campagna and the peasants. I shall now briefly recount what I did for each of these and the results which I obtained.

A.—PROTECTION OF THE RAILWAY SERVANTS.

The method employed was that of the previous year, with the difference that wire-gauze[10] was everywhere substituted for the muslin, and that a large cage of wire-gauze was placed in front of the door so as to form a kind of porch or ante-chamber. This addition of a porch, first suggested by Dr. Blessich, is very useful in giving greater protection to the rooms on the ground floor and affording a shelter where in the summer the family can have the benefit of the open air without actually going outside. As a rule, the doors were made to close automatically, and to make sure that no mosquitoes entered by the chimneys the latter were also covered by gauze with a wider mesh. To render easier the discovery and destruction of any mosquitoes that might chance to enter, the walls of the rooms were whitewashed.

Large and repeated doses of quinine had been administered to any persons who had had relapses in the spring as well as to the very few patients with primary infections, the treatment being completed in all cases with arsenical and ferruginous preparations. No prophylactic medicine was given except to those on night duty on the Adriatic lines, whom I had not been able to induce the previous year to wear regularly at night time the special head-gear and gloves provided for the purpose. They were made to take euchinin in a daily dose of from 0·50 to 0·75 centigramme. On the Mediterranean lines we had not the same difficulty, because there mosquitoes and other insects are so numerous as to cause intolerable annoyance, apart from any danger of their conveying fever. The results which we obtained were briefly as follow.

1. Prenestina-Salone line. On this line we this year protected also the houses on the Cervara-Salone section which last year served us as controls. We were able, however, to use for this latter purpose the intermediate stations of Cervara and Salone as well as the section beyond from Salone to Lunghezza. Now in the zone which was protected out of 52 persons only two contracted fever—namely, a watchman on night duty attacked on June 15th (before the commencement of the prophylactic treatment of those engaged in this dangerous service) and a woman attacked on Oct. 15th who had always shown herself refractory to our recommendations. The watchman, notwithstanding abundant and repeated doses of quinine, had had three relapses at long intervals; nevertheless, his malaria did not prove infectious to the other seven persons who lived in the same house. In the rest of the protected zone 50 persons (21 adults and 29 children) remained free from fever. On the other hand, in the zone of control, two out of three persons sickened at the station of Cervara, 16 out of 18 on the Salone Lunghezza section, six out of 10 in the station of Salone—the four who escaped having been in the habit of frequently sleeping at Rome—and in the houses of the country people along the protected portion of the line and in the huts of Salone there were about 100 peasants, all of whom sickened. Also on the farms of Rustica, Cervelletta, Bocca di Leone, and Gottifredi all, or nearly all, took the fever. *Our protected zone thus remained almost free from malaria in the midst of a fever-stricken region, and in order to render healthy a district where during the preceding year*

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[3] I primi esperimenti di protezione del personale ferroviario dalla malaria, Relazione del dott. Baldi, Supplemento al Policlinico, 21 Febb., 1900.

[4] These frames were never removed from the windows of the first floor of cottage No 19 on the Pontegalera line and now, two years later, are still in excellent preservation. For those who cannot afford metallic frames the muslin ones may be recommended.

[5] Vide Bollettino n. 3 della Società per gli Studi della Malaria. Sitting of Feb. 5th, 1900.

[6] Brit. Med. Jour., Feb 10th, 1900.

[7] A very pleasing sequel to this visit was the experiment of Dr. Sambon and Dr. Low who, in order to obtain documentary evidence as it were of the efficacy of the new prophylaxis, came and passed the malarial season in the most deadly spot in Ostia in a hut protected against mosquitoes and who, together with two other persons, have remained all the time in perfect health.

[8] Dr. Martirano, who has carried out the prophylactic experiments at Ofantino on 28 persons, has not had a single case of primary malarial infection to report.

[9] Professor Grassi published before the season had come to an end an anticipatory report, and this without any hint that others had been working before and were still at work for the railway company and for the Society for the Study of Malaria, by whom the funds were supplied.

[10] The diameter of the mesh of the gauze should not be greater than two millimetres at most; this size prevents the entrance of any but a very small culex. To exclude all sizes of mosquitoes with certainty the mesh should have a diameter of only from 1 to 1·5 millimetres. A coat of varnish is applied to preserve the netting.

everyone had had fever it sufficed to extend to it the new method of prophylaxis

2 Castelgiubileo line (from the seventh to the nineteenth kilometre inclusive) On this line the experiment succeeded in a degree highly convincing Here there are two types of lineman's cottage—the new and the old, the latter from its peculiar construction does not lend itself to being protected and was therefore left to serve the purpose of control This turned out to be a fortunate circumstance because the old and the new cottages as nearly as possible alternate with one another Now in the protected houses out of 57 inhabitants not one took fever, while in the unprotected houses out of 51 inhabitants only seven escaped, and these were nearly all adults, immune in consequence of previous attacks Among the children, on the other hand, only two out of 29 escaped infection in the unprotected huts whilst of the 36 children in the protected houses not one was attacked We also made two further control experiments On August 23rd it became necessary, for reasons connected with the railway service, to transfer a family consisting of a husband, wife, and son from cottage No 17, where they had always enjoyed good health, to the next cottage, No 16 About a month afterwards the wife and child were attacked by fever On the other hand, a family consisting of husband, wife, and six children, all of them suffering from malaria, had been placed in cottage No. 17 We at once put them upon a full and prolonged course of quinine followed by tonic treatment with arsenic and iron, Secure in their protected house from the baleful mosquito, this family has made an excellent recovery, although their convalescence and cure had to go on through the height of the malarial season Only one of the children, in whom the relapses were more obstinate, still remains in somewhat poor condition On this Castelgiubileo line the proof of the value of the new prophylaxis has thus been most decisive and eloquent *Of a whole community of persons all subjected to the same conditions in other respects, those whom we defended against mosquitoes have remained free from fever, whilst those left unprotected have nearly all been attacked* It is as if we had a book with its pages alternately white and black, the white pages corresponding to our protected houses and families, the black representing those left unprotected No less decisive in their results were the experiments made on the other lines

3 Pontegalera line Here, in the section outside of the protected zone, in cottages Nos 15 to 19 inclusive, out of 42 railway servants only three escaped the fever In our protected zone, on the other hand, out of 36 persons only two contracted it, while in the section further on, from the twenty seventh to the thirty third kilometre, out of 10 persons only one remained unattacked As further controls we had the station of Pontegalera, placed almost in the midst of our zone of experiment, where out of seven persons six were attacked, the first lineman's cottage on the Fiumicino railway, where all of the three inmates suffered, and some neighbouring country cottages in which at Chiesola 30 inmates out of 30 were attacked, at the hamlet of Pontegalera four out of four, and at a house placed almost midway between two of the protected railway cottages 12 persons out of 12

4 The Anzio line Here we selected for protection the two cottages most noted for malaria—namely, those at the twenty-fifth and thirty second kilometre Now in these two cottages, in each of which were four persons, all remained perfectly well, and four other persons who came from the Terracina line to live in them suffering severely from malaria recovered their health completely On the other hand, in the cottages from the eighteenth to the twenty-third kilometre, out of 39 inmates 36 sickened with fever, in the cottages lying between the two protected ones nine out of nine, and in those beyond our No 32 cottage eight out of 10 Among a squad of linemen numbering six there were four fever patients, the two who escaped belonging to the family protected by me at the twenty-fifth kilometre

5 The Terracina line In the railway cottages along this line, so terribly malarious, I had 30 persons protected between the station of Frasso and Terracina Of these only two suffered from primary infections—namely, a lineman who by mistake went on night duty without his mosquito hood and a little girl who had had quartan fever In two persons who had become malarial cachectics during the previous two years æstivo autumnal attacks recurred with obstinacy up to the first few days of October, in spite of treatment None of the others had malaria On this line also I was able to establish a series of controls analogous to those I have described on the Castelgiubileo line by leaving here and there cottages unprotected Of 37 persons inhabiting these latter 35 took fever

To sum up, of 207 railway employés subjected to the new prophylaxis against malaria during the seasons 1899 and 1900 only 10 contracted fever, although they were living in the most unhealthy regions of Latium and in the midst of their fellows, all or nearly all, of whom were stricken by the disease Also, in houses defended against the invasion of mosquitoes malaria loses its contagiousness and no longer gives rise to the usual epidemic Further, the treatment of, and convalescence from, malarial fever can be carried on in malarious localities in houses protected from the invasion of mosquitoes quite as well as in places where the air is good

It is to be noted, in conclusion, that this favourable result was obtained with the utmost simplicity, all that was necessary being a little persuasion with a small present, and the supervision which I and two railway officials who assisted me, one on the Adriatic and the other on the Mediterranean railways were able to exercise A similar result could therefore be attained wherever and whenever desired, and I am able to say that these two railway companies propose to secure it on the largest possible scale

B —PROTECTION OF THE CARETAKERS IN THE CAMPAGNA

Two Roman companies—namely, the Società dell' Acqua Marcia and the Società dell Elettricità—have each a caretaker's house on the road from Rome to Tivoli, both situated in localities with a bad type of malaria which has hitherto attacked the families residing in them every year, or rather, I should say, the wives and the five children, for the husbands, owing to many years of past suffering from the disease, have become immune This year for the first time the wives and children have escaped infection, and this immunity they owe to my having had their houses protected before the commencement of the malaria season in the same way as those of the railway people with wire netting As I had here to deal with persons of intelligence who could be trusted to carry out my instructions carefully I left this experiment to proceed, as it were, of its own accord At the beginning of the season I went with the companies' engineers, first to order, and then to approve, the protective arrangements for the houses I gave the requisite instructions (to remain indoors from an hour before sunset till an hour after sunrise and to kill any mosquitoes that might accidentally gain entrance) and after that I did not return From the engineers however, I have from time to time received news of the welfare of these people, together with thanks for the danger escaped The same protection may thus be secured whenever they desire by all the caretakers of the communal, provincial, and Government roads, of monuments, and of the works for reclaiming waste lands in the many malarious districts of Italy

C —PROTECTION OF THE PEASANTS

Malaria rages most of all among the field labourers, working as these do in the most dangerous hours of the evening and night at the most unhealthy time of year—namely, when the principal crops are reaped—living in habitations of a wretched or defective kind—or without any habitation whatever—and withal very insufficiently clad Such conditions render it very difficult to carry out among these people the prophylactic measures which would be, and ought yet to become of the greatest benefit to them socially I wanted notwithstanding this to make the attempt Accordingly, I protected in the usual way, with nets over the windows and doors, the hamlet on the farm of ' Le Castella ' and about half of the hamlet of the 'Cervelletta" Among the houses so protected on the latter farm was one with a terrible reputation for the number of victims which malaria had yearly claimed from it, so much so that the proprietor wished to shut it up Below this house, in which two families (six persons) were going to live, was another, a sort of tavern, which I also protected with the netting And, finally, I determined to make the same experiment with that most primitive of all human habitations, the straw hut closing thoroughly with straw all the holes in its sides, and with wire gauze the openings for allowing the smoke to escape, I placed at its entrance a big cage of the same material, furnished in its turn with two doors made to close automatically. I protected three huts in this way, two at the Cervelletta and one at the Castella.

It is more difficult to induce half-educated people to believe that malaria may be conveyed by the bites of mosquitoes than it is to convince the ignorant peasantry of the fact. On this account I met with much less difficulty from some of the more intelligent among the latter than I had expected in getting them to carry out the new prophylaxis so as to insure success.

In the hamlet of the Castella the family of the manager and the medical man of the Red Cross Society escaped infection, notwithstanding that some stagnant water from a ditch, which was brought into the house in an old cask, might have developed many mosquitoes. So also the 17 Lombard peasants who slept in the protected part of the hamlet of Cervelletta were rewarded for the great care they took by only one of their number falling sick with malaria, a man who was in the habit of getting drunk from time to time and while in this helpless state of sleeping in the open air. In the part of this hamlet which served as control we had at the same time 10 cases of primary infection and several relapses from the previous year's epidemic. And the house so cursed with the disease in former years had no fresh cases in it. One family was, however, obliged to leave its protection in the early days of September, and now (between Oct. 15th and 17th) the two children have already contracted fever.

In the midst of the other straw huts all stricken with malaria, the protected hut at the Castella, with a family, consisting of father (a very industrious man), mother, and three children, remained, wonderful to relate, quite free from fever, as did also one of the protected huts at the Cervelletta with five inmates—father and mother and three children. In this latter hut we never found mosquitoes; a few which found their way as far as the outside cage were killed. On the other hand, in the third protected hut, notwithstanding all our warnings, we found mosquitoes in the cage every morning and also often inside the hut itself. Finding it impossible to induce this family, on account of their apathy or their ignorance, to take the necessary precautions, we removed the protection, and three out of four of the inhabitants took fever. Thus, so long as the peasants were careful, they were able to defend themselves from malaria even in the most primitive of dwellings, the straw hut.

In order to protect from fever the nomadic rural population who come down to the Campagna at the season when the most dangerous kind of work is in progress, and who are easily infected on account of their sleeping in the open, the Caetani family are making a preliminary trial in the Pontine Marshes of a large hut constructed of wood and wire-gauze which can be taken to pieces and transported to wherever it is wanted.

Naturally, in order to make quite complete what we may call this mechanical prophylaxis for the peasantry it would be necessary to stop their work in the more dangerous hours. Besides this one must not lose sight of the ideal kind of prophylaxis for people who work—namely, that of making them artificially immune against the disease. With this object in view I have made, and continue to make many experiments, especially with euchinin, and I propose shortly to give an account of the results obtained by this medicinal method of procuring immunity. For the present I wish to insist upon the fact that by means of the mechanical prophylaxis for malaria (protecting the houses and the uncovered parts of the body) a great step in advance has been made for practical purposes. Among railway employés, caretakers, and even the peasants of the malarious Campagna the lesson of the last two years has been so persuasive that all of those who have hitherto served as controls are anxious to be protected during the next fever season. Within no very distant date all houses in malarious localities will be defended against the entrance of insects; thus during the day there will be no inconvenience from flies and other insects of an unclean, troublesome, or injurious kind, and at night there will not be the annoyance and evil effects of mosquitoes. In all low-lying, warm, moist places, where myriads of insects of every species swarm, this mechanical means of defence against their invasions will become the best of the prophylactic rules for the prevention of malaria and other diseases.

THE METROPOLITAN BOROUGH COUNCILS.

THE following list, compiled from official information, is a substantially complete enumeration of the medical men who have been elected members of the first metropolitan borough councils. There are, however, we believe, one or two vacancies to fill in consequence of the election of aldermen from the council, but the filling of these vacancies will probably leave the list unaltered.

Battersea.—Councillor: Mr. L. S. McManus, M.D., M.Ch. R.U.I.

Bermondsey.—Councillor: Mr. J. Mulqueen, L.R.C.P., L.R.C.S. Irel.

Bethnal Green.—Councillors: Mr. W. A. Farebrother, L.S.A., and Mr. F. E. Rogers, M.R.C.S. Eng., L.R.C.P. Lond.

Camberwell.—Councillor: Mr. A. Smith, L.R.C.P. Irel.

Chelsea.—Councillor: Mr. J. W. Erskine, B.A., M.B. T.C.D., L.R.C.S. Irel.

Deptford.—Councillor: Mr. F. T. Tayler, B.A., M.B., L.R.C.P. Lond., M.R.C.S. Eng.

Finsbury.—Councillor: Mr. E. Jones, M.R.C.S. Eng., L.R.C.P. Lond. (Chairman of the Public Health Committee).

Fulham.—Councillor: Mr. E. Cooney, L.R.C.P. Edin., L.F.P.S. Glasg., L.S.A., D.P.H. Camb.

Greenwich. — Mayor: Surgeon-Lieutenant-Colonel R. Gooding, V.D., M.D. Lond., M.R.C.S. Eng., J.P.

Hackney.—Aldermen: Mr. F. H. Daly, M.D. R.U.I., L.R.C.S. Edin., J.P., and Mr. T. Hoskin, L.R.C.P. Lond., M.R.C.S. Eng., J.P. Councillors: Mr. J. O. Adams, M.D. Durh., F.R.C.S. Eng., Mr. F. M. Miller, M.R.C.S. Eng., L.R.C.P. Lond., Mr. F. Wallace, L.R.C.P. Lond., M.R.C.S. Eng., and Mr. M. E. A. Wallis, L.R.C.P. Lond., M.R.C.S. Eng.

Hammersmith.—Councillors: Mr. C. C. Coker, L.R.C.P. Lond., L.S.A., and Mr. W. A. Davidson, L.S.A.

Hampstead.—Councillors: Mr. E. C. Andrews, M.D. Lond., M.R.C.S. Eng., Mr. C. W. Cunnington, M.R.C.S. Eng., Mr. A. O. Grosvenor, M.D. Edin., M.R.C.S. Eng., and Mr. F. E. Scrase, F.R.C.S. Eng.

Holborn.—Councillor: Mr. W. R. Smith, M.D. Aberd., F.R.S. Edin.

Islington.—Councillor: Mr. John Walker Smyth, L.R.C.P., L.R.C.S. Edin.

Kensington.—Councillor: Mr. F. H. Alderson, M.B. Durh., M.R.C.S. Eng., L.R.C.P. Lond., and Mr. E. D. Vinrace, M.R.C.S. Eng.

Lewisham.—Alderman: Mr. J. W. Elliott, M.R.C.S. Eng., (retired). Councillors: Mr. F. J. L. Hart, M.B., C.M. Edin., Mr. F. S. Smyth, F.R.C.S., L.R.C.P. Edin., and Mr. H. Visger, M.R.C.S. Eng., L.S.A.

St. Marylebone.—Councillors: Mr. L. A. Bidwell, F.R.C.S. Eng., and Mr. J. Edmunds, M.D. St. And., M.R.C.P. Lond., M.R.C.S. Eng.

Paddington.—Councillors: Mr. J. L. Atkinson, L.S.A., Mr. B. F. Popham, M.D. St. And., L.R.C.S. Irel., L.S.A., Mr. A. Prince, L.R.C.P. Edin., M.R.C.S. Eng., and Mr. D. A. Waite, M.A. Oxon., M.R.C.S. Eng., L.R.C.P. Edin.

St. Pancras.—Alderman: Mr. W. Smith, M.R.C.P. Edin. Councillors: Mr. J. A. Angus, Mr. W. F. Hazel, M.R.C.S. Eng., L.S.A., Mr. R. P. Long, L.F.P.S. Glasg., L.S.A., Mr. E. F. T. MacCarthy, L.R.C.P., L.R.C.S. Irel., Mr. R. Paramore, M.D. Brux., M.R.C.S. Eng., and Mr. J. Thompson, M.D. St. And., M.R.C.S. Eng., L.R.C.P. Edin.

Shoreditch.—Councillor: Mr. J. Davies, M.D. Durh., M.R.C.S. Eng., L.S.A.

Southwark.—Alderman: Mr. W. G. Bott, L.R.C.P. Edin., M.R.C.S. Eng. Councillor: Mr. E. C. Perry, M.A., M.D. Cantab., F.R.C.P. Lond., M.R.C.S. Eng.

Stoke Newington.—Councillor: Mr. R. Ostlere, M.B., C.M. Aberd.

Wandsworth.—Alderman: Mr. T. A. Ives Howell, L.R.C.P. Lond., M.R.C.S. Eng. Councillors: Mr. J. Gay, L.R.C.P. Lond., M.R.C.S. Eng., Mr. C. R. Lucas, M.R.C.S. Eng., L.R.C.P. Lond., and Mr. Mark Robinson, M.R.C.S. Eng., L.R.C.P. Lond.

Westminster.—Councillor: Mr. H. A. Des Vœux, M.D. Brux., L.R.C.P. Lond., M.R.C.S. Eng.

Woolwich.—Councillor: Mr. J. Jeken, M.R.C.S. Eng., L.S.A.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD

On the Sanitary Condition of the Borough of Windsor, and upon the Character of the Town Council's Administration, by Dr H TIMBRELL BULSTRODE [1]—Attention is drawn elsewhere in our present number to the immediate circumstances which determined the issue of this report It would seem, however, that the sanitary condition of Windsor has on several previous occasions been the subject of investigation for the Local Government Board, particularly in 1886 when, in consequence of local demands following on the publication of the report [2] an inquiry was held by Dr H Airy and Mr Arnold Taylor, and a series of official recommendations to the Town Council was issued

In the present report ample evidence appears that the backwardness of local administration in Windsor, which was conspicuous 15 years ago, has largely remained a characteristic of the borough If this has been due mainly to the ignorance or apathy of the Windsor public Dr Bulstrode has now done much to enlighten them Departing from the somewhat frigid recital of facts of which official reports are apt to consist, he has produced a document which should certainly succeed in capturing the attention of that important person in modern politics, the "man in the street" After giving details as to the present estimated population (12 716) and a description of the physical and geological features of the town, Dr. Bulstrode deals with its water supply Shallow wells, which used to be common in Windsor, have now disappeared, and the public supply of the Windsor and Eton Waterworks Company serves the whole district This supply is obtained by pumping from several wells sunk in river gravel alongside the Thames the source of supply being largely composed of subsoil water and of Thames water which has percolated to the wells through a greater or less thickness of natural gravelly soil The water is not filtered before being pumped into the service pipes Certain of these wells are within a few yards of inhabited dwellings but Dr. Bulstrode was assured that special precautions had been taken as regards the sewers serving these houses Although, having regard to the sources of supply, systematic examination, chemical or bacterial, of water from each separate well is unquestionably desirable, the only examination hitherto practised has been occasional chemical analyses made for the water company of samples taken from the town mains, which of course represent a mixture of water from all the wells

As regards excrement disposal, "up to a comparatively recent date there was a large number of closets not provided with water, and the unsatisfactory method of hand flushing was resorted to" Much amendment in this respect has however, been lately made With respect to house drains in the poorer parts of Windsor their "nature, direction, and soundness is usually a matter of pure conjecture Ventilation is often entirely absent, as also are opportunities of drain inspection Probably but few of the older drains would withstand the water test, and it does not seem that any very extensive effort has been made to ascertain the exact state of affairs in this respect Numerous instances of defective and broken traps came to my notice and on several occasions complaints of smells from the house sinks were made" These drains were probably laid before the existing by laws came into force; in certain new houses, however, Dr Bulstrode found that in laying house drains the by laws had been contravened

The sewers of Windsor are of diverse kinds "Some are old brick barrel sewers, others pipe sewers with clay joints, and others again, as for instance the more recent, pipe-sewers with proper joints The levels vary considerably, and in certain instances the fall of the sewer is in the opposite direction to the flow of sewage" The contents of the main outfall sewers are pumped on to a sewage farm on an island at Old Windsor This outfall sewer is liable to be blocked during a considerable portion of each 24 hours when pumping is not going on, and hence "acts as a storage tank', this accumulation "must place great strain on the sewers and facilitate deposit in them, a fact easily verified by an examination of the walls of the inspection chambers" Surface water and drainage, which reaches Windsor sewers by the "Clewer ditch," give rise to considerable inconvenience by increasing the pumping requirements House refuse in the poorer parts of Windsor is often stored in ash-pits which are much dilapidated or altogether broken down, and frequently heaps of refuse are allowed to accumulate on the bare ground ' In times of rain this decomposing refuse is washed into the subsoil in the neighbourhood of inhabited houses, and in times of drought and wind is scattered broadcast This aspect of public health control in the borough has there can be no doubt been much neglected" Save for a temporary structure for cases of small-pox, situated alongside the sewage farm, there is no isolation hospital for the borough Dr Bulstrode points out that some responsibility in this matter attaches to the medical officer of health, Dr E Casey, whose advice to the town council shows that his views on the subject "are not those held by the vast majority of his colleagues in the public health service" These views Dr Bulstrode combats, setting out in reply a temperate claim for the utility of isolation hospitals on broad lines of expediency to the community and advantage to the individual

With regard to the housing of the poor of Windsor Dr. Bulstrode shows that a most undesirable state of affairs exists. He gives in illustration detailed notes of his inspection of Victoria Cottages, a row of about 100 houses with dilapidated roofs, falling ceilings, unpaved yards, defective gullies broken rain-pipes, accumulations of refuse in backyards, and many other deficiencies rendering them, in his view, "difficult to regard as suitable for human habitation" Of this visit he says: "I was especially invited to enter certain houses, the tenants beckoning to us to inspect their abodes and to see the conditions under which they were obliged to live There was distinctly a pathetic side to this inspection of Victoria Cottages, the inmates seeing members of the town council with me, thinking that at last at any rate, there would be some redress" In other streets, such as River-street (formerly Bier lane, which figured prominently in the report in THE LANCET in 1885), Distil House row, Red Lion-row court, Garden court, Keppel row, and Queen's square, numerous instances of hopelessly dilapidated and overcrowded dwellings are also detailed In the common lodging houses the custodians were frankly ignorant of, and systematically transgressed, the borough by-laws—a copy of which the inspector seems to have had considerable difficulty in securing. Slaughter house by laws were also disregarded As regards storage of milk in many cases "the circumstances under which the cleansing and the storing of the milk pans were carried out left much to be desired, and customers would not have been reassured by a visit to these places"

Dr Bulstrode reviews in considerable detail the attitude of the town council (which he describes as "without backbone") and their officers towards the measures of sanitary progress which should have been taken to remedy the various evils which he has described Taking as instances certain specific nuisances he gives a chronological history of the dealings of the local authorities with them From these we gather that five years of reports and discussion may not suffice to produce amelioration in some of the worst dilapidated cottage property in the place, and that it may take the sanitary inspector four years of reports and orders before a proper supply of water can be obtained for a closet

Not the least instructive part of the report lies in the indications furnished by the inspector of the degree of responsibility respectively attaching to the town council and to their officers in matters such as these That his inspection resulted in immediate improvement in certain directions is evidenced by a memorandum by the town council which is appended to the report This circumstance seems hopeful for the future

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 33 of the largest English towns 6323 births and 3923 deaths were registered during the week ending Nov 24th The annual rate of mortality in these towns, which had been 17·6, 16 9, and 17·6 per 1000 in the three preceding weeks, was again 17·6 last week. In London the death-rate was equal to 17·2 per 1000, while it averaged 17.9 in the 32 provincial towns. The lowest death-rates in these towns were 10 0 in Norwich, 10 5 in Cardiff, 11 5 in Huddersfield, and 13·1 in Croydon; the highest rates were 21·0 in Manchester and in Preston, 21·9 in Liverpool, 23·2 in Bolton, and 24·3 in Salford. The 3923 deaths in these towns included 351 which were referred to the principal zymotic diseases, against numbers decreasing from 485 to 353 in the four preceding weeks; of these, 76 resulted from diphtheria, 68 from whooping-cough, 65 from "fever" (principally enteric), 58 from measles, 46 from diarrhœa, and 38 from scarlet fever. No death from any of these diseases occurred last week in Wolverhampton; in the other towns they caused the lowest death-rates in Bristol, Cardiff, Norwich, and Newcastle, and the highest rates in Brighton, Swansea, Blackburn, and Sheffield. The greatest mortality from measles occurred in Swansea and Gateshead; from whooping-cough in Derby, Preston, and Sheffield; from "fever" in Plymouth; and from diarrhœa in Swansea, Blackburn, and Gateshead. The mortality from scarlet fever showed no marked excess in any of the 33 towns. The 76 deaths from diphtheria included 22 in London, 12 in Sheffield, eight in Leicester, six in Leeds, and five in Liverpool. No fatal case of small-pox was registered last week either in London or in any of the 32 large provincial towns; two cases of small-pox were admitted into the Metropolitan Asylums hospitals during last week, and both remained under treatment on Saturday last, Nov. 24th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2725, against numbers increasing from 1703 to 2728 on the 12 preceding Saturdays; 246 new cases were admitted during the week, against 336, 289, and 261 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 164 to 352 in the seven preceding weeks, declined again last week to 321, and were 106 below the corrected average. The causes of 51, or 1·3 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Salford, and Newcastle, and 11 other smaller towns. The largest proportions of uncertified deaths were registered in Liverpool, Huddersfield, Sheffield, and Gateshead.

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[1] London: Eyre and Spottiswoode East Harding street, Edinburgh: John Menzies and Co, Dublin Hodges, Figgis, and Co Price 9d.

[2] Report of THE LANCET Special Commission on the Sanitary Condition of Windsor; THE LANCET, August 15th, 1885 p 306

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·2 and 19·9 per 1000 in the two preceding weeks, further rose to 20·3 during the week ending Nov. 24th, and showed an excess of 2·7 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 11·9 in Leith and 16·9 in Edinburgh, to 24 9 in Greenock and 25·2 in Paisley. The 628 deaths in these towns included 25 which were referred to whooping-cough, 20 to diarrhœa, 8 to measles, six to "fever," five to scarlet fever, 4 to diphtheria, and one to small-pox. In all, 69 deaths resulted from these principal zymotic diseases, against 62 and 75 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·2 per 1000, which was 0·6 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had been 22 in each of the two preceding weeks, increased last week to 25, of which 17 occurred in Glasgow and five in Greenock. The deaths from diarrhœa, which had declined from 53 to 16 in the seven preceding weeks, rose again to 20 last week, and included seven in Glasgow, four in Dundee, three in Edinburgh, and three in Aberdeen. The fatal cases of measles, which had been five and 13 in the two preceding weeks, declined again last week to 8, of which five were registered in Aberdeen and two in Edinburgh. The deaths referred to different forms of "fever," which had been seven in each of the two preceding weeks, declined to six last week, and included three in Glasgow and two in Aberdeen. The fatal cases of scarlet fever, which had been four in each of the two preceding weeks, rose last week to five, and were all registered in Glasgow. The deaths from diphtheria, which had been seven and 11 in the two preceding weeks, declined last week to four, of which two occurred in Glasgow, where the fatal case of small-pox was also registered. The deaths referred to diseases of the respiratory organs in these towns, which had increased from 98 to 163 in the seven preceding weeks, declined again last week to 156, and were 28 above the number in the corresponding period of last year. The causes of 24, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 20·0 to 26·0 per 1000 in the four preceding weeks, further rose to 26·1 during the week ending Nov. 24th. During the past four weeks the death-rate in the city has averaged 24·1 per 1000, the rate during the same period being 17 0 in London and 17·4 in Edinburgh. The 175 deaths belonging to Dublin registered during the week under notice were one in excess of the number in the preceding week, and included 19 which were referred to the principal zymotic diseases, against 11 in each of the two preceding weeks; of these, eight resulted from "fever," five from whooping-cough, five from diarrhœa, and one from diphtheria. These 19 deaths were equal to an annual rate of 2·8 per 1000, the zymotic death-rate during the same period being 1·3 in London and 1·0 in Edinburgh. The deaths referred to different forms of "fever," which had been four and three in the two preceding weeks, rose again last week to eight. The fatal cases of whooping-cough, which had been one and two in the two preceding weeks, further increased to five last week. The deaths from diarrhœa, which which had been six and three in the two preceding weeks, rose again last week to five. The 175 deaths in Dublin last week included 30 of infants under one year of age and 38 of persons aged upwards of 60 years; the deaths of infants exceeded the number in the preceding week, while those of elderly persons showed a marked decline. Five inquest cases and three deaths from violence were registered, and 63, or more than a third, of the deaths occurred in public institutions. The causes of 13, or more than 7 per cent., of the deaths in the city last week were not certified.

ROYAL LONDON OPHTHALMIC HOSPITAL GUILD.

THE first annual meeting of the Royal London Ophthalmic Hospital Guild was held in the board-room of the hospital on Thursday, Nov. 22nd. Mrs. JOHN TWEEDY, the chairman of the committee, who presided, in briefly summarising the aim and scope of the work of the Guild, said that its primary object was to aid the hospital by supplying special clothing for the use of the patients. The work of the past few months had been so satisfactory that the committee thought themselves justified in attempting to place the Guild upon a larger and more important basis, and with this object in view the patronage and coöperation of ladies well known for their interest and energy in good works was sought. The Lady Mayoress had consented to become the first President of the Guild The great aim of the Guild would be the creation of a sinking fund for the hospital. It was sad to find a hospital, the pioneer and teacher in eye diseases, struggling for life through lack of funds. If the Royal Ophthalmic Hospital could feel sure of a sinking fund of £80 000 the interest would defray the expenses of rent, rates, and lighting.

The report, a very satisfactory one, was then proposed and adopted.

Lady Russell Reynolds, Lady Avebury, and Mrs. John Tweedy were subsequently appointed vice-presidents, Mrs. Gunn was re-appointed honorary treasurer, and Miss Braybrook secretary.

Among the rules of the Guild are the following:—

> The objects of the Royal London Ophthalmic Hospital Guild are. (*a*) To provide some ward clothing for the patients while in the hospital, and to aid the hospital by giving garments for the operating theatre and the necessary household linen. (*b*) To promote any other work in connexion with the hospital which may from time to time commend itself to the council of the Guild.
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> The Guild consists of members (men and women) who are (*a*) Patrons, invited by the Council; (*b*) Working Members elected by the Executive Committee, contributing not less than 2s. 6d. annually, and also undertaking to furnish two garments per annum for hospital use, or to pay an additional sum of 2s. 6d. in respect of each garment; and (*c*) Associates, contributing not less than 5s. annually.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons F. J. Lilly to the *Doris* and G. S. Smith to the *Blake* and subsequently to the *Empress of India*; Surgeons M. C. Langford to the *Defiance* and R R Fasson to the *Blake* and subsequently to the *Empress of India*.

ROYAL ARMY MEDICAL CORPS.

Colonel Napoleon B. Major is placed on temporary half-pay on account of ill-health. Major Charles James Addison retires from the service receiving a gratuity.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the retirement from the service of the under-mentioned officers:—Lieutenant-Colonel Richard Careless Sanders, Bengal Establishment; Lieutenant Colonel Henry David Cook, Madras Establishment; and Lieutenant Ernest Le Fevre Payne, Madras Establishment, half-pay.

VOLUNTEER CORPS.

Artillery: 1st Lincolnshire (Western Division, Royal Garrison Artillery): Surgeon-Captain T. W. J. Allen resigns his commission. *Rifle:* 14th Middlesex (Inns of Court): Arthur Maitland Ware to be Surgeon-Lieutenant.

TRANSVAAL WAR NOTES.

Civil Surgeon Stewart Kirkpatrick, R A.M C., who is ordered for duty in South Africa, sailed from Southampton in medical charge of the troops on board the *Tagus* on Nov. 27th

Lieutenant L. N. Lloyd, R.A.M.C., Civil Surgeon A. E. Robinson, Civil Surgeon E A Hauseman, Major C. E. Faunce, R.A.M.C., Captain F. J. Wade-Brown, R.A.M.C., Civil Surgeon H. Baylis, I.M.S., Civil Surgeon N B. Harman, and Civil Surgeon H. B. Maunsell have been discharged from hospital to duty.

Colonel A. W. Duke, R.A.M.C., and Major J. W. Jérome, R.A.M.C., are returning home invalided in the *Goth*.

Major W. G. A. Bedford, R A.M.C., Major J. G. Black, R.A.M.C, and Captain K. M. Cameron, R.A.M.C., are returning home invalided in the *Simla*.

ARRIVAL OF SURGEON-GENERAL W. F. STEVENSON AT NETLEY ON HIS RETURN FROM THE SEAT OF WAR.

There were great rejoicings at Netley on Nov. 24th, on the occasion of the return of Surgeon-General W. F. Stevenson from the seat of war in South Africa. Some days before his arrival the ladies of the station had formed themselves into a reception committee with a view to the decoration of the railway station and the route thence to Surgeon General Stevenson's residence. Under the guidance of the committee and with the help of the non-commissioned officers and men of the Royal Army Medical Corps, and of the coastguards and railway employés, the railway station and roadway were most tastefully and appropriately decorated. The whole of the station was hung with Union Jacks and other flags and the entrance room was adorned with banners and flowering plants, flags, and devices. Three frames were erected on which were words and mottoes picked out in green leaves on a white ground. On the arrival platform the words were "Welcome Home"; on the departure platform (Southampton) was the motto of the Royal Army Medical Corps, "In arduis fidelis"; while over the gateway leading to the Surgeon-General's house was a triumphal arch bearing the Celtic motto, "Cead mille failthe." The *Tantallon Castle*, in which Surgeon-General Stevenson travelled home, was sighted off Hurst Castle at five minutes past 12 o'clock and she arrived at the Southampton Docks soon after 2 P.M. Surgeon-General Stevenson was the first officer to land and was met by his wife and daughter and some friends. Leaving Southampton shortly before four o'clock the party travelled to Netley, and arriving there at 4.25 P.M. they were received by the whole of the staff of the Royal Victoria Hospital and of the Army Medical School, in which latter institution the welcomed officer had so long served as Professor of Military Surgery, and by a large body of the general public resident in and around Netley. Surgeon-General Stevenson was most warmly cheered, both on his stepping on to the platform from the train and on his entering the carriage to drive to his home. All the houses on the route were gay with decorations, poles and bunting having been erected and streamers placed across the roadway over head. It will be remembered that Surgeon-General (then Colonel) Stevenson left Netley on Oct 22nd, 1899, in the *Gascon* for South Africa, where, on arrival, he took over his appointment as principal medical officer of the line of communications in Cape Colony and in the Boer States and as consulting surgeon to the forces. From the time of the arrival of Lord Roberts at the front Colonel Stevenson, who was promoted by the Commander-in-Chief to be a local surgeon-general, formed one of the head-quarters staff and accompanied Lord Roberts throughout the campaign. Surgeon General Stevenson was only one day unfit for duty during the 13 months of his arduous work. The reception accorded to him at Netley on his return was a proof of the esteem and affectionate regard in which he is held by his brother-officers and by that section of the general public to which he is so well known.

THE POST OF COMMANDER-IN-CHIEF.

Sir Evelyn Wood is, in a way, filling the post of an Acting Commander-in-Chief pending the arrival of Lord Roberts, who is expected to be in England towards the end of the year. Notwithstanding that Lord Wolseley had consented at the request of the Government to remain in office as Commander-in-Chief until the end of November his retirement before the arrival of Lord Roberts in this country to take up the appointment has naturally given rise to some surprise. People are curious to know whether there is any truth in the rumoured existence of somewhat strained relations between the Horse Guards and the War Office. Although the matter is, of course, one of national interest it has nevertheless a bearing upon the medical as well as upon every other branch of the military service. Army medical organisation and the Royal Army Medical Corps will come in, too, for a good deal of consideration both inside and outside the War Office. It will be remembered that Lord George Hamilton, when speaking lately at Ealing, referred very pointedly to Lord Lansdowne, and stated that the late Minister for War had carried with him to his new office the goodwill and admiration of every one of the colleagues with whom he had been working for the past five years. "A good many of Lord Lansdowne's detractors would be shamefaced when the source of the disasters was made known. No man ever maintained a more chivalrous and magnanimous attitude than did Lord Lansdowne during the dark and dreary days of the war last year." It is easy to understand that the lines of demarcation between the functions of the civil and military branches of the War Department are not always very definitely defined but may occasionally overlap. The meeting of Parliament will be of great interest and fraught with important issues; meanwhile Mr. Brodrick is understood to be working away at his hard task of army reforms. In taking official and regretful leave of Lord Wolseley the nation does not forget the services which he has rendered. If he has never commanded a force against a European foe he has, nevertheless, been successful in the expeditions he has undertaken, has had a long and brilliant war service, and is a thorough soldier. He has, moreover, been largely instrumental in introducing some radical, far-reaching, and good changes in the army.

THE ROYAL NAVY LIST DIARY AND NAVAL HANDBOOK.

This is the fourth yearly issue of a diary and handbook which is of great use, both to naval men and others who are in any way interested in our first line of defence. The excellent diary gives a page to each day with complete schedules for recording drills and the making up of returns, while the miscellaneous information usually found in diaries is such that every officer in the Royal Navy must appreciate its value. Among this information is the following:—A Summary of the Year's Naval Progress by L. Carr Laughton; *The Navy Estimates* for 1900–1901, with full Statistical and Comparative Tables, the Naval Obituary for the Year, with the War and Meritorious Services of Deceased Officers; Tables of Tides and Tidal Constants and Monthly Astronomical Ephemeris; Original Descriptive Articles on the Tides and Terrestrial Magnetism; the Night Signals of the Principal Lines and Signals of Distress (revised to date); and List of Benevolent Funds and Institutions in connexion with the Navy. Messrs. Witherby and Co., 326, High Holborn, are the publishers, and the price is 3*s.* net.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The staff and members of the school entertained Major R. R. Sleman and Captain E. W. St. Vincent Ryan, two of the medical officers of the C.I.V., at dinner at the Florence Restaurant on Friday evening, Nov. 23rd. A large number assembled under the presidency of Brigade-Surgeon-Lieutenant-Colonel P. B Giles, V.D., senior medical officer. Two toasts only were given—"The Queen" and "Our Guests." In responding for the guests Major Sleman bore testimony to the gallantry of the C.I.V. stretcher-bearers in all the engagements in which the corps took part. At the action fought near Frederickstad on July 31st, Private C. J. Day and Private W. Shrimpton rushed forward to help a wounded yeoman in answer to an urgent message, and were both killed. Private T. Cooper at once volunteered to take their place. At the battles of Zand River and Diamond Hill the C.I.V. bearers did good work with both British and Boer wounded, and in the hospitals at Orange River and Glen they materially helped the Royal Army Medical Corps in coping with severe epidemics of enteric fever. Captain Ryan gave his experiences with the mounted infantry, and spoke of the chase after Cronje and his capture, describing also his visit to the laager to treat the Boer sick and wounded. The arrangements for the banquet were carried out by Surgeon-Captain Callender and a very enjoyable evening was spent.

ENDURANCE.

The following passage is extracted from a letter of Mr. Wilfrid Appleyard, a lieutenant in the 2nd East Surrey Regiment, now in garrison at Platrand, to his father, Mr. J. Appleyard of Park Grange, Sheffield:—

> Platrand, Transvaal, Oct. 31st, 1900
>
> ..... Yesterday we had another instance of Boer brutality and a wonderful proof of the remarkable endurance and vitality of savage races. It is not very nice family reading, but I must tell it you, as it seems to me to be such a really marvellous instance of endurance. Yesterday morning a Kaffir was admitted into our lines with his head lacerated most terribly. He actually walked into camp with a hole right through his head and his brain protruding through the wound and dried on to his forehead by the sun. He was a fearful sight, and his head was literally covered with flies. We handed him over to the doctor, to whom he afterwards stated that he had walked all the way from a Boer laager about 20 miles away. He had had a quarrel with his master, a Boer on commando, who as a punishment had broken his thumb with a sjambok and afterwards placed a revolver to the back of his head and fired a bullet through it. The native was left in a donga for dead, but after lying senseless for three days, exposed to the sun and flies by day and the cold by night, he actually walked the whole distance without food until he reached our camp. Our doctor takes it as an affront to medical knowledge that the man should be alive and has sent him to the hospital at Standerton for examination by the medical staff there.

DEATHS IN THE SERVICES.

Deputy Surgeon-General George Mackay died suddenly at his residence, 2, Learmonth-terrace, Edinburgh, on Nov. 20th, aged 88 years. In 1842 he received a commission in the Medical Department of the Honourable East India Company, and took part in the operations against the Mahrattas in 1844. In Burma in 1852 he was present at the actions which culminated in the capture of Rangoon and also at the occupation of Prome and Meaday (medal and clasp for Pegu), and was specially thanked for his services during the campaign. In 1864 he was appointed to the Military Finance Department of the Government of India. He retired in 1875.

Deputy-Surgeon-General James Carroll, on Nov. 27th, at his residence in Dublin.

THE WAR IN SOUTH AFRICA.

The daily journals have been bristling with interesting and exciting news of late in regard to the renewed activity in various directions of the scattered and disorganised Boer forces, the plot against Lord Roberts, the return of some of our troops to this country, and the presence of Mr. Kruger in France; but there is little or nothing of medical interest to be chronicled.

ROYAL LONDON OPHTHALMIC HOSPITAL. — A concert in aid of this hospital will be given at the Sandringham Club, 38 Dover-street, W., on Dec. 13th, at 3.30 P.M., arranged by Mrs. Bertram Blount. Tickets, 7*s.* 6*d.* each, or three for one guinea, can be obtained from the secretary of the club; from Mrs. Bertram Blount, 48, Bedford-gardens, W.; from Mrs. Dwelly, 18, Dawson-place, W.; or from Mrs. MacCallan, 32, Bedford-gardens, Kensington.

Correspondence.

"Audi alteram partem"

"OUR WIDOWS AND ORPHANS."

To the Editors of THE LANCET.

SIRS,—I was glad to see in THE LANCET of Nov. 17th (p. 1459) a letter from Mr. Christopher Heath pointing out the advantages of joining early in life the Society for the Relief of Widows and Orphans of Medical Men. Will you allow me, as one of the directors and therefore as being acquainted with the working of the society, to echo the president's appeal and to urge those of my younger brethren who are still at one of the London hospitals or who have recently commenced the practice of their profession somewhere within the prescribed radius of 20 miles from Charing-cross to become members? With this object I should like to mention but one out of many cases that might be quoted, and I will select the case to which Mr. Heath happened to allude in his letter. It occurred only the other day and will answer my purpose as well as any other. A medical practitioner who joined the society in 1891 died in March of the present year in Australia from the effects of an accident. His widow, who after paying all the debts found that the only provision for herself and her seven children was an insurance of £500, came home to this country not knowing what she was to do or which way to turn. The ages of the children ranged from 12 years to a few months. Knowing that her husband had subscribed to this society she made inquiries and was advised to lay her case before the directors. The facts of the case were investigated and to her surprise and joy she had allotted to her a grant for herself at the rate of £50 per annum and a grant at the rate of £10 per annum for each of the five eldest children, making a total of £100 per annum. In addition to this she will receive from the society a Christmas present of £25. The total amount her husband had paid in subscriptions was 19 guineas Could there be a more striking illustration of the benefits that may accrue from belonging to this society? The two-guinea subscription is an investment to which it would be difficult to find a rival. It ensures—and only think what a comfortable reflection this is for a beginner — substantial help for the widow and children in case of premature decease, and in the event of the subscriber being able to leave his family sufficiently well off not to need help from outside the money goes to the relief of others less fortunately situated, and the annual subscription becomes one of the most admirable and deserving forms of charity to which a medical man, as such, can be called upon to contribute—a charity in the benefits of which only the thrifty can participate.

The society is worked at an almost absurdly small expense (most of its officers, including its solicitor, being unpaid) and its invested capital amounted on May 1st, 1900, to £97,687. Its financial soundness is therefore beyond question. Last year its total receipts available for payments were £3353, and, as its expenses were considerably below £250, it was able to make grants during the year to the extent of over £3000 Anyone who is sufficiently interested to desire further information may obtain it from the secretary, Mr. J. B. Blackett, 11, Chandos-street, Cavendish-square, W., who will also be glad to furnish forms of application.

I am, Sirs, yours faithfully,
CHARLES J CULLINGWORTH.

Manchester-square, W., Nov. 26th, 1900.

EPIDEMIC PERIPHERAL NEURITIS

To the Editors of THE LANCET.

SIRS,—During the last six months I have been particularly struck with the large number of cases of alcoholic neuritis in this large Poor-law infirmary. Although there are generally a few cases in the wards (an average of 13) of late the number has been startling, and at the present time 52 cases of alcoholic peripheral neuritis are in this hospital. The large majority of the cases are amongst women and in many instances only a moderate amount of beer or porter has been taken. Careful investigation goes to show that in nearly all the cases the patients drank beer or porter and not spirits. The association of pigmentation in many cases occurring suddenly and rapidly, completely covering the whole body, the occurrence of eruptions and soreness of the eyes, pointed to the suggestion that there was some poisonous agent in the food or drink, and a new light has been thrown upon the matter by Dr. E. S. Reynolds of Manchester who has actually found arsenic in samples of beer. This short note is only intended as preliminary, and as the subject is of such great importance the cases will be published in full at some future period.

I am, Sirs, yours faithfully,

NATHAN RAW, M D. Durh., F.R.C.S. Edin,

Nov. 28th. Medical Superintendent, Mill-road Infirmary, Liverpool.

THE MEDICAL DEGREE OF THE UNIVERSITY OF BIRMINGHAM.

To the Editors of THE LANCET.

SIRS,—A paragraph in the letter of your Birmingham Correspondent in THE LANCET of Nov. 24th, p 1536, relating to degrees for practitioners, has led to a certain amount of misunderstanding. May I point out that the ordinance, of which I inclose a copy, only refers to those gentlemen who have taken out their entire course of medical study in the Birmingham School of Medicine?

I am, Sirs, yours faithfully,

BERTRAM C. A. WINDLE,

Dean of the Faculty of Medicine, University of Birmingham.

Nov. 26th, 1900.

[INCLOSURE.]

ORDINANCE CONCERNING PRIVILEGES OF PAST STUDENTS OF THE BIRMINGHAM MEDICAL SCHOOL.

That past students of the Birmingham Medical School who have taken out their whole course in Birmingham, and are duly qualified medical men, be permitted at any period during the five years commencing on the 1st of October, 1900, to present themselves for a Final Examination for the Degrees of Bachelor of Medicine and Surgery.

Subjects for examination—(*a*) *Medicine, including therapeutics; (*b*) *surgery and operative surgery; (*c*) *midwifery and gynæcology; (*d*) pathology and bacteriology, and (*e*) forensic medicine and toxicology.

* This examination will consist of three parts (1) written papers; (2) *viva voce*; and (3) clinical

Approved by the University Council, June 13th, 1900.

"THE VESTRY OF CAMBERWELL AND THE ANTITOXIN TREATMENT OF DIPHTHERIA."

To the Editors of THE LANCET.

SIRS,—As the writer of the report and circular alluded to by your correspondent "Camberwell" I could not but be aware of the possibility that a certain amount of opposition would be aroused by them. At the same time, as they received the sanction of a committee on which two medical men sat (one as chairman) I feel that the responsibility is taken off my shoulders. I may, however, ask to be allowed to state in reply to "Camberwell" that the statement that antitoxin would cure 99 per cent. of cases was limited, in express terms, to "first-day" cases, though the quotation of the whole sentence would hardly have given pith to his criticism. As regards both this statement and the one as to the duration of prophylactic effect, I may say that all the most reliable statistics confirm them both. The case-mortality appears to me abundantly to justify the supposition that the use of antitoxin is confined to a small number of practitioners, and this mortality is deliberately under-estimated in my report, so as to avoid exaggeration.

One other letter in terms similar to those of "Camberwell" has reached me, and the writer now sends me his cases. Other communications in a very different strain have also come to hand and other sanitary authorities have made inquiries as to our system with a view to its adoption in their own districts. The number of cases, moreover, sent in for examination has nearly doubled since the issue of the report and circular, so that on the whole I feel justified in believing that "Camberwell's" opinion is shared by few. That Camberwell's practice may be followed by many other boroughs is my earnest hope.

May I be allowed, in conclusion, to refer to one important point in all such arrangements? The value of the provisions is considerably lessened if they are not at all times available. This being a private laboratory, though used for municipal purposes, specimens are received and reported on practically at any time throughout the year. If arrangements for this cannot be made the service which the offer of free diagnosis is capable of rendering is greatly detracted from. A laboratory which is closed from, say, 1 P.M. on Saturday to 10 A.M. on Monday, and observes Bank and other holidays, will often not be available when its services are most needed.

I am, Sirs, yours faithfully,

EDWARD C. BOUSFIELD,

Bacteriologist for the Borough of Camberwell.

Old Kent road, S.E., Nov. 24th, 1900

MEDICAL EDUCATION.

To the Editors of THE LANCET.

SIRS,—I agree absolutely with the opinion expressed by Dr. H. E Armstrong in his letter in the *Times* of Nov. 13th. But I do not think he quite touches upon the question how this preliminary teaching of chemistry and the like can be best obtained and subsequently utilised. The council and staff of Epsom College have long held that the subjects referred to by Dr. Armstrong should be taught thoroughly as school subjects; at the same time the future student should not be allowed to specialise in science subjects until his general education has reached a certain standard and his faculties have been trained so as to be able to gain a firm hold of the elementary principles. Every student should be sent to a school where science is taught and the teaching recognised by the medical examining bodies. After he has passed through the ordinary course of study necessary for a good education he is introduced to the lecture room, the chemical laboratory, and the biological-room, and in a class of, say, 20 students each individual works under the personal superintendence of his teacher and he is taught as far as possible to get an intelligent grasp of the subjects brought before him. In fact, our plan has been to teach all the subjects required for the matriculation and preliminary scientific examinations of the University of London, and the majority of our boys pass one or both of these tests. Many have also succeeded in obtaining scholarships afterwards at Oxford or Cambridge and winning honours in the university examinations. After leaving his school or the university the student joins a hospital fitted to spend the whole of his five years' curriculum in the pursuit of those advanced subjects comprised in a sound medical education. It is common experience that the subjects taught in the smaller forms possible in a public school are better remembered and more readily available for practical use than when the individual relation of teacher and taught is lost in the larger lecture theatres of the great medical schools.

Few teachers of experience will question the statement that the results of the teaching of scientific subjects are bound to be of little use and "practically *nil*" if those subjects are taught prematurely, before the mind has been fitted to grasp their first principles, by a course of training suited to early years, or if, again, a mass of crude facts is imparted where the intelligence has not been awakened or the ground properly prepared.

I am, Sirs, yours faithfully,

C. HOLMAN,

Treasurer of Epsom College.

Nov. 27th, 1900

"THE ALLEGED EXISTENCE OF A 'FOURTH DISEASE.'"

To the Editors of THE LANCET.

SIRS,—It is certainly surprising that the alleged discovery of a new zymotic disease by a medical man of repute—a disease, too, materially affecting the diagnosis of another disease so important, from a diagnostic point of view, as scarlet fever—has called forth so little comment from epidemiologists. If Dr Clement Dukes has indeed discovered a new malady of the nature he claims, the discovery is a highly important one and deserves due recognition. If, on the other hand, as I maintain, he has only been describing under the name of a new disease three series of cases the first two of which were in reality rose-rash, and the last one scarlet fever, then it is most desirable that this should be demonstrated Otherwise confusion will be worse confounded and numerous cases of indefinite but true scarlet fever are likely to be diagnosed as "fourth disease," to the detriment of the public and the discredit of our profession. This must be my excuse for again troubling you.

The main point upon which I join issue with Dr. Dukes is as to the identity of the various epidemics which he describes. If I am right in believing that he is describing more than one disease, then Dr. Dukes's argument as to the mutual unprotectiveness of the supposed new disease with scarlet fever on the one hand and with rose-rash on the other crumbles away; indeed, his whole case may be said to do so, for it should be specially noted that he records *no single case* in which this double mutual unprotectiveness was present.

Now, what are the facts? The first series of cases, we are told, resembled rose rash and were diagnosed by Dr. Dukes himself as such. We are not vouchsafed any information as to the clinical features of this particular series, therefore it is reasonable to suppose that they resembled ordinary cases of rose-rash in appearance, had little or no pyrexia, little or no throat affection, and, most important of all, did not desquamate as we usually understand the term. The same remarks apply to those cases of the second series which were not complicated with scarlet fever. All these cases, I suggest, were really rose-rash. Now compare with these the third series (occurring in March, 1900). Here we are told that the temperature ranged up to 104·2° F., that the fauces were red and swollen, that the eruption so closely resembled scarlet fever that nine out of 10 experts could not have distinguished it, and that desquamation was profuse. These are the cases which, I suggest, were scarlet fever.

If the first series of cases at all resembled these last ones, it is surely pertinent to ask how Dr. Dukes could possibly have diagnosed them as rose-rash rather than as scarlet fever. Under all the circumstances and with the very incomplete particulars forthcoming, it appears to me quite unreasonable to expect us to believe that all the cases were one and the same disease; much less that that disease was a new and hitherto unrecognised one.

As regards Mr. R. Leslie Romer, who gives in The Lancet of Nov. 17th (p. 1459) notes of a series of eight cases resembling scarlet fever but which he has now come to the conclusion were cases of "fourth disease," he says that the chief discrepancies between his cases and those of Dr. Dukes are (*a*) the different colour of the rash and (*b*) the fact that there was no coryza or any enlargement of the post-auricular glands. He appears to have overlooked the most important discrepancy of all—viz., that whilst none of his cases desquamated all those among Dr. Dukes's cases which resembled scarlet fever did so, some of them profusely. I would suggest, therefore, that Mr. Romer's cases were "fifth disease."—I am, Sirs, yours faithfully,

Burton-on-Trent, Nov. 20th, 1900. C. Killick Millard.

"THE TREATMENT OF MALARIA BY HOMŒOPATHIC MEASURES."

To the Editors of The Lancet.

Sirs,—I thank you for your courtesy in sending me a copy of The Lancet of Nov. 24th. Your doing so seems to imply that you expect from me some notice of your editorial referring to my paper before the Chamber of Commerce.[1] If you have sent one to Mr. Jones also perhaps he will be grateful for your unsolicited advice on his business matters, though I think I know him sufficiently well to be able to tell you that he will certainly, as you anticipate, "consider your view to be based upon narrow selfishness," and not only on narrow selfishness, but on wilful prejudice and blind bigotry. I am sure he will see through the sophistry of your assertion that "there is not such a thing as a qualified homœopathic medical man." He knows that such an assertion is a falsehood. He is also aware that you yourselves know very well that the expression "homœopathic medical man" means a medical man who practises homœopathicly; and that you know that the medical men who practise homœopathicly in this country are as legally qualified as you yourselves are. He also knows that it is not true that "medical men (*sic*) cannot work with homœopaths." It is well known to be a fact that consultations frequently take place between the best of the Liverpool traditional practitioners and the homœopathic practitioners of the city. You might have spared yourselves the snarling contrast between medical men and homœopaths, because it is too transparent for Liverpool merchants not to see through.

That the editors of an old medical journal should, at the end of the nineteenth century, assert that "homœopathy is based upon theories exactly contrary to medical knowledge" shows that medical editorial interests are stronger than the interests of truth. You ought to publish this reply; but, of course, in your editorial position you can refuse a reply to your wanton attack on homœopathy and your sophistical insinuations as to the status of medical men who practise homœopathicly, but if you do, there are other channels for exposing your unfairness.

I am, Sirs, yours faithfully,

Birkenhead, Nov. 24th, 1900. John W. Hayward.

*** The prevention and treatment of tropical disease are not Mr. A. L. Jones's business matters, though his generosity and energy are being excellently employed in assisting the interests of science. We repeat that "there is not such a thing as a qualified homœopathic medical man." There is no sophistry in our words. Homœopathic practitioners obtain their qualifications in medicine and surgery, and later become homœopaths. The insinuation that the qualifications upon which homœopaths have a place upon the Medical Register have been obtained by homœopathic work is more than a sophistry—it is a dishonest pretence. Mr. Parnell was a patriot according to his convictions, the idol of his followers, and the paramour of Mrs. O'Shea. But he was not the idol of his followers because he was the paramour of Mrs. O'Shea; and homœopaths are not on the Medical Register because of their therapeutic views. We do not know what a "traditional" practitioner is, but we shall be interested to receive proof that the leading medical men in Liverpool meet homœopaths in consultation. The exposure of our unfairness, as well as further correspondence on this subject generally, must be made in the "other channels" referred to; we can give no more space to the matter.—Ed. L.

THE INCUBATION OF PLAGUE.

To the Editors of The Lancet.

Sirs,—In connexion with the incubation period of plague the following case may be of interest. On Oct. 8th the senior warder at the Brisbane General Hospital assisted the Government medical officer at two post-mortem examinations of bodies subsequently proved to have died from plague. On the morning of Oct. 11th he complained of severe headache and had to leave his duties. On Oct. 12th it was proved both by clinical and bacteriological examination that the man was suffering from plague. He has several very painful buboes in the right axilla and numerous slight abrasions on his hands.

I am, Sirs, yours faithfully,

Harold J. Hutchens,

Medical Superintendent of the Plague Hospital.

Colmslie Hospital, Bulimba, Brisbane, Oct. 13th, 1900.

"THE USE OF TOBACCO ON ACTIVE SERVICE."

To the Editors of The Lancet.

Sirs,—The annotation on the above subject which appeared in The Lancet of Nov. 10th has attracted a considerable amount of attention. It seems to have been copied rather extensively by the daily press and has been freely and, for the most part, approvingly commented upon. Of course, in all matters relating to health the nation looks to the medical profession for advice and guidance. Now, as Lord Rosebery has recently said, the stability of a great empire like ours depends above all other things upon the health of the British people. It is, therefore, a matter of extreme importance that the advice which we give on this vitally important subject should be sound and unquestionable. This necessity is of all the greater importance in the case of those on whom the nation has to depend for its protection from its enemies.

It is owing to a sense of the serious responsibility involved that I venture to suggest that the writer of the annotation referred to, through a too hasty generalisation on the one hand and by overlooking more than one important fact on the other, has been led into serious error. He wishes your readers to believe that the use of tobacco on active service is productive of important advantages. In support of this view he makes this rather sweeping declaration in regard to the war in South Africa. "Perhaps nothing that it has demonstrated has been more marked than the important part which tobacco plays in the soldier's existence." He declares that "there can be no doubt about the truth of it." Yet the sentence which follows this positive declaration furnishes one of the strongest reasons for doubting its truth. We are told that "the Duke of Wellington's armies had no tobacco worth speaking of. If they did not forbid its use, at any rate the Iron Duke's officers were directed to advise their men strongly against it." Now is it for a moment likely that in Spain, where tobacco was cheap and plentiful and therefore easily supplied, the Duke would have discontinued its use if he had not had reason to believe that the army would rather be injured than benefited by the use of tobacco? Surely in order to justify the positive declaration which he makes the writer ought to have produced facts which would place the matter beyond doubt or dispute. But this he fails to do; his declaration is based on the flimsy ground of mere hearsay. But if we do not get facts we get opinions. We are told that "it is difficult to believe that tobacco is anything but a real help to men who are suffering long labours and receiving little food, and probably the way in which it helps is by quieting cerebration, for no one doubts its sedative qualities, and thus allowing more easily sleep which is so all-important when semi-starvation has to be endured." To this it is sufficient to reply that where healthy men have undergone severe fatigue in the open-air they will speedily sink into profound repose, when the fitting time arrives, and opportunity serves, however scanty the diet may have been. Where little or no exercise has been taken there may be unquiet cerebration, and tobacco may act as a sedative, but so will a few drops of tinct. opii or liq. mur. morph. But nature's supply is better than is that of art. The worn and weary man, in Shakespeare's words, "enjoys the honey heavy dew of slumbers," and rises on the morrow, bright and buoyant, ready to face cheerfully the toil and privation he may have to meet. But the man who has meddlesomely tampered with nature's kindly process awakes imperfectly refreshed, he is depressed, and is some time before he can shake off his languor. He has in no way benefited by his smoking; "the pipe did not 'ease the way to sleep,' and the sleep of the non-smoker was not delayed by sheer bodily fatigue and mental restlessness caused by prolonged and monotonous exertion."

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[1] The Lancet, Nov. 24th, 1900, p. 1518.

Now, there are certain circumstances which your annotator has overlooked which render "the use of tobacco" very undesirable "on active service." 1. No fact is better established than that smoking is detrimental to good shooting. The best shots at Bisley are almost invariably non-smokers. 2. It is in the hours of idleness that smoking is most indulged in, and in proportion as it is indulged in the craving for it grows, so that the use in the vast majority of cases leads to the abuse. 3. The fumes of burning tobacco dry and irritate the fauces, exciting thirst, hence smoking and drinking generally are associated; discipline is in this way often infracted, and punishment frequently follows. 4. The fewer and the simpler the soldier's wants the better for his own comfort. The use of tobacco produces in the majority of cases an imperious want, and when it cannot be met the soldier is in great distress and his depression unfits him for earnest work.

I am, Sirs, yours faithfully,

Manchester, Nov. 19th, 1900. R. MARTIN.

"THE ETIOLOGY OF SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 27th there appears an open letter by Dr. Adolf Baginsky and Dr. Paul Sommerfeld supposedly in answer to an article published by me in THE LANCET of Sept. 29th. In this letter the above-mentioned gentlemen make the following statement: "Dr. Class must be ignorant of the customs of earnest Germans, and especially of our work, if he thinks that we wish to rob him of the merits of this investigation." I sincerely regret that Dr. Baginsky and Dr. Sommerfeld have misinterpreted my statements, as I did not have the slightest intention of accusing them of endeavouring to rob me of any credit, and am quite certain that if they had seen my contributions on the subject due credit would have been given by them. That they were not noticed shows, however, that Dr. Baginsky and Dr. Sommerfeld did not review American medical literature very carefully, as my work was published in the three leading American journals—namely, the *Journal of the American Medical Association*, the *Philadelphia Medical Journal*, and the *New York Medical Record*. I fully realise that it is almost impossible to review the entire medical literature of every country before publishing an article, still I believe if European investigation, especially those of continental Europe, would occasionally peruse our leading medical journals no harm would result to them beyond finding that some recent discoveries have been ante-dated by Americans. Dr. Baginsky and Dr. Sommerfeld further state in their letter that a possible point of difference between their germ and that described by me is that theirs occurs both as a diplococcus as well as a streptococcus. I am afraid that the gentlemen overlooked part of my description, as the variability in form mentioned by them was also given in my article. Before closing I wish to state that I am pleased to note that so distinguished a physician as Dr. Baginsky, whose work in pediatrics is fully recognised in this country, should have obtained results so closely agreeing with my observations. As we both have the same end in view—namely, to dispel the mystery surrounding one of the chief scourges of childhood—I can only wish him success in his further investigations.

I am, Sirs, yours faithfully,

Chicago, Nov. 18th, 1900. W. J. CLASS, M.D.

ETIOLOGY OF RHEUMATIC FEVER.

To the Editors of THE LANCET.

SIRS,—May I refer to my advertisement in THE LANCET of Nov. 17th and say that I should like a few more specimens of blood from rheumatic fever cases? In all those sent me the micrococci are present in the blood. Perhaps other members of the profession will kindly send me specimens. I am very pleased to send the cover-glasses and pay 2*s.* 6*d.* for the trouble and postage, as I am desirous of having a large number of specimens from all parts of the kingdom.—I am, Sirs, yours faithfully,

The Hall, Southwick, Brighton, Nov. 22nd, 1900. E. F. GRÜN.

DEW-PONDS.

To the Editors of THE LANCET.

SIRS,—Your annotation containing the result of experiments near the dew-ponds on the downs in THE LANCET of Oct. 13th is to me very interesting, inasmuch as the same condition appears to obtain in the Karoo veldt in the Cape Colony, and I can assure you one has plenty of time for contemplation amongst the scattered farms in the Karoo. The dams, as they are called, are quite shallow and yet retain water for long periods under a broiling sun, and this water serves for cattle, horses, goats, and Boers. I see no other explanation than that given by you.

I am, Sirs, yours faithfully,

Nov. 7th, 1900. BOER-BOK.

"ADJOURNED CORONERS' INQUESTS AND MEDICAL WITNESSES' FEES."

To the Editors of THE LANCET.

SIRS,—Section 22 of the Coroners Act, 1887, says:—

> A legally qualified medical practitioner ...... shall be entitled to receive such remuneration as follows; that is to say, (*a*) for attending to give evidence at any inquest whereat no post-mortem examination has been made by such practitioner, one guinea; and (*b*) for making a post-mortem examination of the body of the deceased, with or without an analysis of the contents of the stomach or intestines, and for attending to give evidence thereon, two guineas.

The word which to my mind settles any dispute there may be as to the effect of these two subsections is the word "and" which connects them. If it had been intended that no more than two guineas should ever become payable the two subsections would have had the word "or" between them. Moreover, it cannot be argued that the evidence which the medical man would give under subsection (*b*) is covered by subsection (*a*), as the word "thereon" clearly refers to evidence which he is in a position to give after having made the post-mortem examination.

It seems clear to me that when a medical man is summoned in the first place merely to give such evidence as he can from his observation of the deceased he comes under subsection (*a*), and if that proves insufficient and he is told to make a post-mortem examination he does so under subsection (*b*), for which he is entitled to a further two guineas, but not until he has given the evidence which he is now in possession of, as the last words of the subsection show: "and for attending to give evidence *thereon*." The space at my disposal in Messrs. Burroughs and Wellcome's Medical Diary precludes me from entering at all fully into these and similar questions, but if carefully studied I believe in most cases the information given is sufficiently accurate to enable anyone to apply the argument for themselves. The text in this particular instance is a good instance in point.

I am, Sirs, yours faithfully,

THE AUTHOR

of A Brief Abstract of the Laws particularly applicable to the Medical Profession in Messrs. Burroughs and Wellcome's Medical Diary.

Nov. 26th, 1900.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Government Resolution on the Report on Plague in Calcutta.—The Progress of the Epidemic.—The Health Officer's Report on Malaria in Bombay.

A GOVERNMENT resolution on the report on plague in Calcutta has just been published. It gives a brief *résumé* of the leading points in the report of the chairman and makes some pertinent comments on certain facts recorded. The history of plague in Calcutta is now very stale news but whereas the official record dates the first outbreak from April, 1898, it seems very probable that the disease really existed in the city in 1896. It is recognised that the high general mortality in 1898 and in the first half of 1899 indicates a larger amount of plague than was shown by the official records. Just as in Bombay there is one ward which has stood pre-eminent for the number of its cases of plague. It is almost in the centre of the northern half of the town and its condition is most insanitary. Dr. W. J. Simpson described it "as unfit for habitation and a source of danger to the town. ...... The narrow ill-ventilated streets; the passages to which neither light nor fresh air have access; the filthy condition of both; the close proximity of the houses to one another and their overcrowded state combine to form conditions which render proper sanitation impossible. It is a standing menace to the rest of the city." The resolution refers to the various changes in plague policy which have from time to time been adopted, and says of the measures employed: "Of these the principal, in fact practically the only one, generally used in Calcutta has been disinfection." The difficulty of finding living cases of plague is drawn particular attention to, as very little help has been received from outside the plague department. In the second half of 1899 only 26 patients were seen alive, and while during the height of the outbreak in 1900 there were 1409 living cases seen out of 7897 reported, this absence of living cases is again noticeable since June 30th, 1900, and the resolution suggests, by certain quoted figures of mortality, that some 470 cases ending in recovery have escaped discovery and that a certain number of deaths really due to plague have escaped record as such. It seems impossible to avoid coming to the same conclusion. The wholesale or "extra-disinfections" are referred to with great confidence Up to Sept. 8th some 42,314 rooms have been subject to this "extra-disinfection." Since that date, I am informed, as many more have been treated, and that at the present time about 10,000 rooms are being disinfected every week. How far disinfection is efficacious in preventing the spread of plague is a question, therefore, to which the ensuing season will be likely to furnish an answer. The resolution implies that the result so far "is a decided if not conclusive preponderance of evidence that disinfection when carried out on as large a scale as possible is a useful and efficacious preventive agency." The Government has come to the conclusion that "disinfection is the only preventive measure which it is practicable to work on a large scale in Calcutta." With the exception of a paragraph referring solely to 1898 there is not a word mentioned about inoculation. The report concludes with an acknowledgment of the services rendered by the plague staff and by the few native gentlemen who have given some assistance.

It is evident that Calcutta has only had one serious outbreak of plague, as the estimated mortality for the two and a half years' period of the visitation only amounts to 13,000, of which 10,000 occurred this year.

For the whole of India there has been a slight decline in the number of deaths due to plague. For the week ending Nov. 3rd 2148 deaths were returned, as compared with 2174 for the previous seven days. In the Bombay Presidency there were 1123 deaths; in the Bengal Presidency, 278; and in the Mysore State, 737. The official returns for Calcutta show almost a blank, but I am informed that the apparent extinction is due to a different method of making the returns. A considerable number of suspicious deaths which were formerly included in the totals are now omitted. In Bombay city the disease is still smouldering. In Poona there is a decline, the deaths having fallen to less than 50 a day,

According to the health officer's report, investigations have been made in Bombay upon the localities in which the anopheles mosquito can be detected. More or less every part of the city and the island shows its existence, but it has been singled out especially at Malabar Hill; in the ravine on the west side of the reservoir and in the storm-water channel; in the pools on the Chowpaty estate on the east of Malabar Hill; in the Wellington and Floral fountains of the fort; and in the Bandora slaughter-houses and the Victoria Garden fountains. Malaria is said to have been more prevalent during the past few weeks. It is noted that in one compound on Malabar Hill nearly all the servants had malaria in some form or other, while the residents of the bungalow were free. Whether malaria has been more frequent of late or not is uncertain, but since the cholera outbreak subsided there has been little indication of decline in the general mortality. This shows a slight improvement during the past week, it is true, but the death-rate continues inordinately high. The excess mortality remains unexplained.

Nov. 8th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Epidemic of Poisoning by Beer.

THE existence of what has been called the "Manchester epidemic" is by this time widely known, as it has been very generally noticed in the papers. For some months past cases of what were generally considered to be alcoholic peripheral neuritis have occurred with remarkable frequency. Dr. E. S. Reynolds has seen great numbers at the workhouse hospital at Crumpsall and also at the Royal Infirmary, and he was one of the first to recognise the fact that they differed in some ways from typical cases of peripheral neuritis due solely to alcohol. Many others have noted the unusual prevalence of these cases in different parts of the city and surrounding district. One characteristic has been the frequent pigmentation of the skin, and in commenting on a case to the students at the infirmary Dr. J. Dreschfeld discussed the possibility of its being connected with arsenic. Dr. T. N. Kelynack has been observing these supposed cases of alcoholic poisoning for some time at the Pendleton branch of the Salford Royal Hospital and also at the Manchester Infirmary, and for the greater part of last week he was making investigations as to their cause in conjunction with Dr. R. Forsyth, medical officer to a large firm of brewers, and Mr. Kirkby, F.L.S., of the Pharmaceutical Department of Owens College. Arsenic was found by them in the beer, not from one, but from several breweries, confirming the results obtained by Dr. Reynolds and also by Professor Dixon Mann. Mr. C. H. Tattersall has also been making researches into the matter, and has sent various samples of beer to Professor Sheridan Delépine who found arsenic in them in considerable quantity. There seems to be no doubt that the source of the arsenic was the crude sulphuric acid used in the production of "invert" sugar supplied to certain manufacturers of cheap beer.

Manchester and Salford Sanitary Association.

At the meeting of the committee of the Manchester and Salford Sanitary Association held on Nov. 21st Professor Dixon Mann in the chair, Dr. F. J. H. Coutts was appointed medical honorary secretary in place of Dr. R. T. Williamson, resigned. At the request of the committee Mr. William Thomson undertook an investigation into the subject of lead-poisoning. He also presented a supplementary report on the recent cases of lamp explosion in Manchester and Salford He described the burners of the lamps and the flash-point of the oils used in them, five of the latter being of the Russian type and one of the American type "There had not yet been traced any explosion with an oil having a flash at or above 100° F." (!) The American type of oils, he explained, were those having flash-points between 73° and 79°, the Russian had the flash-point lying between 84° and 89°, while in the Scotch type it was at or above 100°, but that a certain American oil had also a flash-point of 100° or upwards.

The Lewis Epileptic Colony.

The David Lewis trustees have given nearly £100,000 for the establishment of an epileptic colony in Cheshire. A site has been obtained at Warford, between Knutsford and Chelford, where about 400 acres have been purchased. The patients will live in detached two-storey buildings, accommodating 20 or 24 inmates. The whole equipment, including an infirmary, recreation hall, administrative block, &c., will be on a liberal scale. Most of the food will be grown on the farm, and healthy occupation will be found for the patients.

Nov. 27th

SCOTLAND.

(From our own Correspondents.)

Dinner to the Edinburgh South African Hospital Staff.

On the evening of Nov. 23rd the members of the Edinburgh and East of Scotland Hospital staff were entertained to dinner in the Imperial Hotel by the Edinburgh Company of the Volunteer Medical Staff Corps. Surgeon-Captain Hepburn presided, and he was supported by Colonel Rooney, R.A.M.C., principal medical officer for Scotland; Surgeon-Captain Wallace, who was in charge of the hospital at Norval's Pont; Captain M'Intyre, and Mr. Hepburn. After the toast of "The Queen and Royal Family" had been honoured the chairman proposed "The Navy, Army, and Reserve Forces," and Colonel Rooney replied. The toast of "The Edinburgh South African Hospital" was then given by the chairman and was acknowledged by Mr. Wallace. Captain Erskine subsequently proposed the toast of "The Edinburgh Company." The members of the hospital staff have returned in good health, looking all the better for their South African experiences.

Edinburgh Royal Infirmary.

At a meeting of the managers of the Edinburgh Royal Infirmary on Nov. 19th the board, on the motion of Sir Andrew Macdonald, resolved to communicate with the Members of Parliament for the city, the county, and Leith, asking them to do all they could to support the Bill for exempting hospitals from local taxation The infirmary at present pays £300 in taxes.

Pharmaceutical Society of Great Britain.

The first evening meeting of the North British Branch of the Pharmaceutical Society of Great Britain was held on Nov. 23rd. Professor J. Arthur Thomson, Aberdeen University, gave the inaugural sessional address on "Medical Aspects of Natural History."

University of Edinburgh Preliminary Examination.

At the October preliminary examination in the Faculty of Medicine of the University of Edinburgh 128 candidates appeared for examination, of whom 13 were women. A large number of first-year students, however, are exempted from the preliminary examination by holding leaving certificates. The total number of first-year students of medicine, including extra-academical graduation women students, is 248.

St. Andrews Ambulance Association.

The annual meeting of the subscribers to the Edinburgh branch of the St. Andrews Ambulance Association was held on Nov. 22nd. In moving the adoption of the report Dr. P. A. Young, who presided, referred to the loss sustained by the association in the death of Professor Armstrong. Referring to the work of the past year, he said that the most important work had been the establishment and maintenance in South Africa of the Scottish National Red Cross Hospital. Between £40,000 and £50,000 had been subscribed for this scheme, and a hospital of 500 beds had been sent out which had won great praise from military men in South Africa With regard to the ordinary work of the association, it was worthy of notice that there had been a great increase in the number of removals by the wagons of the association. In the past year there had been an increase of 254 removals over the preceding year. He hoped that there would be an increase of contributions to enable them to keep up their work on the present scale.

Death of Deputy Surgeon-General Mackay.

Deputy Surgeon General George Mackay, M.D. Edin., J.P., died at his residence in Edinburgh on Nov 20th. Deceased was the eldest son of the late Major Donald Mackay, of the 70th Foot and grandson of Colonel George Mackay, of Boghouse, Sutherlandshire. He was born in 1820 and in 1841 took the degree of M.D. at the University of Edinburgh, when he also became a Licentiate of the Royal College of Surgeons of Edinburgh. In 1842 he received a commission in the medical department of the Honourable East India Company's service. He took part in the operations against the Mahrattas in 1844. He was in active service in Burmah in 1852 and received the medal and clasp for Pegu. After the war he returned to Madras and officiated as civil surgeon, first at Coimbatore and later at Ootacamund. In 1854 he was promoted to the rank of surgeon-major and was transferred to the Military Finance Department as examiner of medical accounts. Subsequently to this he became secretary to the Madras Medical Fund and the Military Fund. He retired from the service in 1875. He is survived by his widow, three sons and three daughters.

New Veterinary College.

Professor W. Owen Williams has succeeded his father as principal of the New Veterinary College, Edinburgh.

University of Aberdeen.

All the property needed for the erection of the new Greyfriars Church having now been acquired, Mr. A. Marshall Mackenzie, A.R S A., Aberdeen, has been appointed to prepare plans for the new building, and it is understood that an ornate front for Marischal College extension is being kept in view in prospect of the removal of the old church and other buildings in the Broad street front.—The University Court have declined to make any alteration in the arrangement as to matriculation fees.—The Students' Representative Council has received a letter from Mr. J. E. Crombie, Lord Rector's assessor at the University Court, promising to further the erection of a gymnasium for the University.

Aberdeen Royal Infirmary.

Dr. Robert John Garden having resigned his post as senior surgeon Dr. John Marnoch has been appointed one of the the surgeons, and applicants for the vacancy in the assistant surgeonship caused by Dr Marnoch's promotion will be advertised for. The employés of the municipal corporation still refuse to contribute systematically to the infirmary, but another effort is to be made to get them to reconsider their position.

Nov. 28th

IRELAND.

(From our own Correspondents.)

The Banquet at the Royal College of Surgeons in Ireland.

The welcome-home dinner given by the Royal College of Surgeons in Ireland to the medical staff of the Irish Hospital recently returned from South Africa took place on Nov. 24th and was a very great success. Between the Fellows of the College and their guests about 150 were present, including his Excellency the Lord Lieutenant of Ireland, the Lord Chancellor of Ireland, the Right Hon. G. Wyndham, M P., Chief Secretary for Ireland, Lord Iveagh, M.P., the Right Hon. the Attorney-General, M.P., and Lord Plunket. The President of the College, Dr. Thomas Myles, occupied the chair, and after the health of Her Majesty the Queen was duly honoured he mentioned that His Royal Highness the Duke of Connaught had authorised him to state that he much regretted to find that he was unable to attend on account of another engagement Lord Cadogan, though still suffering from the effects of his recent accident and obliged to walk with the assistance of two sticks, delivered a most interesting and admirable speech after he had read with dramatic effect a telegram of congratulation and of welcome to Sir William Thomson and his staff from Her Majesty the Queen.

Death of Dr. Francis J. B Quinlan.

A brief notice appeared in THE LANCET of Nov. 17th, p. 1465, of the death of Dr. Francis J. B. Quinlan, who was known for many years in Dublin as physician, medical teacher, examiner, and professor. His funeral, which took place on Nov. 12th, was largely attended by his brother Fellows of the Royal College of Physicians of Ireland and by a representative gathering of the medical profession generally. Some 15 years ago he was much engaged in private practice, but being from the money point of view independent he gradually gave up the occupation of a popular physician in order to devote all his energies to the teaching of his favourite subjects—materia medica and therapeutics. Since the foundation of the Royal University of Ireland he was the Dublin examiner in those subjects there, while he also held for years the post of examiner for the Conjoint Board of the Royal College of Physicians of Ireland and of the Royal College of Surgeons in Ireland. He was, in point of fact, for years the most eminent and widely known teacher in Ireland in the subject which he had made his own. For the last quarter of a century he filled the office of professor of materia medica at the Catholic University Medical School, while to all students of that school, as well as to those of the Royal College of Physicians of Ireland and the Royal College of Surgeons in Ireland, and also to those of the Royal University of Ireland he was well known as an examiner. From his position as a professor and teacher during so many years his personality was familiar to crowds of students of medicine now in practice and to readers of THE LANCET all over the world. They will recognise the void which his rather sudden death has left in the ranks of the lecturing and teaching medical professors of Dublin. Like his father, who was a well-known citizen of Dublin and editor of a daily journal Dr. Quinlan possessed much literary ability and he frequently contributed admirable articles on Public Health and Hygiene to the *Irish Times* as well as to the medical journals. Although he was a prominent professor in the medical school of the Catholic University, Dr. Quinlan was always in politics a strong Unionist, a consistent Conservative, and an active member of the Senate of the University of Dublin. He had passed his seventh decade, but up to the last few weeks was a most energetic and effective lecturer and teacher. His rather sudden breakdown in health and subsequent death was thus a disagreeable surprise to his wide circle of friends.

Nov. 28th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Mercantile Marine Medical Officers.

A DISPUTE arose recently between the medical officers of the mercantile marine and the head of the Sanitary Department of Marseilles. The former are employed by the great steamboat companies and travel on their boats; the Sanitary Department is an official body connected with the Public Health Department and consequently is under the Minister of the Interior. The ships' medical officers have charge of the passengers and crew and attend them when they are ill during the voyage They must also on the arrival of a ship in port hand in a statement as to the health of the ship. None the less, however, the port medical officer makes an official visit and he alone decides as to what, if any, measures of disinfection have to be taken with regard to passengers, crew, cargo, or boat This independence of the two services is absolutely necessary, for the ship's medical officer, who is in the employ of the company, is liable to lose his place if he shows himself too severe or inflicts losses on the company by keeping the ship at a loss in quarantine. On the other hand, the port medical officer, whose duty it is to inspect steamers, often carrying from 700 to 800 souls, is very wide awake to the enormous responsibility which devolves upon him if he lets pass one single case which may become the focus of an epidemic, and is consequently liable to be over-exacting. Hence arises friction which recently culminated in actual conflict. The Maritime Medical Society at a recent meeting passed a resolution, which was published in the press, that its members had decided to have nothing more to do with the port sanitary authorities at Marseilles and they also protested against the little regard shown to themselves by the sanitary authorities who looked upon them with suspicion. They also protested against the very insufficient measures of disinfection which are taken at the sanitary station of Frioul in the case of ships coming from infected ports. They instanced the case of a steamer from Senegal, one of the officers of which, who had been confined in the sanitary station at Frioul, escaped during the night with the complicity of the sentry and was out for several hours. This protestation, which is somewhat contradictory in that at the same time it complains of over-strictness as regards certificates and of laxity as regards the disinfection of ships, has called forth an answer in the form of a letter from the chief of the Sanitary Department to the Minister of the Interior, but it seems likely that matters will quiet down. Certainly the port sanitary authorities should pay every attention to the certificates given by ships' medical officers; but, on the other hand, there have been too many instances in which these officers have shown regrettable laxity in the interests of their company, from fear of losing their posts. The remedy would seem to be that the ships' medical officers should be independent of the companies in whose service they are and should be appointed by the State, as are the inspectors of sugar refineries, petroleum distilleries, and other industrial establishments which inspectors have to watch in the interests of the public purse, but where, nevertheless, the owners have to pay the inspectors.

Military Service for Medical Students.

The position of medical students in France from the point of view of military service has for a long time past given rise to criticism. Formerly, when the "voluntary year" of service existed they did very well on the whole. They were allowed, on payment of 1500 francs, to serve for only one year instead of for five years, as all other classes of Frenchmen between the ages of 20 and 25 years had to do except in a few cases, such as the son of a widow. Between the ages of 25 and 45 years they were enrolled, as all other soldiers, in the army of the reserve, and after that in the territorial army, which is never called up except in case of war, save only for the manœuvres. As for the year passed in barracks medical students were, as a rule, if they wished it, attached to a regiment of hospital orderlies as simple privates. In the army of the reserve and in the territorial army they ranked as assistant surgeons (*médecins auxiliaires*)—that is to say, as non-commissioned officers, and once they had taken the degree of doctor they ranked as *médecins aides-majors*—namely, as officers, and in the event of war had to do the same work as regular military surgeons. Under these conditions it was only to be expected that the year passed in barracks would have been devoted to instructing the student in the work which he might have to do as a *médecin aide-major*, including besides purely professional and administrative details such as the organisation of hospitals. What happened, however, was the exact contrary. The student received no instruction on these matters, but was treated as an ordinary private, no difference being made between him and a peasant who was probably destined to be never anything more than a simple orderly. When, moreover, men had to be chosen from among these orderlies for work in military hospitals the ordinary private was always chosen in preference to the medical student, who was kept at work in the barracks sweeping out courtyards, washing vegetables, or being employed on sentry-go and picket duty. The majority of medical men in Paris at the present time have passed through a "voluntary year" of this kind. The fact, however, is capable of explanation up to a certain point, for it was necessary that orderlies should have some instruction in their duties, however humble, as regards the sick, for the medical student during war-time would not be acting as an orderly but as a surgeon. But the medical student should certainly have been instructed during his year of service in his possible future duties as regards ambulance work and the like. This instruction was only given during the period of the manœuvres, which lasted too short a time to make the instruction really of use. The recruiting law of 1889 brought no real change. True, the "voluntary year" was abolished and the term of compulsory service was reduced from five years to three; medical students in common with those of other liberal professions passed only one year in barracks, but they had to be fully qualified by the age of 26 years. If they were not, they had to complete the remaining two years of military service, so that the only way in which the medical student benefited by the law of 1889 was that he no longer had to pay the 1500 francs for the privilege of only serving one year. As to his work during this year, the most diverse regulations existed in different regiments. Some students were attached to an orderly regiment and kept at work in barracks, some passed six months as hospital orderlies and some were attached to an ordinary regiment and were treated exactly like ordinary privates. In what way the student was employed rested very much with the colonel of the regiment. To remedy these defects two propositions have just been laid before the Chamber—one by M. Lachaud, providing that all medical students should be considered as real *médecins auxiliaires* from the time of their joining the regiment after a very short course of military instruction. The other, presented by M. Astier, goes further and suggests that service for one year should be done away with, for he considers, with a certain amount of reason, that to this is due the overplus of medical men. For the one year's service instead of three attracts a great number of young men to enter the medical profession. The Government has, however, issued a decree which closely approaches the proposal formulated by M. Lachaud. Medical students will continue to put in only one year of military service, but after six weeks' military instruction they will be employed as *médecins auxiliaires.* This solution of the difficulty, which is generally regarded as satisfactory, is partly owing to the fact that the army is very short of medical men. The authorities do not want to increase the number at present on account of expense, neither do the present military surgeons want their numbers increased, for promotion is slow enough as it is However, the new regulation pleases nearly everyone. The number of *médecins militaires* will be greatly increased even on a peace footing without extra expense, and the students will still have to serve only one year, and that under more agreeable circumstances than formerly, and will receive more thorough instruction as to their possible duties in time of war. There is one defect in the regulation and that is that no mention is made as to when in his medical course the student is to serve his year. Most students will certainly try to get it over as soon as possible—that is to say, at the beginning of their medical course. They will therefore give their military service at a time when they have had practically no medical instruction whatever and so will be of very little use. It would have been much better if the year of service had been made compulsory at the end of the medical curriculum when the student could have rendered service both to the army and to his profession. The young medical man should certainly be sent for his year to a provincial garrison, and thus the overcrowding of the great centres with medical men would be avoided.

Obituary.

The death of Professor Ollier at Lyons is announced. He was in his seventieth year and was professor of clinical surgery at the Faculty of Lyons, a corresponding member of the Institute, and Commander of the Legion of Honour. He was well-known by his work on resections of bones and joints. It was he who attended President Carnot after he received the knife-blow which proved fatal. Professor Ollier was made honorary Fellow of the Royal College of Surgeons of England at the recent centenary.

Nov. 27th

Obituary.

RICHARD NEALE, M.D. LOND., M.R.C.S. ENG., L.S.A.

DR. RICHARD NEALE, who died on Nov. 22nd at the age of 73 years, was a great benefactor to the medical profession by reason of his having inaugurated and conducted the well-known "Medical Digest" He received his medical education at University College Hospital He took an interest in the purification of air by chemical means and was the inventor of an apparatus which he wished to be tried upon the Underground Railway for this purpose. The apparatus was described in THE LANCET of August 1st (p 301) and 8th (p. 359), 1880, but we do not think that it ever came into practical use. Dr. Neale's life-work, however, was the "Medical Digest," a work of incomparable usefulness. The latest edition contains references to the most important British medical periodicals from 1840 to the beginning of 1899. We can say for ourselves that we have rarely, if ever, known the "Digest" to fail in giving the information which we have sought in its pages, and our frequent quotations from it for the benefit of our readers show its worth. We have often wondered why correspondents write to us asking us questions, the exact answers to which will be found in so well-known a volume. In an out-of-the-way part of the country we can understand the practitioner deciding that the possession of an index to literature which he cannot consult is of no practical use to him; but where files and bound volumes of all good medical periodicals can be perused—as obtains in every big town in the land—no medical man will regret the purchase of a "Digest." Armed with it he is master of all possible information on medical periodical literature. Although the price of the book (25*s.* 6*d*) seemed high Dr. Neale made nothing by its sale, and yet he worked at it for four hours a day during 50 years. In recognition of his unselfish labours a testimonial was set on foot, being the outcome of an appeal signed by leading members of the profession which appeared in THE LANCET of Feb. 10th, 1900 (p. 420), and a list of subscriptions received appeared in THE LANCET of May 5th last, (p. 1335). It is most earnestly to be hoped that some one will be found who will take up the work which Dr. Neale can no longer carry on, for it would be a thousand pities if such a useful compilation were to come to an end.

JOSEPH MORTIMER GRANVILLE, M.D. ST. AND., M.R.C.P. LOND., M.R.C.S. ENG.

WE regret to have to record the death of Dr. Joseph Mortimer Granville which took place on Nov. 23rd at 7, Queen Anne-street, Cavendish-square. Dr. Mortimer Granville was 67 years of age at the time of his decease. He was at one time associated—in the capacity of editor, we believe—with the *Globe* and subsequently was connected with this journal, having been many years ago a member of the staff of THE LANCET. Dr. Mortimer Granville had many marked qualifications as a journalist which had been cultivated and developed by much literary work in that capacity. He was a voluminous reader and had an alert and retentive memory. He possessed an easy and facile style and considerable power of rapid and varied composition. Combined with this he had a fresh and novel way of viewing a great variety of subjects which came within his purview. He was rather to be regarded as a conversationalist with a pen in his hand than as a patient, clear, and accurate thinker, but if his mental promptitude was occasionally wont to capture his judgment he was, nevertheless, often able to prick his readers' ears with an apparent paradox or impart some fresh and suggestive view to their minds. It was more particularly in writing upon current events of a socio-medical, clinical, or mixed character and of a more or less ephemeral interest, where he could rapidly focus the results of his previous reading or those derived from an unconscious exercise of memory, and mingle them with his own ideas, that Dr. Mortimer Granville was at his journalistic best. We do not think that, notwithstanding his undoubted ability, his friends and admirers would claim for him that he was to be ranked as a scientific type of worker. Having ceased connexion with this journal he continued to practise in London as a physician and wrote much on various subjects of a more or less professional character, especially in regard to gout, on which, it is needless to add, he entertained very different views to those held by medical authorities generally. He published various small treatises of a popular sort which displayed his talent for shrewd, if superficial, observation Among these may be mentioned "Minds and Moods," "Sleep and Sleeplessness," "The Secret of a Clear Head," and "The Secret of a Good Memory," all of which were designed to popularise knowledge of common psychological phenomena. His interest in mental problems was undoubtedly stimulated by work which he had done in our columns when making as our Commission certain inquiries into the care of the insane The results of the investigations which he then undertook were afterwards published under his name with the title "The Care and Cure of the Insane," and they constitute his only work upon mental disease and allied subjects having any pretence to scientific scope. He also wrote largely upon gout, and invented various small instruments, such as surface and differential thermometers, designed for medical use. Dr. Mortimer Granville became M.R.C.S. Eng. in 1856, M.D.

St. And. in 1876, and M.R.C.P. Lond. in 1883, and was a member of several societies.

ROGER EDWARDS, M.D. DURH., L.R.C.P. LOND., M.R.C.S. ENG.

DR. ROGER EDWARDS died at his residence, Colwyn Bay, North Wales, on Nov. 21st, in his fifty-first year. Dr. Edwards, who was born at Dolgelly, received his medical education at University College Hospital, London, and qualified L.R.C.P. Lond. and M.R.C.S. Eng. in 1875 and in 1896 he graduated M.D. of Durham University. After holding resident appointments at University College Hospital and the Royal Free Hospital Dr. Edwards settled at Llanfyllin, Montgomeryshire, where he soon established an extensive practice. The deceased was formerly medical officer of health for the Bala Urban District Council. He took a great interest in municipal matters and was several times re-elected mayor of Llanfyllin. Dr. Edwards was also a member of the Montgomeryshire County Council and chairman of the county governing body.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Edward R. Squibb, a well-known pharmacologist. He had in early life been in medical practice. His "Ephemeris of Materia Medica" is well known.—Dr. Karl Georg Gaedeken, Professor of Medicine, Hygiene, and Mental Diseases in the University of Copenhagen.—Dr. Hugo Bergeat, a well-known Munich laryngologist.—Dr. George Stetter, Professor in the University of Königsberg. He was chiefly known by his writings on fractures and dislocations. He was 52 years of age.—Dr. Antonio Ferreira França, formerly Professor of External Pathology in the University of Rio de Janeiro.—Dr. Moses White, formerly Professor of Pathological Anatomy in Yale.—Dr. F. Acconci, Professor of Gynæcology in the Medical School of Genoa.

THE ANNUAL DINNER OF THE BRISTOL MEDICAL STUDENTS.—On Nov. 22nd, the Bristol medical students held their annual dinner under the presidency of Dr. Shingleton Smith, at which Sir William Broadbent was the guest of the evening. About 110 gentlemen were present, including for the most part past and present students and local practitioners. After dinner the president proposed the first toast, that of "The Queen and Royal Family," and reminded his hearers that it was only just over a year since Her Majesty had so graciously come down to open the Bristol Convalescent Home. After a verse of "God save the Queen" the guest's health was drunk with musical honours. Sir William Broadbent responded in a few words. Mr. C. E. S. Flemming then proposed "The Army, Navy, and Auxiliary Forces," and Surgeon-Major D. S. Davies replied. Sir William Broadbent then rose to propose the "Health of the Bristol Medical School" and said that he felt that the chief right he had in proposing this toast was that he felt so much sympathy with it and that he wished well for the school. He had constantly heard of the Bristol Medical School throughout his life, and he thought that its incorporation with University College was but a stepping-stone to a Bristol University. He said he thought that the clinical practices of the Bristol Royal Infirmary, the Bristol General Hospital, the Eye Hospital, and the Children's Hospital, which were all open to students, combined to form a field for clinical work and observation which would make such an institution a formidable competitor in the teaching world of medicine and might even, he thought, attract students from London. In conclusion, he said that he wished success to the faculty, to the students, and to the medical school. Dr. Markham Skerritt, who replied for the Bristol Medical School, said that he hoped in regard to a university that they would follow in the steps of the inhabitants of Birmingham, who had taken time by the forelock and had constituted their university at a time when a race had not arisen which "knew not Joseph." He thanked Sir William Broadbent for coming among them and speaking in such kind terms of University College. Dr. A Ogilvy then proposed the toast of the "Past and Present Students" and Dr. Weatherly and Mr. Corfield replied. This was followed by the toast of "The President," proposed by Dr. Doyne, and to this Dr. Shingleton Smith replied. The toasts were interspersed with music and songs, and on the whole this was one of the most successful dinners that has yet taken place.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE seventieth session of the General Council of Medical Education and Registration was opened on Tuesday, Nov. 27th, the President, Sir William Turner, being in the chair. The programme of this session, it was expected, would be got through by Saturday (to-day), and there are financial reasons for curtailing the sessions of the Council. This forecast, however, is already discredited, for the Council has fixed the hearing of a very important case of a disciplinary character for Monday, Dec. 3rd. It looks as if the adjustment of the expenditure and income of the Council will have to be secured by other means than by reduction in the number of days of the sessions.

The members of the Council arrived in due time and in full force, including Sir William Thomson of Dublin, to whose services in South Africa the President made an eloquent allusion which was heartily cheered by the Council. The three new members—Professor B. C. A. Windle, representing the University of Birmingham; Professor Charles Bent Ball, the Royal College of Surgeons in Ireland; and Professor Alfred Harry Young, the Council of the Victoria University—were duly introduced. The resignation of Sir Philip Smyly created a vacancy in the Executive Committee to fill which the Council elected Sir Christopher Nixon.

The address of the President consisted largely of highly appreciative notices of the late Sir Henry Acland, Dr. Dennis Embleton, and Professor D. J. Leech. The two former were among the original members of the Council; and few members have been more regretted than Professor Leech, whose services, especially in the matter of the Pharmacopœia, were most valuable. Sir William Turner touched with much judgment and good taste on the thorny subject of the right of the Council to "approve" the institutions, schools especially, whose examinations in chemistry, physics, and biology are accepted by the Royal Colleges of England, and drew forth the applause of the Council when he expressed the hope that differences between the Colleges and the Council would be settled without a breach of that good understanding which had done so much for medical education in the past.

A highly interesting communication transmitted from the Foreign Office was read from Mr. William Wyndham, Her Britannic Majesty's Consul at Chicago, with reference to a bogus diploma mill in that city. Mr. Wyndham stated that an Englishman named Allan Fisher is selling in England the medical degrees of the People's Institute, an association which has been raided by the Chicago police as fraudulent. Mr. Wyndham gave the names of certain persons known to have purchased these sham medical degrees, and we are glad to believe none of the persons are on the Medical Register.

The proceedings on Wednesday afternoon formed an illustration of a way that the Council has of raising again and again the same question, and of devoting hours to the discussion of it, only to arrive at an infinitesimal change of result in no way justifying the expenditure of the Council's time and money. If there was one thing which the Council had discussed thoroughly, it was the question of the curriculum and the examinations for diplomas of Public Health. The subject was dealt with by Sir John Simon before he left the Council, and his voice was most influential in such matters. His interest in that subject was great for two reasons—first, the intrinsic importance of it; and, secondly, and more particularly, because the Medical Act of 1886 had given to the General Medical Council much responsibility in the matter, providing that the registration of any diploma in sanitary science shall be dependent on the discretion of the Council. But two years ago Sir William Gairdner called attention to apparent diversities of interpretation of the Council's regulations concerning diplomas in Public Health that prevailed in different localities, with the result that the Public Health Committee was instructed to inquire into the matter. This committee presented on Wednesday a lengthy report, to which we refer our readers. Sir John Batty Tuke moved, as an amendment to the formal motion of Mr. Teale that his committee's report should be received and entered on the minutes, that the report be re-committed, on the ground that the Council, if it followed the recommendation of the committee, would be lowering the status of the diplomas. The amendment was lost and the report was debated at length by the Council in committee without any appreciable alteration being effected in existing regulations.

TUESDAY, NOV. 27TH.

The seventieth session of the General Council of Medical Education and Registration was opened to-day, the place of meeting being the hall of the Council in Oxford-street, London. The President, Sir WILLIAM TURNER, occupied the chair.

Introduction of New Members.

This was the first business of the session. There were three Members to introduce. Dr. MacAlister introduced Dr. Bertram C. A. Windle, the first representative of the University of Birmingham; Dr. Bennett introduced Dr. Charles Bent Ball, the successor of Sir Philip Smyly in the representation of the Royal College of Surgeons in Ireland; and Sir Dyce Duckworth introduced Professor Alfred Harry Young, who succeeds the late Dr. Leech in the representation of the Victoria University.

Presidential Address.

The PRESIDENT then delivered his address.

The Deaths of Sir Henry Acland, Dr. Leech, and Dr. Embleton.

The PRESIDENT said that he would be wanting in respect to the memory of one of the most eminent of his predecessors if he were to open the present session without referring to the death, a little more than a month ago, of one who for 13 years occupied the presidential chair of that Council. Sir Henry W. Acland was chosen by the University of Oxford as its representative when the Council was formed in 1858, and he and Dr. Dennis Embleton, whose death was announced a few days ago, were the last of the eminent men who constituted the first Council of Medical Education and Registration. At Oxford Sir Henry Acland was prominent in the establishment of the museum as a great centre of scientific training, in the extension of the Professoriate, and in the encouragement of scientific studies as avenues to obtaining degrees in Arts and Medicine. During 29 years he sat in this Council as one of its members. Dignified in presence, courteous in manner, graceful in speech, he brought to bear on the consideration of their business a cultivated and reflective mind. His life and environment led him fully to appreciate the position of medicine as one of the learned professions, and that the special technical training necessary for its efficient practice should be based on a sound general and scientific education. His academic and social position and the innate nobility of his nature had from an early period of his life gained for him the friendship and confidence of the leaders of the medical profession, of statesmen of both parties, and others eminent in public life, and contributed in no small measure to insure the Council's harmonious relations with the departments of Government with which it was officially brought into communication. To the late Dr. Leech the Council was greatly indebted for skilful guidance in the preparation of the last edition of the Pharmacopœia, and of the Indian and Colonial supplement, with the latter of which he was engaged almost to the end. Dr. Leech had bequeathed to the Council for its library a valuable collection of Pharmacopœias and other volumes bearing on his special subject. The Victoria University had chosen as his successor Professor A. H. Young, M.B. Edin., of the Owens College. Sir Philip Smyly had resigned his seat as the representative of the Royal College of Surgeons in Ireland and the College had elected Dr. Charles Bent Ball.

University of Birmingham.

"On May 25th of this year," the President continued, "an Act passed the Legislature granting to the University of Birmingham, which had been established by Royal Charter on March 24th, the power to hold qualifying examinations in medicine, surgery, and midwifery, for the purpose of registration under the Medical Acts, as if it had been a University in the United Kingdom legally qualified at the date of the Medical Act, 1886, to grant diplomas in medicine and surgery. The Council of the University also became entitled to choose one representative to be a member of the General Medical Council as if that University had been included in Section 7 of the Medical Act, 1886. On June 20th of this year I received official intimation of the passing of the Act and requested the Registrar, as soon as copies could be obtained, to forward one to each member of the Council. Section 2 provided that the Act was to come into operation on Oct. 1st, and on Oct. 4th the Vice-Chancellor intimated that Dr. Bertram C. A. Windle had been chosen as the representative of the University of Birmingham. This Act of the Legislature has given an additional member to the Council, and in choosing Dr. Windle the University has selected a member who has long been engaged in medical education, on the details of which he can speak from personal knowledge and experience.

Bills in Parliament.

During the last session of Parliament three Bills were before the House of Commons on subjects in which the Council was interested. A Bill for obtaining additional penal and disciplinary powers over registered medical practitioners was read a first time, but as it was introduced late in the session it made no progress. I propose to make arrangements for the introduction of the Bill as soon as Parliament meets for the transaction of general business. In the Companies Acts Amendment Bill Clause 3 made it unlawful for a company to carry on the profession or business of a physician, surgeon, dentist, or midwife. The Bill passed the second reading and subsequent stages, but the clause appertaining to the medical profession was struck out in the committee of the House of Commons. The Midwives Bill, to the consideration of which the Council had devoted much attention and which was partially debated in the Commons, became a dropped measure.

The Royal Colleges of Physicians and Surgeons in London.

On the last day of the May session I undertook to obtain the opinion of our legal advisers on the legal questions raised in the report of the Education Committee on the subject in dispute between the Council and the Royal Colleges of Physicians and Surgeons in London, and the representatives of those Colleges promised to endeavour to obtain certain additional information bearing on the question. Through these gentlemen and the courtesy of the President of the Royal College of Physicians the opportunity was given to me to bring the case, drawn on behalf of that College, and the opinion of their counsel thereon, before Mr. Muir Mackenzie, along with the resolutions of the Council and the reports of the Education Committee. These papers have been considered by our counsel during the recess and he has written his opinion which, as a confidential document, will be placed in the hands of members of Council.

The Apothecaries' Hall, Dublin.

Intimation has been given to the Council that the Examining Board in Ireland, formed by the combination of the Royal College of Surgeons and the Apothecaries' Hall, has been dissolved. The Examination Committee will report on inspections of the Third and Final Professional Examinations of the Apothecaries' Hall, Dublin. Dr. G. A. Gibson, who has acted as the Council's inspector of the examinations of this body for two years, has intimated to me his resignation. As he has discharged his duties with great care and judgment the Council will, I hope, give me authority to express our thanks to him for his services."

Dr. MACALISTER moved that the Council thank the President for his address and request him to allow its being printed in the minutes, and in doing so he said he desired to associate himself very warmly with all that Sir William Turner had said about their late colleague, Dr. Leech.

Mr. BRYANT seconded the motion, which was at once agreed to by the Council.

The Service Examination Results.

The REGISTRAR (Mr. H. E. ALLEN) presented two tables, one showing the results of the competition held on July 27th for commissions in the medical staff of the Royal Navy and the other showing those of the competition held in August for commissions in the medical staff of the Army.

Dr HERON WATSON, seconded by Sir DYCE DUCKWORTH, moved:—

> That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy and to the Director-General of the Army Medical Service for the returns which they have respectively again furnished to the Council, with the request that these returns may in the future continue to be furnished to the General Medical Council.

This motion was agreed to.

Dr. BRUCE moved that the tables be referred to the Examination Committee for their consideration. These tables, he said, contained valuable matter and were not in his opinion sufficiently considered.

Mr. BROWN, in seconding this motion, called attention to the large number of rejections in the Army examination.

Sir DYCE DUCKWORTH, chairman of the Examination Committee, opposed the motion on the ground that the tables spoke for themselves and his committee could do nothing with them. The subjects to which Mr. Brown had referred to were not strictly medical subjects. They were subjects intended to test the general culture of the candidate, such a subject, for instance, as physical geography. Most members were aware of the difficulties at present in securing candidates of a high class for the army and he need not go into them. As to the navy he, as an old examiner, was able to say that the condition of the medical service was most satisfactory as regards the quality and high standing of the men who applied and were appointed to it. As chairman of the Examination Committee he must decline the proposed task.

Dr. MCVAIL said that he was a member of the Examination Committee and he thought that these tables should be submitted to it. In the case of the army examination it appeared that there were 50 vacancies offered for competition, that 15 men came forward, and that only nine of them got appointments. It was well known that the army could not get the necessary supply of surgeons. So much had that been the case that the War Department had given nominations for places without examination at all to various universities and corporations. It would seem, therefore, that the rejected candidates or the candidates who did not receive appointments at this examination must have been sadly incompetent and he thought that that was a matter for inquiry. If, as Sir Dyce Duckworth said, the insufficiency was in subjects not strictly medical then this Council ought to know it. This Council had of course nothing to do with physical geography. What this Council had to see was that men getting diplomas from the various universities and corporations were competent in the subjects recommended by the Council.

The motion to refer the tables to the Examination Committee was carried by 11 to 10 votes.

Procedure in Dental Penal Cases.

On the recommendation of the Executive Committee the Council adopted certain amended standing orders relating to dental penal procedure The principal object of the amendments made is to enable the Council to do what it frequently does in medical cases, postpone the final judgment after deciding that the charge is proved.

Vacancy in the Executive Committee.

Sir Christopher Nixon was appointed to fill the vacancy in the Executive Committee due to the resignation of Sir Philip Smyly.

Pharmacopœia Committee.

Dr. MACALISTER brought up the following report from the Pharmacopœia Committee:—

> The Pharmacopœia Committee, in common with the whole Council, have to lament the loss they have sustained by the untimely death of Dr. Leech. As an active member of the committee since 1892, and as their chairman since 1893, he rendered zealous and valuable service in the preparation of the British Pharmacopœia, 1898, and of the Indian and Colonial Addendum. A special record of the committee's indebtedness to him was made in their report to the Council of May 31st, 1898 He also brought about the establishment of a regular conference between representatives of the committee and of the pharmaceutical societies of Great Britain and of Ireland for the investigation of questions bearing on the revision of the Pharmacopœia. At the suggestion of this conference a number of important researches have been begun, and some, notably those of Professor H. G. Greenish on the solubilities of official drugs, have in part been published. Such researches will be of material assistance to the committee in the task of revising the Pharmacopœia and will serve to carry forward the work in which Dr. Leech took so deep and effective an interest. His portrait, presented by a member of the committee, has been placed in the committee room.
>
> The committee have elected Dr. MacAlister to be chairman in the place of Dr. Leech.
>
> Up to the present the number of copies of the British Pharmacopœia, 1893, printed for the Council has been 31,500. Of these 29,840 have been disposed of, leaving a balance of 1660 copies in hand. The number sold in the present year up to Nov. 24th was 2003. As the publication of the Addendum will probably increase the demand for copies of the Pharmacopœia, to bind up with it, the committee recommend that the President be authorised to direct the printing of an additional issue of 1500 copies, should this appear to be necessary before the next meeting of the Council.
>
> The committee have met repeatedly during the recess for the purpose of completing the draft of the Indian and Colonial Addendum, 1900, which forms the subject of a separate report.
>
> During this work the need of a reference collection of medicinal plants and other articles of materia medica has more than once been felt when questions of description or identification were under discussion. The nucleus of such a collection already exists in the specimens forwarded by some of the colonial authorities. The committee ask power to make the collection complete and to furnish the committee room with proper cases for its reception.
>
> Donations of books for the reference library have been made by Mrs. Leech and Dr. Attfield, to whom the thanks of the Council are due. Dr. Payne has undertaken the duty of supervising the arrangement and cataloguing of the library, which now contains a number of rare and interesting works.

In moving the adoption of the report Dr. MACALISTER said that he learned that the amount due by the publishers was about £465. On the Addendum, however, they had spent from £300 to £400 and that, of course, would come out of the balance at the credit of the committee. The committee, however, would be recouped, and more than recouped, by the sale of the Addendum itself.

Dr. MCVAIL, seconding the motion, spoke of the value and importance of the proposed small museum.

The Council adopted the report.

Inspection of Final Examinations.

The REGISTRAR (Mr. H. E. ALLEN) read a report which stated that

> The Executive Committee think it well to report to the General Council what steps they have taken consequent to the resolution passed by the General Council on May 30th, desiring them to forthwith make arrangements for a systematic inspection and visitation of the final examinations of the several licensing bodies. Time has not yet allowed for the completion of these arrangements, but the Executive Committee have decided that, following the precedent adopted in 1892, it will be well to spread the inspection over three years, and to inspect the examinations in the following order:—First year: Scottish Corporations, Irish Universities. Second year: Irish Corporations, English Universities. Third year: English Corporations, Scottish Universities. From information already obtained by the office a calendar will be prepared showing the dates when these respective examinations take place in each year, and members of Council will be requested to state at the close of each year the examinations which they would be prepared to visit along with the inspector, it being understood that it is not the custom for a member to visit the examinations of those bodies with which he is officially connected or in his own division of the kingdom.
>
> The committee agreed to invite Sir George Duffey to undertake the duties of inspector for the year 1901.

Dr. MACALISTER moved that this report be received and entered on the minutes. He said that it should be put on the minutes as a record and that it did not require the adoption by the Council.

Mr. BRYANT seconded the motion.

Dr. GLOVER supported the committee's recommendation.

The motion was agreed to.

The PRESIDENT asked that the names of members who would act as visitors should be sent to him before the end of the session, it being understood that, following precedent, there should be different visitors for the corporate bodies and for the universities.

Irish Arrangements.

The REGISTRAR read the following communication from the Royal College of Surgeons in Ireland as to the severance of its connexion with the Apothecaries' Hall, Dublin:—

> Royal College of Surgeons in Ireland, Dublin,
> July 20th, 1900.
>
> SIR,—I am directed by the President and Council to inform you all connexion between this College and the Apothecaries' Hall for the holding of Conjoint Examinations ceased on the 1st of the present month.
>
> Yours truly,
> JOHN BARTON, F.R.C.S., Secretary of Council.
>
> H. E. Allen, Esq., Registrar.

Dr. MACALISTER, who moved that this communication should be entered on the minutes, mentioned that candidates for the "final" could go to the Apothecaries' Hall.

The communication was received and entered on the minutes.

Bogus American Diplomas.

The next business on the programme was the receipt of a communication remitted to the General Medical Council by the Executive Committee from the Foreign Office in regard to the sale of false American diplomas

Foreign Office, Sept 24th 1900

SIR,—I am directed by the Secretary of State for Foreign Affairs to transmit to you, for the information of the General Council of Medical Education, the accompanying copy of despatches from Her Majesty's Consul at Chicago respecting the sale of false American diplomas

I am, Sir, your most obedient humble servant

F. H VILLIERS

The Registrar of the General Medical Council

[COPY]

British Consulate, Chicago, July 3rd, 1900

MY LORD,—I beg to report for your lordship's information that the postal inspector of Chicago has at last been able to arrest and to have held in heavy bail for trial Dr. Armstrong and his associates of the People's Institute, Van Buren street, Chicago

Armstrong and his partners under various names have been doing a very lucrative business in selling diplomas to persons in England, and their agent, Z Whightman Van Appin, disposed of large numbers of useless diplomas in British India I hope to obtain a list of the persons who purchased these diplomas in India from Mr Van Appin and will at once forward it to your lordship

From a postcard that has been held by the postal authorities, who have been so good as to communicate it to me, I see that Mr Allan Fisher, who styles himself M.D and Ph D, writing on the 5th ult. from ' Mere " 'Wiltshire,' to Dr Armstrong, People's Institute, Van Buren street, Chicago, states that he has delivered a diploma of D D to a Mr Johnson (no address given), who is very much pleased with it, and that he had hopes of selling two M D diplomas for the sale of which he was in treaty with persons whose names are not mentioned

The postal authorities also hold return postcards showing that Dr. Armstrong and company are in treaty with the following parties either to sell diplomas or have already sold them diplomas:—

1 Rai Tharoda Kanto Lahiri, M D, 6612, Simla street, Calcutta, and is corresponding with:—

2. Dr Hassall, 76 and 80 Paul street, Manchester, England,

3 J M Lethera, M D, House No 3, Zier Thost Bang (?), Girgaum, Bombay, India.

This address is very indistinctly written

4 Z Wightman Van Appin, c/o Dr J. Murdoch, 714, Shelby street, Louisville, Kentucky.

I think the police will probably be able to find out some useful details of the business of bogus diploma selling by Dr Armstrong in Great Britain from Mr Allan Fisher, who is now acting as selling agent for the diplomas of the Independent Medical College and the Metropolitan Medical College of Chicago, Illinois These so-called colleges have charters issued by the State of Illinois, the laws of the State being very lax in the matter of granting such charters, but their diplomas are being sold all over Great Britain and British India, and probably in the colonies to anyone who may be willing to buy them

It is possible that Mr Allan Fisher has been duped by Armstrong and company, but he is now evidently acting as their agent and sells D D Diplomas as well as M D, signed by the same people, or rather by the same person, as it has been found out that all the signatures are made by a girl in different handwritings

Armstrong and his associates have been held in heavy bail for trial for making use of the mails to defraud, and for the moment the diploma mill is said to be closed

Her Majesty's Government of India may also be able to find out through the addresses I have given above if there has been anyone appointed in India to sell the diplomas

Mr Z Wightman Van Appin himself bought a Ph D and M D diploma for $144, and then was sent to India with a quantity of blank diplomas of all kinds to fill in

I will inform your lordship later on of the result of the trial of Armstrong and company.

I have, &c,

(Signed) WM WYNDHAM,

Her Majesty's Consul

Her Majesty's Principal Secretary
of State for Foreign Affairs

[COPY]

British Consulate, Chicago,
August 31st, 1900

MY LORD,—With reference to my dispatch, No 25 of the 3rd July last, I have now the honour to forward a list of persons who are residents in Great Britain India and the colonies who appear to have been duped by the diploma mill of Armstrong and company, of Chicago:— Pectells Wm E, Melbourne Australia, Fisher, M D, Allan, Bristol England, Thomson D D S, Benj Sydney, Australia, Chand M D, Tatch, Ludhiana, India, Kennedy, M D, E M, Bristol, England Secretary, Bank of Bengal, India, Lear, W E, Brighton, Canada, Allahabad Bank, Allahabad, India, Fisher, A Leigh, England, Newton, Ph D, F H, Melbourne, Australia, Hoverban, M D, N Desar, Baroda, India, Nanaratly, M D, B H, Ahmedabad, India, Sarvana D F, Bombay, India, Kapen M D, R. D, Baroda, India, Trilli, Podley Mort, Jamaica, W I

There are doubtless many others who have purchased bogus diplomas, but I have as yet only found out the above cases

I have, &c,

(Signed) WM WYNDHAM,

Her Majesty's Consul

The Secretary of State,
Foreign Office.

The REGISTRAR explained that none of the names in the foregoing list were those of practitioners registered in the British Medical Register

Dr MACALISTER said it was desired that the utmost publicity should be given to these documents That, he assumed, would be obtained by the Council's placing the documents on their minutes

It was resolved to receive the communications and enter them on the minutes

Dr. GLOVER thereupon moved:—

> That the President be requested to thank the Secretary of State for Foreign Affairs for transmitting to the Medical Council the foregoing communication regarding the sale at Chicago of false American diplomas, and to ask that the Council may be informed as to the result of the proceedings against Dr Armstrong and his associates

He thought that it would be well if the trade in bogus degrees could be stopped, and he thought that the steps taken by the Chicago authorities and our consul in that city would meet with the approval of the medical profession of the United States In placing the documents in question on the minutes of the Council and passing his motion he felt that they were only advancing the views of the educationists of America who were taking great interest in this question.

Dr LOMBE ATTHILL seconded the motion, which was unanimously agreed to

Exemption from Examination

The Council next considered a report by the Registrar on evidence of previous examination required by the various licensing bodies from candidates claiming exemption from further examination in certain subjects This report was —

I On May 30th 1900, the General Council passed the following resolution "That the Registrar be instructed to inquire of the various examining boards what evidence they require to be produced by candidates who claim to be exempted from examination in particular subjects on the ground that they have already passed in these subjects before other licensing bodies" II Pursuant to this instruction the Registrar on June 11th, 1900 addressed a circular letter of inquiry to all the licensing bodies, to which all have replied III An abstract of the answers received is set forth in what follows —

The Royal College of Physicians of London —With regard to the First Examination.—When a candidate claiming exemption from any or all of the parts of this examination can show that he has passed in any or all of them at an examination for a degree in medicine at a university in the United Kingdom, in India, or in a British colony, or when a candidate can show that he has obtained a colonial, Indian, or foreign qualification (not necessarily a degree in medicine) entitling him to practise in the country in which it has been conferred, he must produce a certificate from the president, dean, or secretary of the university stating definitely the subject or subjects in which he has passed In some cases proof of the possession of the qualification is accepted as evidence, provided there is further evidence as to the curriculum including examination in the subjects of the first examination *With regard to both the first and second examinations* — Any student of a university of the United Kingdom who can prove by a certificate from the dean, registrar, or other recognised official of the university that he has passed in the subjects of these examinations of the College at an examination for a degree in medicine can claim exemption from such examinations The possession of a degree in medicine or surgery of a colonial, Indian, or foreign university recognised for the purpose exempts the holder from both these examinations Certificates of the course of study must be produced, but evidence of the possession of the degree is accepted as proof of the passing of equivalent examinations

The Royal College of Surgeons of England.—Refers the Council to the answer sent by the Conjoint Board

The Conjoint Board of the Royal Colleges of Physicians and Surgeons of England —Candidates desiring exemption from the subjects of the first and second examinations are required to produce a certificate from the dean, secretary, or other authority of the university stating the subjects in which they have passed in the examination for a degree in medicine of the university In certain cases, however, especially in the cases of graduates in medicine of recognised universities with the requirements and subjects of the various examinations of which the Board is acquainted, the degree itself is accepted as evidence that the earlier examinations have been passed

The Apothecaries' Society of London —Candidates presenting themselves for the final examination of the Society and who have passed the primary examination of some other recognised body are required to produce direct evidence from the secretary of such body as to the subjects passed, with a clear statement that the said subjects are complete and not elementary No exemptions from the final examination are made.

The University of Oxford.—Allows no exemptions.

The University of Cambridge —Allows no exemptions

The University of Durham —A candidate who has passed the first examination of the English Conjoint Board is exempt from the subject of biology in the first examination of the University. A certificate from the secretary of the board is required Candidates holding a qualification from a recognised licensing board of the United Kingdom at the date of entry for the first examination of the University are exempt from examination in elementary anatomy and biology, but are required to pass in chemistry and physics The presence of the candidates' names on the Medical Register is the evidence accepted in this case.

The University of London —Allows no exemptions

The Victoria University —Exemptions seldom allowed. Qualified practitioners only are exempted from particular subjects of the examinations for the M B degree and the Medical Register is accepted as evidence, though certificates could be required if it were desired to know what particular examination a candidate had passed.

Royal College of Physicians of Edinburgh —The Single Licence only is granted to candidates who hold a recognised qualification in surgery on their filling up a prescribed declaration and producing their diploma

Royal College of Surgeons of Edinburgh.—The Single Licence only is granted to candidates who hold a recognised qualification in medicine on their lodging a schedule of curricula and producing their diplomas.

Faculty of Physicians and Surgeons of Glasgow.—Exemption from any particular subject can only be obtained on the production of an open certificate or the receipt of a private official attestation proving that a candidate has already passed in that subject before another licensing body.

Conjoint Board of the Royal Colleges of Physicians and Surgeons of Edinburgh and of the Faculty of Physicians and Surgeons of Glasgow.—Candidates for exemption in any subject of any examination must produce a certificate—or cause an official communication to be sent direct to the board—showing that they have passed an equivalent and final examination in that particular subject before one of certain specified boards.

University of Edinburgh.—The only exemption from examination granted to candidates for the degrees of M.B. and Ch.B. is in the case of those who have completed a course of study and passed an examination in botany, zoology, physics, or chemistry at a university of the United Kingdom or at any other university whose course of study and standard is considered by the Senatus Academicus to be satisfactory; and they must, in the case of a university of the United Kingdom, produce a certificate signed by the dean of the university in question stating the subjects passed in, and that they qualify for a degree in arts or science; and in the case of other universities a similar certificate must be produced, together with the diploma, or simply the diploma and a reference to the calendar setting forth the regulations under which it was obtained.

University of Glasgow.—Examinations of other licensing bodies are not recognised as exempting from medical professional examination, but candidates claiming exemption from certain scientific subjects on the ground of having already completed a course of study qualifying for a degree in science or in arts, passed in such subjects at a university of the United Kingdom or other university specially recognised for the purpose by the university court, must produce university certificates showing that they have passed the examination in the particular subject or subjects in which exemption is claimed.

University of Aberdeen.—Same as the University of Glasgow.

University of St. Andrews.—Same as the University of Glasgow.

Conjoint Board of the Royal Colleges of Physicians and Surgeons of Ireland.—It is the invariable practice that a formal certificate must be produced, signed by the proper officer of a licensing body, at which any subject has been passed exemption from which is sought.

Royal College of Physicians of Ireland.—The Single License granted only to registered medical practitioners, who must produce their registration certificates. As to examinations conducted conjointly, the requirements are those stated by the Conjoint Board in Ireland.

Royal College of Surgeons in Ireland.—Same as the Conjoint Board in Ireland.

Apothecaries' Hall, Dublin.—A certificate must be produced, or a letter directly forwarded by the registrar of the licensing body at which the candidate states that he has passed certain subjects and is entitled to exemption in respect of them.

University of Dublin.—A certificate must be produced, signed by the accredited official of a licensing body, showing that an examination has been passed in a particular subject, or a diploma is held to cover all the examinations required to be passed in order to obtain it.

Royal University of Ireland.—Allows no exemptions.

Mr. Horsley, who thought this report exhibited a dreadful state of affairs in regard to the medical education in this country, moved—

> That a schedule of the universities or licensing bodies recognised for the purposes of exemption from examination be obtained from each licensing body.

He said that in justice to their students the subject was one which ought to be fully inquired into by the Medical Council. It was not good enough to say that "the degree itself was accepted as evidence that the earlier examinations had been passed." The Germans took that view and if that was not good enough for the Germans that should not be good enough for them.

Sir William Thomson seconded.

On a division 12 voted for and 12 against. The President gave his casting vote against, in order, as he said, to observe the universally followed rule in such cases—namely, "keep things as they are."

Mr. Horsley's proposal was accordingly rejected and the report was received and entered on the minutes.

Dental Business.

Dr. MacAlister submitted the following report from the Executive Committee on Dental Business transacted by it since the May session, viz.:—

> (*a*) The prescribed conditions in each case having been duly fulfilled the names of the under-mentioned persons have been restored to the Dentists' Register, from which they had been erased in conformity with the provisions of Section 12 of the Dentists' Act:—Isaac Bailey, Ernest S. Barlow, Emile H. Chapman, Hedley H. Ham, Frank A. Harsant, Frederic E. Ladmore, Joseph Moyle, Frederick G. Roberts, James Stett, Ernest R. Tebbitt.
>
> (*b*) The committee considered and approved a Standing Order to be substituted for the present Standing Order XV., 11.

(*c*) The committee further considered the cases of Mr. E. H. C. Bailey and Mr. F. W. Bailey, with regard to whom, on May 29th, they had passed the following resolution:—

> That Mr. E. H. C. Bailey and Mr. F. W. Bailey be asked to produce the certificates required by the regulations under which they commenced their studies in proof of their having fulfilled the requirements of the Board.

Whereupon it was resolved—

> That the further consideration of these cases be postponed till the return of Mr. Bailey from Australia.

Nothing further having been heard from Mr. Bailey in regard to this matter the committee resolved—

> That the cases of E. H. C. Bailey and F. W. Bailey be referred to the Dental Committee for inquiry into the facts.

This report, on the motion of Dr. MacAlister, seconded by Mr. Tomes, was received and entered on the minutes.

The Council adjourned.

Wednesday, Nov. 28th.

The Council met again to-day, Sir William Turner being in the chair.

The Diploma in Public Health.

The first business on the programme was to receive the following report by the Public Health Committee, viz.:—

1. Instructions to the Committee.

On Dec. 5th, 1899, the General Medical Council passed the following resolution in regard to a report by the Committee on the interpretation given at different places to the regulations of the Council as regards the course of study for the Diploma in Public Health:—

"That the report of the Public Health Committee as amended be received and entered in the minutes and that copies be sent to members of the Council and transmitted to the bodies which confer diplomas in public health for their observations on the recommendations made by the Committee."

2. Analysis of the Remarks of the Bodies.

The Committee now present the following analysis of the remarks of the bodies on the report of the Public Health Committee.

1. The Committee report that five bodies state that they have practically no criticisms to offer—viz.: (1) the University of Oxford; (2) the University of Durham, (3) the University of London; (4) the University of Aberdeen; (5) the University of Dublin; while one body "has the matter still under consideration."

2. Other licensing bodies present observations in regard to the several recommendations of the Committee.

3. As regards Rule I. (1), viz.: "(1) A period of not less than 12 months shall elapse between the attainment of a registrable qualification in medicine, surgery, and midwifery, and the admission of the candidate to any examination, or any part thereof, for a diploma in sanitary science, public health, or state medicine," the Committee in Recommendation I. advised that this rule be maintained. The licensing bodies are practically unanimous in favour of the recommendation.

4. As regards Rule I. (2), viz.: "(2) Every candidate shall have produced evidence of having, after obtaining a registrable qualification, attended during six months practical instruction in a laboratory or laboratories, British or foreign, approved by the body granting the diploma, in which chemistry, bacteriology, and the pathology of the diseases of animals transmissible to man are taught," the Committee made the following Recommendation II.—viz.: That Rule I. (2) be so far modified as not necessarily to require evidence as to attendance on a course of practical laboratory instruction in the case of candidates already competent in the branches of study in question; and that it read as follows:—"(2) Every candidate shall, after obtaining a registrable qualification, either have produced evidence that he has attended a sufficient course of practical instruction in a laboratory or laboratories, British or foreign, approved by the body granting the diploma, in which chemistry, bacteriology, and the pathology of the diseases of animals transmissible to man are taught; or shall otherwise have produced evidence that he has received adequate instruction in the branches of study referred to."

The Licensing Bodies have made the following observations in regard to this recommendation:—

(i.) The Committee of Management of the Two Royal Colleges of Physicians and Surgeons of England

feel that the sentence in this proposed Rule "adequate instruction in the branches of study referred to" is "too indefinite, and they consider that it is desirable for every candidate to attend a recognised course of instruction, although the number of attendances may well be left open as proposed in the first part of the clause. The committee therefore suggest the omission of the sentence after the word 'taught.'"

(ii.) The University of Cambridge.

"The committee of the State Medicine Syndicate of the University of Cambridge, which has conducted examinations in sanitary science for medical officers of health since 1875, have considered the report of the Public Health Committee of the General Medical Council, dated Dec. 4th, 1899, and beg leave to submit to the Council the following observations:—

"No serious difficulty has been found in the working of the Council's rules in their present form.

"The present requirement in general terms of two courses of six months each (not necessarily non concurrent throughout their whole extent) in laboratory work and in out-door sanitary practice is satisfactory, and should not be appreciably relaxed. It is to be feared that such a general relaxation of the rule regarding these courses as appears to be proposed in the report would tend to depreciate the standard of that special and systematic study of the several branches of science that concern public health which is now required of candidates for the diploma. The requirement of six months' practical sanitary work (of all pertinent kinds) should be retained by all examining bodies; and the practical courses of laboratory instruction should be limited to such as are recognised and approved by these bodies. The study of chemistry, physics, and general pathology (including the elements of bacteriology), which usually forms part of the curriculum for an ordinary medical qualification, is not sufficiently relevant to the special duties of a medical officer of health to take the place of the study of their specific applications to hygiene which the present rules enjoin.

"The renouncement of the present requirement of these post-graduate courses would therefore have a deteriorating effect, and would tend to increase the proportion of rejected candidates at the examinations "

(iii) The Victoria University

suggests the following reading of the proposed recommendation: "Every candidate, *before admission to the examination*, must either produce evidence that he has attended *satisfactorily* a sufficient course of practical instruction in a laboratory or laboratories, British or foreign, approved by the body granting the diploma, in which chemistry *as applied to public health*, bacteriology *as applied to public health*, and the pathology of the diseases of animals transmissible to man, are taught; or shall otherwise have provided evidence that he has received adequate instruction in the branches of study referred to " (The suggested changes are italicised)"

(iv) The Committee of Management of the Conjoint Board of the Royal Colleges of Physicians and Surgeons of Edinburgh and Faculty of Physicians and Surgeons of Glasgow

"The committee cannot help viewing the adoption of the proposed alteration with considerable doubt and apprehension '

(v) The University of Edinburgh.

takes exception to the view that laboratory work done before qualification can be accepted as an equivalent for the six months of special laboratory work required under the existing rules of the Council

"While examination is the only means of testing a candidate s knowledge, it is regarded by most examiners as an imperfect one Under the present regulation there is the added guarantee that the candidate has given six months to the special work at a time when he can devote himself entirely to it and related studies "

(vi) The University of Glasgow

"is unable to agree with the modifications of Rule I (2) as proposed," and suggests as an alternative to the six months required by the existing rule the following: "or (*b*) shall have produced evidence by the course of study for a degree in science which he has obtained, that he has received adequate instruction in the branches referred to,'

(vii) The Royal College of Surgeons in Ireland

"The suggested modifications contained in the proposed new rules 2 and 3 seem to this Council to reduce the certificate to the level of mere shams "

5. As regards Rule 1 (3), viz —

"(3) *Every candidate shall have produced evidence that during a* period of six months after obtaining a registrable qualification he has practically studied the duties of out-door sanitary work—

' (*a*) In England and Wales either under the medical officer of health of a county or of a single sanitary district having at the date of the last census a population of not less than 50 000 or the medical officer of health of a combination of two or more sanitary districts having collectively at the date of the last census a population of not less than 35 000, or

"(*b*) In Scotland or Ireland under the medical officer of health of a county or of one or more sanitary districts having at the date of the last census a population of not less than 30,000; or

"(*c*) Under a medical officer of health who is a teacher in the department of public health of a recognised medical school

"The certificate of an assistant officer of health of a county or a large urban district may be accepted, provided the medical officer of health of the county or district consents to the assistant officer giving such instruction

"*** Any candidate who shall produce evidence that he has himself held an appointment as medical officer of health under conditions not requiring the possession of a special sanitary diploma shall be exempt from this regulation "

The Committee made the following Recommendation 3, viz —

That the first paragraph of Rule I (3) be modified so as to read as follows:—

"Every candidate shall have produced evidence that, after obtaining a registrable qualification, he has practically studied the duties of outdoor sanitary work under a medical officer of health '

The licensing bodies have made the following observations in regard to this recommendation —

(i) The Royal Colleges of Physicians and Surgeons of England

make no comment

(ii) The Victoria University

suggests the following modification "Candidates to produce certificates 'of having received instruction in practical sanitary work on not less than 60 days under the medical officer of health of a county or of a large urban district.'"

(iii) The Conjoint Board of Scotland

say that the proposed changes generally "appear to them to be retrograde in character "

(iv) The University of Edinburgh

"thinks that three months is a reasonable minimum period for this instruction

(v) The University of Glasgow

The Committee of Faculty cannot acquiesce in the modification of Rule I (3) proposed by the Committee of Council and it recommends that for the rule as proposed the following should be substituted —

"Every candidate shall have produced evidence that, after obtaining a registrable qualification he has practically studied for a period of not less than three months the duties of a medical officer of health, provided always that this course is not taken concurrent with the course of laboratory instruction, or for a period of not less than six months where this course and that of laboratory instruction are allowed to run concurrently

The committee sees grave objections to the rule as proposed In the first place, no period of time during which the course of practical study must run is laid down, and no definite conception is given of the kind or character of practical study in which the candidate is to engage indeed, a simple certificate by a qualified medical officer of health would meet the demands of the proposed rule, and, in any case serious differences of interpretation to the term "practically studied" would certainly result, depending upon the individual conceptions thereof of different medical officers of health Already the practice in this respect is sufficiently divergent to demand the laying down of a minimum fixed period or even programme of study Obviously, since the objective point of most candidates for Diplomas in Public Health is the position of medical officer of health it becomes of the first importance that candidates should be well prepared, not only for the examinations precedent to the obtaining of a diploma, but more especially for the efficient practical performance of the duties of such an office. It may be urged that an efficient board of examiners is an effective safeguard against the imperfectly prepared candidate To some extent this is true, at the same time, it is by no means impossible for a candidate imperfectly equipped in practical knowledge but well prepared in book knowledge, to pass the necessary examination in this department, and if the Diploma in Public Health is to maintain its high character and to form evidence of the fitness of its possessor for the important practical duties of a medical officer of health, it is essential that the evidence of instruction in practical sanitary work ought to be substantial In short, unless a definite minimum period of carefully defined study in this department is laid down in the rule, there would be no guarantee as to its efficiency

On the merits of the question the Committee of Faculty believes that a period of three months would be sufficient for the study of practical sanitation provided that the whole time of the candidate be devoted to the subject, and that the period of study did not run concurrently with the course of laboratory instruction, or, alternatively, a period of six months running concurrently with the other But the Committee of Faculty is of opinion that the length of time devoted to the study of practical sanitation does not so much matter as the kind and range of the subjects studied, and in order to ensure some general uniformity of range of instruction it would suggest that a schedule of subjects to be studied should be drawn up by each medical officer of health who is entitled to teach candidates, and should be submitted to each body granting a diploma in public health for approval, in conformity with which certificates of instruction should be drawn. Such a method would tend to prevent inequalities of practice in the granting of such certificates

The committee is in entire concurrence with the views of the Committee of Council regarding the necessity of engaging the services of competent examiners for each subject of examination by the bodies granting diplomas, and it also agrees with the proposed addition (*d*) to Rule I (3)

(vi) The Royal College of Physicians of Ireland

recommend that Rule I (3) be modified so as to read as follows —

"Every candidate shall have produced evidence that after obtaining a registrable qualification he has practically studied the duties of *outdoor sanitary work under a medical officer of health in England or* Scotland, and in Ireland under such persons as may be approved by the licensing bodies "

(6) As to recommendation 4 viz.:—

In view of the increased latitude thus advocated as regards the teaching to be required under Rule I (2) and (3), your Committee have arrived at the further conclusion that the bodies granting diplomas in public health should always engage the services of (*a*) Examiners competent in the sciences of bacteriology, chemistry, &c, in relation to public health, and (*b*) examiners who have themselves had practical experience in the outdoor work of a medical officer of health

The Committee report that Recommendation 4 is practically accepted by all the bodies

(7) As to Recommendation 5, viz. —

It having come to the knowledge of the Committee that there would be advantage in making some extension in the number of the medical officers of health entitled to certify as to compliance with the terms of Rule I (3) your Committee are of opinion that there would be advantage in adding to the officers defined under (*a*), (*b*) and (*c*) the following —

"(*d*) Under a medical officer of health who devotes his whole time to public health and allied duties and is not engaged in private practice '

The licensing bodies have made the following observations in regard to this recommendation,—

(i) The University of Cambridge

reports that as to the question of the overlapping of the prescribing courses of laboratory work and *outdoor sanitary practice there seems* to be no good reason for laying down a rule of the Council No harm *can arise from* a certain latitude to candidates in the distribution of their time, provided that the courses are efficient and not hurried through in a few weeks, and that the examinations are of a sufficiently searching character

The Committee accordingly deem it inexpedient for the purposes of the diploma of the University as well as of other examining bodies that the Council s rules should be relaxed to the extent contemplated in the report.

The Committee approve of the proposed extention of Rule I (3) *d* as to work with a medical officer of health who devotes his whole time to public health and allied duties, and is not engaged in private practice

(ii) The University of Edinburgh

are of opinion —

(*a*) ' That the smaller sanitary areas do not provide sufficient opportunities of study to ensure the requisite amount of practical training " and

(*b*) "That if the pupil possessed a competent knowledge of the scientific principles which form the subject of hygiene the amount of this tuition might be reduced, '

(c) ' That three months is a reasonable period for this instruction "

3 Conclusions.

Your Committee have duly studied the observations and representations of the several licensing bodies which have commented on the provisional recommendations of 1899 Further and with particular reference to demand for practical instruction in the duties, routine and special of medical officers of health, the Committee have ascertained, from official sources of information, that in England and Wales and in Scotland facilities already exist, and in Ireland are likely to be ere long forthcoming sufficient to meet in this sense the wants of candidates for the Public Health Diploma.

Again your Committee have considered the case of candidates who hold official positions under the Secretaries of State for War for India, and the colonies, *so fully referred to in the report of the Public Health* Committee, December 1899 —(*Minutes*, xxxvi, p. 755.)

With these additional data before them, and upon reconsideration of the whole subject, your Committee recommend the following rules in substitution for those now in force:—

Draft Rules for Diploma in Public Health.

I. A period of not less than 12 months shall elapse between attainment of a registrable qualification in medicine, surgery, and midwifery, and the admission of the candidate to any examination, or any part thereof, for a diploma in sanitary science, public health, or State medicine.

II Candidates shall be separated into two classes, juniors and seniors.

Juniors to be candidates in regard of whom 10 years have not elapsed since attainment of their registrable qualification.

Seniors to be candidates who have possessed a registrable qualification for 10 years.

III. Junior candidates.

(1) Every candidate shall have produced evidence of having, after obtaining a registrable qualification, attended during six months practical instruction in a laboratory or laboratories, British or foreign, approved by the body granting the diploma, in which chemistry, bacteriology, and the pathology of diseases of animals transmissible to man are taught.

(2) Every candidate shall have produced evidence that after obtaining a registrable qualification he has during six months, other and separate from the like period employed in laboratory work as required under (1), been associated day by day in the duty, routine and special, of public health administration such as is exercised:—

(a) In England and Wales by the medical officer of health of a county or of a single sanitary district having a population of 50,000, or by a medical officer of health giving his whole time to public health work.

(b) In Scotland by a medical officer of health of a county or counties, or of one or more sanitary districts having at the date of the last census a population of 30,000

(c) In Ireland by a medical superintendent officer of health of a district or districts having at the date a population of 30,000; or

(d) By a medical officer of health who is also a teacher in the department of public health of a recognised medical school.

(e) The certificate of an assistant medical officer of health of a county or of a sanitary district of 50,000 population may be accepted, provided the medical officer of health of the county or district permits the assistant officer to give such instruction.

(3) Every candidate shall produce evidence that, after obtaining a registrable qualification, he has, during three months, practically observed and studied the clinical and administrative work pertaining to the medical superintendence of a hospital for infectious diseases

The three months devoted to study in this sense may be concurrent with the administrative work referred to under Section (2), but not with the laboratory work of Section (1).

IV. Senior candidates

(1) Every candidate shall have produced evidence of having, after having obtained a registrable qualification, attended during six months practical instruction in a laboratory or laboratories, British or foreign, approved by the body granting the diploma in which chemistry, bacteriology, and the pathology of diseases of animals transmissible to man are taught

(2) Every candidate shall have produced evidence:

(a) That he has himself held during five years an appointment as medical officer of health in a district with a population of 5000; or

(b) That he has, during not less than 60 days, received instruction in practical sanitary work under a medical officer of health in the United Kingdom administering a district having a population of 20,000 and upwards

The 60 days thus devoted to practical sanitary administrative work may be concurrent with the laboratory work required of seniors under Section (1).

Mr. TEALE, chairman of the Committee, moved that the report be received and entered on the minutes. In doing so he explained the position of the Council with regard to the Diploma in Public Health and the circumstances which had led to the inquiry by his committee. It was in May, 1898, he said, that Sir William Gairdner called attention to apparent diversities of interpretation given at different places to the regulations of the Council as regards the course of study for this diploma. The principal requirement involved was that as to the candidate having practically studied the duties of outdoor sanitary work under a medical officer of health during a period of six months. In the report now presented there was dealt with the case of candidates who held official positions under the Secretaries of State for War, for India, and for the Colonies. The committee had considered whether anything could be done to meet the case of these candidates without reducing either the education or the value of this diploma, and they had come to the conclusion that something might be done by dividing the candidates into two classes, one class to consist of men who went in for the diploma soon after their ordinary qualification and the other to consist of men who went in for it 10 or more years after their ordinary qualification. The one class they proposed to call juniors and the other seniors. It would be said that they were letting down the diploma, but in his opinion they were not doing so. There surely was a great difference between men of 10 years' experience and practice in official appointments and men only commencing work. The former would get more out of nine months than the latter would get out of twelve months He and some of his colleagues on the Committee felt that it was a question whether it was desirable by the action of this Council to restrict too much the sanitary office to men who at once became specialists in the matter—to divorce from it too much men who had been in general practice and who had acquired thereby experience and breadth of view.

Dr. BRUCE seconded the motion.

Sir JOHN BATTY TUKE moved as an amendment that the report be re-committed, and he said he did so as a member of the Council who had perhaps had more to do with the forming of the regulations for this diploma than anyone now present. Eleven years ago he acted with Sir John Simon and Sir John Struthers, and the general results of their advice had been accepted by the Council. He opposed the report on the ground that it lowered the general tone of education and of examination. He could not help regretting that the report had not been sooner in the hands of members in order that they might have examined it carefully and compared it with the other literature on the subject. The Acts of Parliament conferred on the Council very peculiar and exceptional powers over these Public Health diplomas—powers materially different from those they exercised over professional education examination and registration, and the Council had endeavoured to set a high standard of proficiency—in fact, to put the examinations upon the honours level. He would like to know who had asked for any charge in the rules of the Council. They were told that the pressure came from departments of the Government, who requested that in order to allow officers abroad to obtain these diplomas, they should reduce the qualifications. He saw no reason for this. If the Government wished to bring what they desired about the simple thing for them to do was to grant their officers study leave. One of the great grievances of medical men in the army service was that this study leave was not granted them, and if the Council agreed to the change now proposed it would only make the War Office the more persistent in its refusal. The licensing bodies had not asked for the change; on the contrary, they opposed it, and it was a new feature in the deliberations of this Council to find the bodies asking for the maintenance of a high order of education and this Council endeavouring to lower it. In conclusion, he submitted that no sufficient reason had been given for the proposed change. Certainly there was no dearth of diplomates in Public Health, for if they looked at last year's Register they would find that 150 men had been granted this diploma, which was something like five times more than the necessities of Great Britain and Ireland.

Dr. GLOVER seconded the amendment.

Sir CHRISTOPHER NIXON, after complaining of having had insufficient time to study the report, said that he hoped that any conclusion the Council came to on this subject of the Public Health diploma regulations would be final. Although he thought the report capable of amendment, he was not prepared to adopt the extreme step proposed by Sir John Batty Tuke of sending it back to the committee.

Dr. MCVAIL said that he thought the Council should proceed to the consideration of the report. He would remind the Council that the late Sir Richard Thorne had told them that he saw great necessity for making some provision for men who had been a long time in the profession getting their diploma upon a somewhat shorter curriculum, and he would point out that while the committee proposed that the curriculum for these men should be somewhat different they did not propose a different examination. He submitted that a man who had been in practice for a number of years did not need so long a period of study as a man who had only finished his student career. A study of the proposed draft rules would show that there was no lowering of the standard but rather a raising of it.

Sir WILLIAM GAIRDNER recalled the circumstances which led to the inquiry by the committee and said that the work of the committee had gone somewhat beyond what was originally contemplated. He must support the amendment because it appeared to him that the Committee left the question in a most unsatisfactory position

Dr. BRUCE repudiated the imputation that there was any reducing of the present restrictions. They were not reducing the restrictions and, indeed, if they struck a balance they would find that they were increasing them.

Dr GLOVER said that he felt that the constant recurrence of this important subject was most unsatisfactory and he saw no justification for its resuscitation on the present occasion He regarded recent events in our colonies as a striking object lesson in the sanitary methods that prevailed there and he thought it would be a most unfortunate thing if in the face of this object lesson they reduced their requirements in the case of colonial candidates It was an entirely new departure for this Council to divide candidates into two classes. It might be good for the colonial candidates, but it could not be good for the colonies themselves. Another point to be remembered was that with the present standard there was an ample supply of candidates

Mr. Brown hoped that the report would not be sent back to the committee in this unceremonious manner, but would be discussed by the Council.

Dr. MacAlister said that he should like to support the amendment because the report did not sufficiently explain the reasons at the back of this pressure from the Government departments and because no provision was made for limiting the proposed relaxation to the officers of these departments.

On a division being taken the amendment of Sir John Batty Tuke was rejected by a large majority. The Council thereupon agreed to receive the report and to enter it on the minutes. The consideration of the report was then taken in committee of the whole Council.

Mr. Teale moved the adoption of the first draft rule recommended by the committee, explaining that it was the same as the existing rule on the subject.

The committee agreed to the rule.

Mr. Teale then moved the adoption of draft rule No. 2, proposing that candidates should be separated into two classes, juniors and seniors.

Dr. McVail seconded this motion. The reasons which had led the committee to divide the candidates into two classes were reasons, he said, which had been growing upon the committee ever since it took up this work.

The President: Cannot you give us a better name than juniors and seniors?

Dr. McVail said he was seconding the proposal of the committee and perhaps, therefore, it would be for somebody else to suggest something different; he did not see how he could. The evidence had been accumulating all through the inquiry that there were many men in practice in the colonies and India in public appointments whom it was most desirable to induce to take the diploma in Public Health. What the Government departments had pressed the committee to do was to shorten somewhat the period of residence necessary in this country for obtaining the diploma and the committee thought that in the case of men of 10 years' experience the period might be shortened. Let the Council, however, clearly understand that there was no interference proposed with the standard of examination.

Dr. Atthill suggested that the classes might be described as A and B.

The President said that it was a question of professional standing, and surely some means could be devised of expressing that. He thought the words "juniors" and "seniors" most objectionable.

Mr. Horsley threw out the suggestion that the whole paragraph was unnecessary, because the men with the 10 years' experience could be dealt with by a proviso in the subsequent rules.

Mr. Teale said that he was quite willing to adopt this suggestion, though he thought the paragraph in the report had done good in the way of calling attention to the matter.

Sir John Batty Tuke said that, in his opinion, the subject was much too important to be disposed of in this fashion. Clearly it was proposed to do away with a measure of education which after all was of much more consequence than examination.

Dr. MacAlister suggested the use of these words "that a difference be made between the courses of study required of (*a*) practitioners under, and (*b*) practitioners over 10 years' standing."

Sir William Thomson submitted that the Council had no right to differentiate in this way between classes of candidates, and he for one would object to giving any gentleman who happened to have been in practice for 10 years a different curriculum from a gentleman who had come fresh from his ordinary medical qualification He had seen this principle in operation and he knew where it led

After there had been some further discussion, Mr. Teale asked leave to withdraw his motion in its entirety. Some exception was taken to the request and the President put from the chair the question that leave be given. This was carried and the motion consequently dropped.

Dr. McVail thought that the whole difficulty with regard to draft rule No. III. could be got over by the deletion of the word "junior."

The President: Then No. III. would be omitted altogether?

Dr. MacAlister said that if they passed the committee's recommendation they would make it very much harder for seniors.

Dr. McVail explained that if "junior" were omitted "senior" also would be omitted.

The proposal was then put and unanimously carried, the words "junior candidates" being struck out.

Mr. Teale thereupon moved that—

> "(1) Every candidate shall have produced evidence of having, after obtaining a registrable qualification, attended during six months' practical instruction in a laboratory or laboratories, British or foreign approved by the body granting the diploma, in which chemistry, bacteriology, and the pathology of diseases of animals transmissible to man are taught."

Dr. McVail seconded.

Sir Christopher Nixon asked what was meant by instruction such as the committee proposed, especially in reference to "the pathology of diseases of animals transmissible to man."

Dr. Bruce was of the opinion that there could be no difficulty in such a matter, and if any difficulty was experienced that could be overcome by the exhibition of pathological specimens in the laboratory.

The motion was unanimously passed.

Mr. Teale next moved the adoption of Section (2) of recommendation III. The preamble of that, he explained, meant that it enforced six months' work.

Sir John Batty Tuke seconded.

Dr. MacAlister pointed out that if the Council adopted the rule as drafted they would be committing themselves to the principle of classification which had been suggested by the committee—namely, that there should be a distinction made between "junior" and "senior," or they would make it harder for seniors to pass examinations than hitherto.

On the suggestion of the President, the recommendation was altered so that it might read: "Candidates shall have produced evidence that after obtaining a registrable qualification," &c. After some conversation,

Mr. Brown said he thought that it would be very desirable to make a compromise on this matter. He suggested that three months of the course might run concurrently and the other three months not concurrently.

Mr. Power gave it as his opinion that there should be at least three months given up for practical sanitary work under the supervision of a medical officer.

Mr. Brown hoped that the Council would insist on securing in this section a period of six months—three months for work in the laboratory and three months' work non-concurrent.

Dr. McVail was not prepared to accept a cutting down of the curriculum to three months, which, he argued, the proposal before the Council really meant.

Dr. MacAlister and some other members denied the accuracy of Dr. McVail's interpretation, Sir John Batty Tuke remarking that in reality the committee's recommendation amounted practically to the addition of three months to, not their subtraction from, the curriculum.

The original proposal was withdrawn, and Mr. Teale, seconded by Sir John Batty Tuke, moved that the new rule, so far as the preamble was concerned, should read as follows:—

> "Candidates shall have produced evidence that after obtaining a registrable qualification, they have, during six months, of which at *least three months* shall be distinct and separate from the period devoted to laboratory work under regulation (1), been associated day by day in the duty, routine and special, of the public health administration under the supervision of," &c.

The recommendation, as thus modified, was agreed to, as also were the following modified subsections:—

> (*a*) In England and Wales the medical officer of health of a county or of a single sanitary district having a population of 60,000 or a medical officer of health giving his whole *time to public health work; (b) in* Scotland a medical officer of health of a county or counties or of one or more sanitary districts having a population of 30,000; (*c*) in Ireland a medical superintendent officer of health of a district or districts having a population of 30 000; or (*d*) by *a medical officer of health who is also* a teacher in the department of public health of a recognised medical school.
>
> *** The certificate of an assistant medical officer of health of a county or of a sanitary district of 50,000 population may be accepted provided the *medical officer of* health of the county or district permits the assistant officer to give such instruction.

Mr. Teale explained that subsection (*d*) was not to be regarded as referring to Ireland only. It was to be taken as a general provision applicable to England and Scotland and Ireland.

Sir Christopher Nixon moved that Ireland should be treated exceptionally and that it should have the option under subsection (*c*) of bringing in "such persons as may be approved by the licensing bodies." He, however, was supported by the vote of only five members of the Council and before the next matter was entered upon he jocularly informed the Council that all the Irish representatives had voted for his proposal.

Mr. Teale proposed the adoption of subsection 3, namely:—

> (3) Every candidate shall produce evidence that, after obtaining a registrable qualification, he has, during three months practically observed and studied the clinical and administrative work pertaining to the medical superintendence of a hospital for infectious diseases. The three months devoted to study in this sense may be concurrent with the administrative work referred to under section (2), but not with the laboratory work of section (1).

Dr. Bruce seconded.

Dr. McVail supported the motion, as it was in his view a great advance upon the present practice.

The President thought "administrative" was not needed at all.

Dr. Little, Dr. Lombe Atthill, and Sir Christopher Nixon agreed, while Sir William Thomson contended that, supposing the rule were passed, the words "and administrative" would prove unworkable.

Dr. MacAlister, seconded by Mr. Young, submitted a modification of the existing rule—namely:—

> That every candidate shall produce evidence that after obtaining a registrable qualification he has, during three months, attended the practice of a hospital for infectious diseases at which opportunities are afforded for the study of methods of administration.

On a division Mr. Teale's motion was supported by only six members, whereas Dr. MacAlister's proposal received 17 votes, and was unanimously passed when it was put to the Council as a substantive motion.

Mr. Teale intimated that he would not trouble the Council with some remarks he had intended to make with reference to the classification suggested by the committee but rejected by the Council. Further he would entirely drop Section IV.

Dr. MacAlister said that he would bring up the report on the following day.

The Council resumed and adjourned.

Thursday, Nov. 29th.

The Council met again to-day and proceeded to the consideration of penal cases.

Medical News.

University of London.—At the M.B. examination held in October the following candidates were successful:—

First Division.—Samuel Herbert Lee Abbott, St. George's Hospital and Oxford; Donald Johnstone McGavin, Mason College and Queen's and General Hospitals, Birmingham; James Robert Morton, London Hospital; William Payne, Westminster Hospital; William Henry Willcox, B.Sc., St. Mary's Hospital; and Louisa Woodcock, London School of Medicine and Royal Free Hospital.

Second Division.—William Fielding Addey, University College; Robert Atwood Beaver, Liverpool Royal Infirmary; Guy Black, St. Thomas's Hospital; Sidney Herbert Bown, University College; Percy Frank Braithwaite, Owens College; Charles Hildred Brodribb, St. Mary's Hospital; Charles Henry Bullen, Mason University College; James Alfred Butler, Guy's Hospital; Alfred Henry Bygott, St. Mary's Hospital; Adrian Caddy, St. George's Hospital; Charles Holt Caldicott, Mason College; James Cameron, Royal Infirmary and University of Edinburgh and London Hospital; Wilfrid Henry Coltart, Mason College; John Bernard Davey, Middlesex Hospital; Frank Sherwill Dawe, B.Sc., St. Mary's Hospital; Alec Densham, Guy's Hospital; Margaret Bernard Dobson, Harriet Rosa Delo Ford, and Sarah Louise Fraser, London School of Medicine and Royal Free Hospital; Thomas Hall Gandy, St. Bartholomew's Hospital, Edward Alfred Gates, St Thomas's Hospital; Joseph Strickland Goodall, Middlesex Hospital; William Gough, B.Sc., Yorkshire College; Louisa Hamilton, Royal Free Hospital; Mary Hannah Frances Ivens, London School of Medicine and Royal Free Hospital; Lionel Capper Johnson, Owens College and University College, Liverpool; Alfred Ernest John Lister, St. Bartholomew's Hospital; John Wishart Little, St. Thomas's Hospital; Olive McDougall, London School of Medicine and Royal Free Hospital; William Halliburton McMullin, King's College; Patrick Thurburn Manson, Guy's Hospital; Edith Neild, School of Medicine for Women and Royal Infirmary, Edinburgh; Eugene Michael Niall, St. Bartholomew's Hospital; Cyril Alfred Rankin Nitch, St. Thomas's Hospital; William Paynter Noall, Owens College and Manchester Royal Infirmary; Mabel Paine, London School of Medicine and Royal Free Hospital; Thomas Massey Pearce, St. Bartholomew's Hospital; Mary Elizabeth Phillips, London School of Medicine and Royal Free Hospital; Miles Harris Phillips, University College and Royal Infirmary, Bristol; Thomas Copeland Savage, University College; Margaret Sophia Sharp and Amy Jane Guy Smith, London School of Medicine and Royal Free Hospital; William Smith, Bristol Medical School and St. Bartholomew's Hospital; Alfred Bertram Soltau, London Hospital; Hackworth Stuart, University College; Kathleen Olga Vaughan, London School of Medicine and Royal Free Hospital; Rupert Waterhouse, St. Bartholomew's Hospital; and Florence Elizabeth Willey, B.Sc., London School of Medicine and Royal Free Hospital.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only, and is not final until the reports of the examiners shall have been confirmed by the Senate.

University of Cambridge.—At a congregation held on Nov. 22nd the following were admitted to medical degrees:—

Doctor of Medicine.—Arthur Frederick Shoyer, B.A., B.C., Trinity Hall.

Bachelor of Medicine and Bachelor of Surgery.—Arthur Croft Hill, M.A., Trinity College; Francis John Nicholls, St. John's College.

Bachelor of Medicine.—Richard Ernest Sedgwick, B.A., B.C., Gonville and Caius College.

The degree of M.A. *honoris causâ* is to be conferred on Dr. G. H. F. Nuttall, Lecturer in Bacteriology and Preventive Medicine, and on Mr. T. Strangeways Pigg, M.R.C.S. Eng., Demonstrator of Pathology.—The Special Board for Medicine have had under their consideration the question of re-arranging the subjects of the Third Examination for the M.B. degree, and have prepared a report showing how the subjects of this examination may be brought into better educational sequence.

Society of Apothecaries of London.—In November the following candidates passed in the subjects indicated:—

Surgery.—J. H. Beasley (Sections I. and II.), Birmingham; A. H. Brehaut (Section I.), Cambridge and King's College Hospital; J. H. Clements University College Hospital; M. E. Fendick (Sections I. and II.), Royal Free Hospital; J. I. Halstead (Section I.), Manchester; D. J. Morgan (Sections I. and II.), St. Mary's Hospital; J. C. S. Rashleigh (Section II.), St. George's Hospital; A. T. Spanton (Section II.), Cambridge and St. George's Hospital; and V. F. Wall (Section I.), St. Mary's Hospital.

Medicine.—R. V. Cowey (Sections I. and II.), St. Mary's Hospital; E. N. de V. Dawson (Section I.), St. Thomas's Hospital; R. A. Jones (Section I.), St Mary's Hospital; J. C. S. Rashleigh (Sections I. and II.), St. George's Hospital; and A. T. Spanton (Sections I. and II), Cambridge and St. George's Hospital.

Forensic Medicine.—A. H. Bell, Cork and Guy's Hospital; R. V. Cowey, St. Mary's Hospital; M. E. Fendick, Royal Free Hospital; R. A. Jones, St. Mary's Hospital; D. E. Lockwood, Royal Free Hospital; J. C. S. Rashleigh, St. George's Hospital; F. A. Segreda, Guy's Hospital; and P. Southan, Birmingham.

Midwifery.—A. G. H. Anthonisz, University College Hospital; L. Bradstock, Birmingham; A. H. Brehaut, Cambridge, and King's College Hospital; A. C. Clarke, Manchester; E. Courtauld, Royal Free Hospital; J. W. Elliott, St. Mary's Hospital; M. E. Fendick and R. Gillett, Royal Free Hospital; D. T. Jones, Middlesex Hospital; O. Millauro, Westminster Hospital; D. J. Morgan, St. Mary's Hospital; and B. Rowlands, St. Bartholomew's Hospital.

The diploma of the society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery: A. C. Clarke, R. V. Cowey, J. C. S. Rashleigh, and A. T. Spanton.

Royal College of Surgeons in Ireland: Fellowship Examination.—The following gentlemen having passed the necessary examination have been admitted Fellows of the College:—

M. A. Brennan, L.R.C.S. Irel.; T. I. Considine, L.R.C.S. Irel.; O'C. J. Delahoyde, L.R.C.S. Irel.; W. R. G. Hamilton, L.R.C.S. Irel.; R. J. Harvey, L.R.C.S. Irel.; E. S. Hawthorne, L.R.C.S. Irel.; C. A. Hayman, L.R.C.S. Irel.; N. J. Keller, L.R.C.S. Irel.; G. Q. Lennane, L.R.C.S. Irel.; J. McGinn, L.R.C.S. Edin.; M. J. C. Marmion, L.R.C.S. Irel.; A. B. Mitchell, B.Ch. Roy. Univ. Irel.; F. Nolans, L.R.C.S. Irel.; E. M. J. O'Farrell, L.R.C.S. Irel.; W. Pooley, L.R.C.S. Irel.; D. Power, L.R.C.S. Irel.; H. Ross-Todd, L.R.C.S. Irel.; E. C. Ryall, L.R.C.P. Lond.; J. Trant, L.R.C.S. Irel.; R. S. Wayland, L.R.C.S. Irel.; and A. E. Wynne, L.R.C.S. Edin.

The following gentleman passed the primary part of the examination:—

M. Malone-Lee.

Medical Magistrate.—Mr. Samuel P. Smith, L.R.C.P., L.R.C.S. Irel., has been appointed by the Lord Chancellor a magistrate for the borough of Croydon.

Asylum Accommodation in Cornwall.—At the last meeting of the Penzance Board of Guardians it was stated that the Cornwall County Asylum was now full. The guardians, who had a patient waiting to be removed to the asylum, decided to petition the county council to provide more accommodation at the institution.

Superannuation Allowance.—At the meeting of the Swansea Board of Guardians held on Nov. 15th it was stated that the Local Government Board had agreed to a five years' extension of the term of service of Mr. David Howell Thomas, medical officer to the Swansea Workhouse, so as to permit of his retirement upon the full superannuation allowance.

THE annual conversazione of the Royal British Nurses' Association will be held at Westminster Town-hall on Tuesday next, Dec. 4th, at 8 P.M.

HOSPITAL SUNDAY AT PLYMOUTH.—Oct. 21st was observed in Plymouth as Hospital Sunday, when £690 were collected in the various churches and chapels for the South Devon and East Cornwall Hospital, Plymouth.

BEQUEST.—The Treasurer of the British Medical Benevolent Fund has received the sum of £1000, free of legacy duty, from the executors of the late Mr. Manwaring Shurlock, M.R.C.S. Eng., L.S.A., of Chertsey.

THE DESTRUCTION OF HUNTER'S HOUSE.—The dismantlement of No. 28, Leicester-square, which is now taking place in consequence of a large improvement scheme in the locality, is interesting from the fact that it is the house at the rear of which John Hunter built his famous museum of comparative anatomy.

STOCKPORT AND DISTRICT MEDICAL SOCIETY.—The following resolution was unanimously passed at a special meeting of the above society held on Nov. 22nd :—

> That this meeting of medical practitioners of Stockport and neighbourhood indignantly protest against the ignorant and insulting paragraph contained in the *Cheshire County News* of the 16th inst. in which invidious comparison is made between a notorious quack and registered medical practitioners.

The passage in the *Cheshire County News* ran as follows :—

> In reference to the decision arrived at by a Yorkshire coroner's jury affecting Dr. Rawlings of Reddish it will be of interest to learn that Dr. Rawlings has since been the recipient of numerous letters from old patients and others expressing their sympathy with him, their confidence in his ability, and admiration for his character. At a meeting also the other night in a room crowded with men Dr. Rawlings fulfilled an engagement to lecture, and a most remarkable manifestation of sympathy with the medical gentleman broke out, the cheering being loud and long-continued. We need only add that an unregistered medical practitioner, however able he may be, is subject to disagreeable incidents similar to that in which Dr. Rawlings is involved, while men with not half his ability, if registered, would escape them altogether.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, Bedford-street, Strand, London.

Laboratory Directions for Beginners in Bacteriology. By V. A. Moore. 1900

ALLEN, GEO., Charing-cross-road, London.

Annals of a Doss House. By Sydney Halifax. 1900.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

The Microscopy of the More Commonly Occurring Starches By Hugh Galt, M.B., C.M. Glasg., D.P.H. Camb. Illustrated. 1900. Price 3s. 6d. net.

BLACKIE AND SON, Old Bailey, London, E.C.

Droll Doings. Illustrated by Harry B. Neilson. 1901. Price 6s.

With Rifle and Bayonet: a Story of the Boer War. By Captain F. S. Brereton, R.A.M.C. Illustrated. 1901. Price 5s.

In Far Bolivia: a Story of a Strange Wild Land. By Dr. Gordon Stables, R.N. Illustrated. 1901. *Price 3s. 6d.*

With Buller in Natal, or a Born Leader. By G. A. Henty. Illustrated. 1901. Price 6s.

CHAPMAN AND HALL, London.

What is Heat? and What is Electricity? By F. Hovenden, F.L.S., F.G.S., F.R.M.S. With Diagrams. 1900. Price 6s.

CHURCHILL, J. & A., Great Marlborough-street, London.

Elements of Human Physiology. By E. H. Starling, M.D. Lond., F.R.C.P. Fourth Edition. 1900. Price 12s. 6d.

How to Examine the Chest. By S. West, M.D. Oxon., F.R.C.P. *Third Edition. 1900. Price 6s.*

CLAY, WM. F., Teviot-place, Edinburgh.

A Text-book of Pathology in Relation to Mental Diseases. By W. Ford Robertson, M.D. Illustrated. 1900. Price 21s. net.

DORNAN, WM. J., Philadelphia.

Transactions of the American Surgical Association. Vol. xviii. Edited by De Forest Willard, M.D., Ph.D. 1900.

HAAS AND COMPANY, 2, Langham place, London.

Comptes-Rendus du XII Congrès International de Médecine, Moscou 7(19)-14(26) *Août, 1897. Edited by Secretary General* W. Roth

Les Stations de Boues Minérales de la Russie d'Europe. Par Professeur A. Scherbakov. 1897.

Grundriss der Inneren Medicin. Von Dr. Max Kahane. 1901.

La Médicine du Zemstwo en Russie. Par E. Ossepow, J. Popow, et P. Komkine.

HACHETTE ET CIE., Paris.

La Vie de Pasteur. Par Rene Vallery-Radot. 1900.

HEYWOOD, J., Shoe-lane, London, and Manchester.

Defects in Plumbing and Draining Work. By Francis Vacher, Medical Officer of Health of Cheshire. New Edition. Illustrated. 1900. Price 1s. net.

HODDER AND STOUGHTON, Paternoster-row, London.

Memoir of James Macartney, M.D. St. Andrews and Dublin. By Alexander Macalister, *Professor of Anatomy, Cambridge.* 1900. Price 6s.

LAMERTIN, H., Bruxelles.

Manuel de Bactériologie Clinique. Par M. Funck. 1901.

LONGMANS, GREEN AND CO., Paternoster-row, London.

Recent Fractures and Internal Derangements of the Knee-joint. By W. H. Bennett, F.R.C.S. Reprint from THE LANCET. Illustrated. 1900. Price 4s. 6d.

MACMILLAN AND CO., London.

A Manual of Medicine. Edited by W. H. Allchin, M.D. Lond., F.R.C.P., F.R.S. Edin. Vol. ii. 1900. Price 7s. 6d. net.

MARLBOROUGH, E., AND CO., Old Bailey, London.

Technical Words and Phrases: an English-French and French-English Dictionary. By J. A. Standring and C. A. Thimm, F.R.G.S. 1900. Price 2s. 6d.

PENTLAND, Y. J., Edinburgh.

Gynæcological Operations, exclusive of those Interfering with the Peritoneal Cavity. By Skene Keith, M.B., F.R.C.S. Edin. *Illustrated. 1900.*

PHILADELPHIA MEDICAL PUBLISHING COMPANY, Philadelphia.

The Surgical Treatment of Congenital and Pathological Disfigurements of the Face. Abstract of the Mutter Lectures for 1900. By J. B. Roberts, A.M., M.D. 1900.

PUTNAM'S SONS, Bedford-street, London.

Leaders in Science—Thomas Henry Huxley: *a Sketch of his Life* and Work. By P. Chalmers Mitchell, M.A. Oxon. 1900 Price 5s.

RICHARDS, GRANT, Henrietta-street, Covent-garden, London.

Memoirs of Edward Hare, C.S.I., late Inspector General of Hospitals, Bengal. By E. C. Hare, Major, I.M.S. 1900. *Price 5s. net.*

Rectorial Addresses delivered before the University of Edinburgh, *1859-1899* Edited with an Introduction by A. Stodart-Walker, M.B., F.R.C.P. Edin. 1900. *Price 7s. 6d. net.*

SAMPSON LOW, MARSTON, and Co., Fetter-lane, Fleet-street, London.

Twentieth Century Practice of Medicine. Vol. xx. Edited by T. L. Stedman, M.D. 1900.

SANITARY PUBLISHING COMPANY, Fetter-lane, Fleet-street, London.

The Food Inspector's Handbook. By Francis Vacher. Third edition. Illustrated. 1900. Price 3s. 6d. net.

SAUNDERS, W. B., AND CO., 161, Strand, London, and Philadelphia.

A Manual of Personal Hygiene. Edited by W. L. Pyle, A.M., M.D. Illustrated. 1900. *Price 6s. net.*

The Hygiene of Transmissible Disease. *Illustrated. 1899. Price 9s. net.*

Fractures. By Carl Beck, M.D. With an Appendix on the Practical Use of the Roentgen Rays. Illustrated. 1900 Price 15s. net.

The Pathology and Surgical Treatment of Tumors. By N. Senn, M.D., Ph.D., LL.D. Second edition. Illustrated. 1900. Price 21s. net.

An American Text-book of Physiology. Edited by W. H. Howell, Ph.D., M.D. Second edition. Vol. i. 1900 Price 25s. net.

Lectures upon the Principles of Surgery. By C. N. Nancrede, A.M., M.D., LL.D. 1899. Price 10s. 6d. net.

SWAN SONNENSCHEIN AND CO., London.

Handbook of Practical Botany. By Dr. E. Strasburger. Translated and edited from the German by W. Hillhouse, M.A., F.L.S. Fifth edition. Illustrated. 1900. Price 10s. 6d.

WILSON, EFFINGHAM, Royal Exchange, London.

Lawyers and their Clients. A Practical Guide for the Latter. 1901. Price 2s.

The Professional Pocket-book, or Daily and Hourly Engagement Diary for 1901. In three parts. Part 1, January to April. Part 2, May to August. Part 3, September to December (Rudall, Carte, and Co., Berners-street, London, W.)—Magazines, &c., for December: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Myra's Journal, Pall Mall Magazine, Windsor Magazine, English Illustrated Magazine, Knowledge, Humanitarian, Wide World Magazine, New Century Review, North American Review, Cornhill Magazine, Sandow's Magazine, New Monthly, Girl's Realm, Black and White Christmas Number, World Christmas Number, Pears's Annual.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ATOCK, M. H., M.D., Ch.M. Irel., has been appointed Acting Medical Officer at Trial Bay Prison, Arakoon, New South Wales.

BEVERIDGE, A. T. G., M.B., C.M. Aberd., has been appointed Medical Officer for Robert Gordon's College, Aberdeen.

CROMMELIN, C. E., M.D. Cincinnati Medical College, Ohio, has been appointed Medical Officer and Vaccinator at Tenterfield, New South Wales.

DEY, ROBERT, M.B. Syd., has been appointed Government Medical Officer and Vaccinator at Wilcannia, New South Wales.

Eadie, James, M.B., Ch.B. Melb., has been appointed Public Vaccinator for Balaclava, Victoria, Australia.

Freyer, J. K., M.R.C.S., L.R.C.P. Irel., has been appointed Government Medical Officer and Vaccinator at Campbelltown, New South Wales.

Gamble, Morris, F. H., L.R.C.P., L.R C S. Edin., L.F.P.S Glasg., has been appointed Medical Superintendent, *pro tem.*, to the Sunbury Lunatic Asylum, Victoria, Australia.

Hope, J. W., L.R.C.P. Edin., L.S.A. Lond., has been appointed President of the Medical Board, West Australia.

Joyce, C., M.B. Melb., has been appointed Officer of Health for the Local Board of Health, Beaconsfield, Tasmania.

Kennedy, J. C., M B., Ch.B. Melb., has been appointed Acting Public Vaccinator, *pro tem.*, for Port Melbourne, Victoria, Australia.

Knipers, J. C., M.D. Jena, has been appointed Medical Officer at Cloncurry, Queensland.

Lander, C. D., M B., M.S. Edin., has been appointed Public Vaccinator for South Australia.

Leschen, H. A., M.B., Ch.M. Edin., has been appointed Superintending Medical Officer, Whitby Falls Lunatic Asylum, West Australia.

Ley, G. J., M.B. Melb., has been appointed Public Vaccinator for Stratford, Victoria, Australia.

McDouall, H. C., M.R.C.S., L.R C.P. Lond., D.P.H. Camb., has been appointed Senior Medical Officer to the Hospital for the Insane, Callan Park, New South Wales.

M'Gavin, Lawrie Hugh, F.R.C.S. Eng., has been appointed Assistant Surgeon to the North-west London Hospital, Kentish Town-road.

Mackie, Wm. J., M.D. Brux., L R C.S., L.K.Q.C.P. Irel., has been appointed Medical Officer to the Lunatic Asylum at Nelson, New Zealand.

Reid, C W., M.B., M.S. Edin., has been appointed Senior Medical Officer, Lunacy Department, Parramatta Hospital for the Insane, New South Wales.

Richards, W. Jones, M.R C S., L.R C.P. Lond., has been appointed Fourth Assistant Medical Officer to the Middlesex County Asylum near Tooting.

Richardson, J. C. R., M.B., B.C. Camb., has been appointed Medical Officer of Health for the Saxmundham Urban Sanitary District.

Roll, G. W., M B., B.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Royal Westminster Ophthalmic Hospital, King William-street, Strand, W.C.

Roth, W. E., M.R.C.S. Eng., has been appointed Northern Protector of Aboriginals and an Inspector under the Pearl-shell and Beche-de-Mer Fishery Acts, Queensland.

Smith, Wm. R., M.D. Lond., has been appointed Certifying Surgeon under the Factory Acts for the Beeston District in the County of Nottingham.

Woodhouse, H. C., M.B., Ch.B. Vict., has been appointed District Medical Officer, Madeley Union, *vice* G. L. Proctor, resigned.

Zlotkowski, F. S. N., M.B. Syd., has been appointed a Justice of the Peace for New South Wales and Queensland.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Birmingham and Midland Eye Hospital, Church-street, Birmingham.—Assistant House Surgeon. Salary £60 per annum, with apartments and board.

Blackburn and East Lancashire Infirmary.—Junior House Surgeon. Salary to commence at £60 per annum, with board, washing, &c.

Brighton and Hove Lying-in Institution and Hospital for Women, 76, West-street, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance.

Bury Infirmary.—Senior House Surgeon. Salary £100, with board, residence, and attendance. Also Junior House Surgeon. Salary £80, with board, residence, and attendance.

Chelsea Hospital for Women, Fulham-road, S.W.—Clinical Assistant. Tenable for three months on payment of eight guineas.

Chesterfield and North Derbyshire Hospital and Dispensary, Chesterfield.—Resident House Surgeon for two years. Salary £100 per annum, with board, apartments, and laundry.

Darlington Hospital and Dispensary.—House Surgeon, unmarried. Salary £150 per annum, with rooms in the institution. Applicant to board himself.

Derbyshire Royal Infirmary, Derby.—Resident House Surgeon for twelve months. Salary £100 per annum, with apartments and board.

Doncaster General Infirmary and Dispensary.—Assistant House Surgeon. Salary £40 per annum, with board and residence.

East Suffolk and Ipswich Hospital, Thorofare, Ipswich.—Two House Surgeons, unmarried. Salary £80 for the senior and £70 for the second, with board, lodging, and washing.

Government of Ceylon.—Medical Man for the Ceylon Medical College, for the post of Registrar, Curator of Museum, and Lecturer. Salary Rs. 6000 per annum, rising by triennial increments of Rs. 500 to Rs. 8000.—Address, Private Secretary, Colonial Office, S.W.

Grove Hall Asylum, Bow, London, E.—Junior Assistant Medical Officer. Salary £120 per annum, with board, furnished apartments, attendance, and washing.

Guest Hospital, Dudley.—Assistant House Surgeon, for six months. Salary at the rate of £40 per annum, residence, board, and washing.

Halstead Union.—Medical Officer for the Fourth District of the Union. Salary £36 per annum. Special arrangement for extra fees, &c. Applications to the Clerk, Halstead.

Hospital of St. Francis, New Kent-road, London.—Gynæcologist. Candidates must be F.R C.S. Eng.

Hospital for Women and Children, Leeds.—Non-resident House Surgeon for six months. Salary at the rate of £125 per annum.

Huddersfield Infirmary.—Junior House Surgeon. Salary £60 per annum, with board, residence, and washing.

Hull Royal Infirmary.—House Surgeon for two years, unmarried. Salary 100 guineas per annum, with board and furnished apartments. Also Assistant House Surgeon for one year. Salary £60, with board and furnished apartments. Also Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

Kensington Dispensary, 56, Bedford-gardens, Kensington.—Honorary Medical Officers. Also Honorary Anæsthetist.

Leicester Infirmary.—Assistant House Surgeon for 12 months. Salary £80, with board, apartments, and washing.

London County Asylum, Hanwell, W.—Junior Assistant Medical Officer. Salary £150 per annum, with board, furnished apartments, and washing. Applications to the Clerk to the Asylums Committee, Office, 6, Waterloo-place, S.W.

London Hospital Medical College, Mile-end, E.—Assistant Demonstrator of Anatomy. Salary £90 a year.

Miller Hospital and Royal Kent Dispensary, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary at the rate of £60 per annum, with board, attendance, and washing.

Noble's Isle of Man General Hospital and Dispensary, Douglas, Isle of Man.—Resident House Surgeon, unmarried. Salary £82 per annum, with board and washing free.

Northampton General Infirmary.—House Surgeon, unmarried. Salary £125 per annum, with furnished apartments, board, attendance, and washing.

Nottingham General Dispensary.—Assistant Resident Surgeon. Salary £140 per annum, all found except board.

Parish of Birmingham Workhouse Infirmary.—Assistant Resident Surgical Officer at the Workhouse Infirmary for one year. Salary £100 per annum, with furnished apartments, rations (no alcoholic liquors), coals, gas, laundry, and attendance. Applications to the Clerk, Parish Offices, Edmund-street.

Parish of Fulham.—Second Assistant Medical Officer at the Infirmary, St. Dunstan's-road, Hammersmith, W., for six months. Salary at the rate of £60 per annum, with board, furnished apartments, and washing. Apply to the Medical Superintendent at the Infirmary.

Parish of St. Leonard, Shoreditch.—Second Medical Officer of Health for the Infirmary, Hoxton-street, N., for six months. Salary at the rate of £100 per annum, with rations, washing, and furnished apartments at the Infirmary.

Rhondda Urban District.—Medical Officer of Health for the district for one year. Salary £500, including travelling expenses. Applications to be made to the Clerk, Public Offices, Pentre (Glam.)

Royal Ear Hospital, *Soho, London.*—House Surgeon (non-resident). Small honorarium given.

Royal Hants County Hospital, Winchester.—House Surgeon, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

Royal Hospital for Incurables, Donnybrook, Dublin.—Resident Medical Officer for one year. Salary £100 per annum, with board and furnished apartments.

Royal National Mission to Deep Sea Fishermen's Hospital Vessels.—Young Medical Officer for service. Salary £3 3s. weekly. Apply to Mr. F. H. Wood, 181, Queen Victoria-street, London.

Seamen's Hospital Society ("Dreadnought"), Greenwich, S E.—House Physician for "Dreadnought" Hospital. Salary £75 per annum, with board and residence.

The Chief Inspector of Factories gives notice of vacancies as Certifying Surgeons under the Factory Acts at Banbridge, in the county of Down; at Dorking, in the county of Surrey; at Walton-on-the-Naze, in the county of Essex; and at Halesworth, in the county of Suffolk.

Throat Hospital, Golden-square, London.—Non-resident Junior House Surgeon. Salary £100 per annum, with luncheon daily.

University College, London.—Assistant Surgeon.

West Herts Infirmary, Hemel Hempstead.—House Surgeon and Dispenser, who shall be also Assistant Secretary, for two years, unmarried. Salary £100 per annum, with furnished rooms, board, fire, lights, attendance, and washing.

West London Hospital, Hammersmith-road, W.—House Physician and House Surgeon, for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

Davis.—On Nov. 23rd, at Grand-parade, St. Leonards, Dorothy, wife of W. H. Davis, M.B., M.R C P., of a daughter.

Jones.—On Nov. 25th, at Mayo, Llangammarch Wells, Breconshire, the wife of W. Black Jones, M.D., B S., of a daughter (stillborn).

Newton.—On Nov. 14th, at Balcombe, Sussex, the wife of Reginald Newton, M.R C.S., L.R.C.P., of a son.

MARRIAGES.

Elwin—Graves.—On Nov. 24th, at St. Alphege's, Greenwich, George Richard Elwin, M D., of Brook House, Bromley, Kent, to Beatrice, eldest daughter of James Graves, The Grove, Blackheath.

Tresidder—Garden.—On Nov. 21st, at the parish church, Dalton-in-Furness, Morton Everard Tresidder, M.R.C.S., L R.C.P. Lond., of Westcombe Park, Blackheath, London, to Elsie Annie daughter of the late James Garden, Hamilton House, Dalton-in-Furness.

DEATHS.

Edwards.—On Nov. 20th, at his residence, Tynyffordd, Colwyn Bay, North Wales, Roger Edwards, M.D. Durham, M.R.C S. Eng., L.R.C.P. Lond., in his 50th year.

Neale.—On Nov. 22nd, Richard Neale, M.D. Lond., of South Hampstead and Sandgate, Kent, aged 73.

Rawdon.—On Nov. 22nd, at Underbank, Elstree, Herts, suddenly, Henry Greenwood Rawdon, M.D., F.R.C.S. Edin., aged 63 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE MEDICAL PROVIDENT LEAGUE

WE have received from a considerable number of correspondents inquiries concerning a body to be called the Medical Provident League From a preliminary circular which is stated to be addressed to "medical practitioners who now attend members of the National Deposit Friendly Society we learn that the objects and constitution of the league are as follows:—

Objects

1 To unite medical practitioners throughout the United Kingdom for the better defence and furtherance of their professional interests

2. To bring about better arrangements for affording provident medical aid to the working classes

3 To support such existent provident schemes as are equitable to medical practitioners and to oppose such schemes as are inequitable in their working or management.

4 To unite and coördinate the personal influence of medical practitioners with individual Members of Parliament in order to direct the course of any legislation which affects the interest of the medical profession or of the public health

5 To initiate, or support, schemes incidental to, or conducive to, the furtherance of the above objects

Constitution

1 Membership of the League shall be open to any registered medical practitioner

2. The members, in annual general meeting, shall elect such officers as may from time to time seem desirable and a Council to manage the affairs of the League

3 The subscription for Foundation Members shall be half a guinea entrance fee and half a guinea annual subscription All entrance fees shall be invested in Trustee Securities and set aside as a permanent Reserve Fund

This information concerning the Medical Provident League is prefaced by the following letter —

245, Kennington road, London, S E, November 1st, 1900

MY DEAR SIR,

You are aware of the universal dissatisfaction throughout our profession with the methods and management of the Medical Aid Associations and similar bodies, how they are, to an ever increasing extent overworking and underpaying their Medical Officers, how powerless our disunited ranks seem to be to cope with the growing evils of the system: how our appeals for restrictive enactments have been made, in vain to Councils and Colleges

It is strongly felt that we must do as Englishmen have always done—HELP OURSELVES and trust to our own efforts to combat the grave abuses of which we complain The first essential is union· and it has been therefore determined to establish a MEDICAL PROVIDENT LEAGUE as an active fighting and political organisation fighting the Medical Aid Associations, on their own ground, by giving every support to Provident Societies which will pay their medical officers fairly and treat them with the courtesy and respect which are due to members of a skilled and honourable profession, persuading one Society after another to adopt that attitude, moreover, uniting and co-ordinating the personal influence of medical men with individual members of Parliament so as to obtain due attention to our professional interests in all new legislation, and especially to secure proper payment for all medical services rendered to the State, e g, payments *for Certificates of Death*

A commencement has now been made in the fulfilment of the above programme After prolonged consideration and negotiation the following Resolutions have been brought before, and unanimously passed by, the governing body of the NATIONAL DEPOSIT FRIENDLY SOCIETY

(Membership, about 50 000 Invested Funds, about £250 000)

"The GENERAL COMMITTEE of the NATIONAL DEPOSIT FRIENDLY SOCIETY, which now works in the most harmonious and satisfactory manner with several hundred MEDICAL PRACTITIONERS throughout the Country, is sincerely desirous to receive the active support and confidence of the MEDICAL PROFESSION generally, and, in particular, to accord to any representations which the Medical Officers of the Society might desire to make the fullest consideration and respect It is, therefore, hereby RESOLVED:—

(1) That the General Committee of the National Deposit Friendly Society would welcome the formation of an Association of medical practitioners willing to attend Members of the Society upon the terms and conditions specified in the Rules of the Society.

(2) That, if such a Medical Association were formed, the General Committee would be prepared to co-opt, as acting members of the General Committee, two medical practitioners, to be nominated each year by the said Association, so that these *gentlemen could represent the views and wishes of its Medical* Officers upon the Governing Body of the said Society

(3) That the said Society being about to appoint—as every other Insurance Company does—special Medical Referees to examine Applicants for Life Assurance (the new Department to be opened by this Society on January 1st next), the General Committee would be prepared to receive the Nominations of such Referees if made by the said suggested Association"

In brief, then, this Society, which is highly *spoken of by* all who have worked for it, offers, in return for moral support from a medical association to give that association a voice in the management of its affairs by direct representation on its governing body; and to give it also a valuable *quid pro quo* by the power of nominating the practitioners who shall be appointed as MEDICAL REFEREES for the new LIFE INSURANCE DEPARTMENT of the Society These appointments as you are doubtless aware, will probably be very lucrative, *and every member of the League would of course, be eligible for nomination.*

(*In future, as at present any member of the Society can consult any medical practitioner he chooses, for sickness or injury The Society merely offers valuable appointments for special Insurance work to those practitioners who will combine to give their associated aid and support to the Society*)

It will be admitted that these concessions are wise and generous and prove the desire of this Society to stand well with the Medical *Profession It is obvious that they represent a strong foundation* for the future work and success of the Medical Provident League (*vide* next page), and a remarkable encouragement to practitioners to unite together to help both themselves and their profession

All the preliminary steps have been taken and cordial promises of help have been received It is therefore proposed to found the MEDICAL PROVIDENT LEAGUE and to enrol members at once, to elect the Officers and the Council as speedily as possible, *in order to nominate members as Referees for every district Immediate action is necessary, as those appointments must be settled in the next month*

Under the circumstances, it is felt that, in the formation of the League, the offer of membership and its great practical advantages should be *first* made to medical practitioners who now attend members of the National Deposit Friendly Society, and I therefore address this preliminary circular to you, feeling confident that you will recognise the practical value of membership to yourself and *afford us your co-operation and* aid

To avoid the financial mistake, made by most Medical Societies in the past an Entrance Fee of half a guinea besides an Annual Subscription of half a guinea, for FOUNDATION MEMBERS, has been decided upon, and the former amounts will be invested in Trustee securities as a Reserve Fund It is probable in view of the practical value of membership, that *both the Entrance Fee and the Annual Subscription will be considerably increased for future members*

If you will fill up and return to me the appended form, your name shall be enrolled as a Foundation Member of the League, and further circulars will be sent you at once If you do not reply, it will be assumed that you do not desire to join the movement

I am, Dear Sir,
Yours faithfully,
J W J OSWALD, M D,
Chairman of the Organising Committee

Dr Oswald's letter incloses the following post-card addressed to himself

The Secretary, The Medical Provident League

SIR —I request you to place my name on the list of Foundation *Members of the* Medical Provident League and as soon as the League is formed I will forward you Cheque for One Guinea, being an Entrance Fee of half a guinea and my first Annual Subscription *of half a* guinea

Qualifications

Please write very distinctly
Signed
Address
November 1900

PLEASE ANSWER THE FOLLOWING QUESTIONS

Would you desire to be nominated for election as a Medical Insurance Referee of the National Deposit Friendly Society?

Would you act, if elected, as Local Secretary of the League in your District?

Would you act on the General Council of the League, if elected thereon?

We have given so much space to the printing of this circular, without abbreviation, because we have to offer unfriendly criticism of the proposals which it contains It is because we, like the gentlemen whom Dr Oswald addresses, "are aware of the universal *dissatisfaction* throughout our profession with the methods and management of the Medical Aid Association and similar bodies," and are aware, also, how well grounded this dissatisfaction is, that we *feel* bound to warn our readers that the league holds out nothing which should induce them to join it. The circular is a proposal *for a bargain* to be struck between medical men and a friendly society The National Deposit Friendly Society desires "moral support from a medical association" The General Committee

Eadie, James, M.B., Ch.B. Melb., has been appointed Public Vaccinator for Balaclava, Victoria, Australia.

Freyer, J. K., M.R.C.S., L.R.C.P. Irel., has been appointed Government Medical Officer and Vaccinator at Campbelltown, New South Wales.

Gamble, Morris, F. H., L.R.C.P., L.R C S. Edin, L.F.P.S. Glasg, has been appointed Medical Superintendent, *pro tem*, to the Sunbury Lunatic Asylum, Victoria, Australia.

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Richardson, J. C. R, M.B., B.C. Camb., has been appointed Medical Officer of Health for the Saxmundham Urban Sanitary District.

Roll, G. W., M B, B.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Royal Westminster Ophthalmic Hospital, King William-street, Strand, W.C.

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Woodhouse, H. C., M.B., Ch.B. Vict., has been appointed District Medical Officer, Madeley Union, vice G. L. Proctor, resigned.

Zlotkowski, F. S. N., M.B. Syd., has been appointed a Justice of the Peace for New South Wales and Queensland.

Vacancies.

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Birmingham and Midland Eye Hospital, Church-street, Birmingham.—Assistant House Surgeon. Salary £60 per annum, with apartments and board.

Blackburn and East Lancashire Infirmary.—Junior House Surgeon. Salary to commence at £60 per annum, with board, washing, &c.

Brighton and Hove Lying-in Institution and Hospital for Women, 76, West-street, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance.

Bury Infirmary.—Senior House Surgeon. Salary £100, with board, residence, and attendance. Also Junior House Surgeon. Salary £80, with board, residence, and attendance.

Chelsea Hospital for Women, Fulham-road, S.W.—Clinical Assistant. Tenable for three months on payment of eight guineas.

Chesterfield and North Derbyshire Hospital and Dispensary, Chesterfield.—Resident House Surgeon for two years. Salary £100 per annum, with board, apartments, and laundry.

Darlington Hospital and Dispensary.—House Surgeon, unmarried. Salary £150 per annum, with *rooms in the institution.* Applicant to board himself.

Derbyshire Royal Infirmary, Derby.—Resident House Surgeon for twelve months Salary £100 per annum, with apartments and board.

Doncaster General Infirmary and Dispensary.—Assistant House Surgeon. Salary £40 per annum, with board and residence.

East Suffolk and Ipswich Hospital, Thorofare, Ipswich.—Two House Surgeons, unmarried. Salary £80 for the senior and £70 for the second, with board, lodging, and washing.

Government of Ceylon.—Medical Man for the Ceylon Medical College, for the post of Registrar, Curator of Museum, and Lecturer. Salary Rs. 6000 per annum, rising by triennial increments of Rs. 500 to Rs. 8000.—Address, *Private Secretary, Colonial Office, S.W.*

Grove Hall Asylum, Bow, London, E—Junior Assistant Medical Officer. Salary £120 per annum, with board, furnished apartments, attendance, and washing

Guest Hospital, Dudley.—Assistant House Surgeon, for six months. Salary at the rate of £40 per annum, residence, board, and washing.

Halstead Union.—Medical Officer for the Fourth District of the Union. Salary £36 per annum. Special arrangement for extra School or Applications *to the Clerk, Halstead.*

Pearce, St. St. Francis, New Kent-road, London.—Gynæcologist. London Schomust be F.R C.S. Eng.

Phillips, UnivWomen and Children, Leeds.—Non-resident House Copeland Savagmonths. Salary at the rate of £125 per annum.

Amy Jane Guy Srmary.—Junior House Surgeon. Salary £60 per Hospital; Williamd, residence, and washing.

mew's Hospital;

Hull Royal Infirmary.—House Surgeon for two years, unmarried. Salary 100 guineas per annum, with board and furnished apartments. Also Assistant House Surgeon for one year. Salary £60, with board and furnished apartments. Also Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

Kensington Dispensary, 56, Bedford-gardens, Kensington—Honorary Medical Officers Also Honorary Anæsthetist.

Leicester Infirmary.—Assistant House Surgeon for 12 months. Salary £80, with board, apartments, and washing.

London County Asylum, Hanwell, W.—Junior Assistant Medical Officer. Salary £150 per annum, with board, furnished apartments, and washing. Applications to the Clerk to the Asylums Committee, *Office, 6, Waterloo-place, S.W.*

London Hospital Medical College, Mile-end, E.—Assistant Demonstrator of Anatomy. Salary £90 a year.

Miller Hospital and Royal Kent Dispensary, Greenwich-road, S.E—*Junior Resident Medical Officer for six months. Salary at* the rate of £60 per annum, with board, attendance, and washing.

Noble's Isle of Man General Hospital and Dispensary, Douglas, Isle of Man.—Resident House Surgeon, unmarried. Salary £82 per annum, with board and washing free.

Northampton General Infirmary.—House Surgeon, unmarried. Salary £125 per annum, with furnished apartments, board, attendance, and washing.

Nottingham General Dispensary.—Assistant Resident Surgeon. Salary £140 per annum, all found except board.

Parish of Birmingham Workhouse Infirmary.—Assistant Resident Surgical Officer at the Workhouse Infirmary for one year. Salary £100 per annum, with furnished apartments, rations (no alcoholic *liquors), coals, gas,* laundry, and attendance. Applications to the Clerk, Parish Offices, Edmund-street.

Parish of Fulham.—Second Assistant Medical Officer at the Infirmary, St. Dunstan's-road, Hammersmith, W., for six months. Salary at the rate of £60 per annum, with board, furnished apartments, and washing. Apply to the Medical Superintendent at the Infirmary.

Parish of St. Leonard, Shoreditch.—Second Medical Officer of Health for the Infirmary, Hoxton-street, N., for six months. Salary at the rate of £100 per annum, with rations, washing, and furnished apartments at the Infirmary.

Rhondda Urban District.—Medical Officer of Health for the district *for* one year. Salary £500, including travelling expenses. Applications to be made to the Clerk, Public Offices, Pentre (Glam.)

Royal Ear *Hospital*, Soho, London.—House Surgeon (non-resident) Small honorarium given.

Royal Hants County Hospital, Winchester.—House Surgeon, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

Royal Hospital for Incurables, Donnybrook, Dublin.—Resident Medical Officer for one year. Salary £100 per annum, with board and furnished apartments.

Royal National Mission to Deep Sea Fishermen's Hospital Vessels.—Young Medical Officer for service. Salary £3 3s. weekly. Apply to Mr. F. H. Wood, 181, Queen Victoria-street, London.

Seamen's Hospital Society ("Dreadnought"), Greenwich, S E.—House Physician for "Dreadnought" Hospital. Salary £75 per annum, with board and residence.

The Chief Inspector of Factories gives notice of vacancies as Certifying Surgeons under the Factory Acts at Banbridge, in the county of Down; at Dorking, in the county of Surrey; at Walton-on-the-Naze, in the county of Essex; and at Halesworth, in the county of Suffolk.

Throat Hospital, Golden-square, London.—Non-resident Junior House Surgeon. Salary £100 per annum, with luncheon daily.

University College, London.—Assistant Surgeon.

West Herts Infirmary, Hemel Hempstead.—House Surgeon and Dispenser, who shall be also Assistant Secretary, for two years, unmarried. Salary £100 per annum, with furnished rooms, board, fire, lights, attendance, and washing.

West London Hospital, Hammersmith-road, W.—House Physician and House Surgeon, for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

Davis—On Nov. 23rd, at Grand-parade, St. Leonards, Dorothy, wife of W. H. Davis, M.B., M.R C P., of a daughter.

Jones.—On Nov. 25th, at Mayo, Llangammarch Wells, Breconshire, the wife of W. Black Jones, M.D., B S, of a daughter (stillborn)

Newton—On Nov. 14th, at Balcombe, Sussex, the wife of Reginald Newton, M.R C.S., L.R.C.P., of a son.

MARRIAGES.

Elwin—Graves.—On Nov. 24th, at St. Alphege's, Greenwich, George Richard Elwin, M D., of Brook House, Bromley, Kent, to Beatrice, eldest daughter of James Graves, The Grove, Blackheath.

Tresidder—Garden.—On Nov. 21st, at the parish church, Dalton-in-Furness, Morton Everard Tresidder, M.R.C S., L R.C.P. Lond., of Westcombe Park, Blackheath, London, to Elsie Annie daughter of the late James Garden, Hamilton House, Dalton-in-Furness.

DEATHS.

Edwards.—On Nov. 20th, at his residence, Tynyffordd, Colwyn Bay, North Wales, Roger Edwards, M.D. Durham, M.R.C.S. Eng., L.R.C.P. Lond., in his 50th year.

Neale.—On Nov. 22nd, Richard Neale, M.D. Lond., of South Hampstead and Sandgate, Kent, aged 73.

Rawdon.—On Nov. 22nd, at Underbank, Elstree, Herts, suddenly, Henry Greenwood Rawdon, M.D., F.R.C.S. Edin., aged 63 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE MEDICAL PROVIDENT LEAGUE.

WE have received from a considerable number of correspondents inquiries concerning a body to be called the Medical Provident League. From a preliminary circular which is stated to be addressed to "medical practitioners who now attend members of the National Deposit Friendly Society we learn that the objects and constitution of the league are as follows:—

Objects

1. To unite medical practitioners throughout the United Kingdom for the better defence and furtherance of their professional interests.

2. To bring about better arrangements for affording provident medical aid to the working classes.

3. To support such existent provident schemes as are equitable to medical practitioners and to oppose such schemes as are inequitable in their working or management.

4. To unite and coördinate the personal influence of medical practitioners with individual Members of Parliament in order to direct the course of any legislation which affects the interest of the medical profession or of the public health.

5 To initiate, or support, schemes incidental to, or conducive to, the furtherance of the above objects.

Constitution.

1. Membership of the League shall be open to any registered medical practitioner.

2. The members, in annual general meeting, shall elect such officers as may from time to time seem desirable and a Council to manage the affairs of the League.

3. The subscription for Foundation Members shall be half a guinea entrance fee and half a guinea annual subscription. All entrance fees shall be invested in Trustee Securities and set aside as a permanent Reserve Fund.

This information concerning the Medical Provident League is prefaced by the following letter:—

245, Kennington-road, London, S E, November 1st, 1900.

MY DEAR SIR,

You are aware of the universal dissatisfaction throughout our profession with the methods and management of the Medical Aid Associations and similar bodies; how they are, to an ever-increasing extent, overworking and underpaying their Medical Officers; how powerless our disunited ranks seem to be to cope with the growing evils of the system; how our appeals for restrictive enactments have been made, in vain, to Councils and Colleges.

It is strongly felt that we must do as Englishmen have always done—HELP OURSELVES; and trust to our own efforts to combat the grave abuses of which we complain. The first essential is union; and it has been therefore determined to establish a MEDICAL PROVIDENT LEAGUE as an active fighting and political organisation; fighting the Medical Aid Associations, on their own ground, by giving every support to Provident Societies which will pay their medical officers fairly and treat them with the courtesy and respect which are due to members of a skilled and honourable profession; persuading one Society after another to adopt that attitude; moreover, uniting and co-ordinating the personal influence of medical men with individual members of Parliament so as to obtain due attention to our professional interests in all new legislation, and especially to secure proper payment for all medical services rendered to the State; e g, payments for Certificates of Death.

A commencement has now been made in the fulfilment of the above programme. After prolonged consideration and negotiation the following Resolutions have been brought before, and unanimously passed by, the governing body of the NATIONAL DEPOSIT FRIENDLY SOCIETY.

(Membership, about 50,000 Invested Funds, about £250,000.)

"The GENERAL COMMITTEE of the NATIONAL DEPOSIT FRIENDLY SOCIETY, which now works in the most harmonious and satisfactory manner with several hundred MEDICAL PRACTITIONERS throughout the Country, is sincerely desirous to receive the active support and confidence of the MEDICAL PROFESSION generally, and, in particular, to accord to any representations which the Medical Officers of the Society might desire to make the fullest consideration and respect. It is, therefore, hereby RESOLVED:—

(1) That the General Committee of the National Deposit Friendly Society would welcome the formation of an Association of medical practitioners willing to attend Members of the Society upon the terms and conditions specified in the Rules of the Society.

(2) That, if such a Medical Association were formed, the General Committee would be prepared to co-opt, as acting members of the General Committee, two medical practitioners, to be nominated each year by the said Association, so that these gentlemen could represent the views and wishes of its Medical Officers upon the Governing Body of the said Society.

(3) That the said Society being about to appoint—as every other Insurance Company does—special Medical Referees to examine Applicants for Life Assurance (the new Department to be opened by this Society on January 1st next), the General Committee would be prepared to receive the Nominations of such Referees if made by the said suggested Association."

In brief, then, this Society, which is highly spoken of by all who have worked for it, offers, in return for moral support from a medical association, to give that association a voice in the management of its affairs by direct representation on its governing body; and to give it also a valuable *quid pro quo* by the power of nominating the practitioners who shall be appointed as MEDICAL REFEREES for the new LIFE INSURANCE DEPARTMENT of the Society. These appointments, as you are doubtless aware, will probably be very lucrative, and every member of the League would, of course, be eligible for nomination.

(In future, as at present, any member of the Society can consult any medical practitioner he chooses, for sickness or injury Th Society merely offers valuable appointments for special Insurance work to those practitioners who will combine to give their associated aid and support to the Society.)

It will be admitted that these concessions are wise and generous and prove the desire of this Society to stand well with the Medical Profession. It is obvious that they represent a strong foundation for the future work and success of the Medical Provident League (*vide* next page), and a remarkable encouragement to practitioners to unite together to help both themselves and their profession.

All the preliminary steps have been taken and cordial promises of help have been received. It is, therefore, proposed to found the MEDICAL PROVIDENT LEAGUE and to enrol members at once; to elect the Officers and the Council as speedily as possible, *in order to nominate members as Referees for every district. Immediate action is necessary, as those appointments must be settled in the next month*

Under the circumstances, it is felt that, in the formation of the League, the offer of membership and its great practical advantages should be *first* made to medical practitioners who now attend members of the National Deposit Friendly Society, and I therefore address this preliminary circular to you, feeling confident that you will recognise the practical value of membership to yourself and afford us your co-operation and aid.

To avoid the financial mistake, made by most Medical Societies in the past, an Entrance Fee of half a guinea, besides an Annual Subscription of half a guinea, for FOUNDATION MEMBERS, has been decided upon, and the former amounts will be invested in Trustee securities as a Reserve Fund. It is probable, in view of the practical value of membership, that *both the Entrance Fee and the Annual Subscription will be considerably increased for future members.*

If you will fill up and return to me the appended form, your name shall be enrolled as a Foundation Member of the League; and further circulars will be sent you at once. If you do not reply, it will be assumed that you do not desire to join the movement.

I am, Dear Sir,
Yours faithfully,
J. W. J OSWALD, M.D.,
Chairman of the Organising Committee.

Dr. Oswald's letter incloses the following post-card addressed to himself.

The Secretary, The Medical Provident League.

SIR,—I request you to place my name on the list of Foundation Members of the Medical Provident League, and as soon as the League is formed I will forward you Cheque for One Guinea, being an Entrance Fee of half a guinea, and my first Annual Subscription of half a guinea.

Qualifications

Please write very distinctly.
Signed ....
Address ....
November .... 1900.

PLEASE ANSWER THE FOLLOWING QUESTIONS.

Would you desire to be nominated for election as a Medical Insurance Referee of the National Deposit Friendly Society? ....

Would you act, *if elected, as Local Secretary* of the League in your District?... ....

Would you act on the General Council of the League, if elected thereon?..... ... .

We have given so much space to the printing of this circular, without abbreviation, because we have to offer unfriendly criticism of the proposals which it contains. It is because we, like the gentlemen whom Dr. Oswald addresses, "are aware of the universal dissatisfaction throughout our profession with the methods and management of the Medical Aid Association and similar bodies," and are aware, also, how well grounded this dissatisfaction is, that we feel bound to warn our readers that the league holds out nothing which should induce them to join it. The circular is a proposal for a bargain to be struck between medical men and a friendly society. The National Deposit Friendly Society desires "moral support from a medical association." The General Committee of the National Deposit Friendly Society "is sincerely desirous to receive the active support and confidence of the medical profession." In other words, the National Deposit Friendly Society will be much obliged if medical men will combine together to act as canvassers for the society. There is no doubt of the value that such support would be to the society. What are the medical men to receive in return? Membership of a league, which they could certainly found and manage for themselves, if they saw it was needed, without the embarrassing assistance of a friendly society; and eligibility for nomination as medical referees to a life insurance scheme which has not yet been started. We think that the National Deposit Friendly Society would have all the best of the bargain and we advise our readers to refrain from filling up the card.

We are sorry to write in an antagonistic spirit to a scheme which on the face of it is an attempt to reconcile a well-managed friendly society—as we believe the National Deposit Friendly Society to be—with the medical profession. But the olive branch must be tendered in a very different way. Medical men must not be invited to act as local secretaries to a body affiliated to a friendly society, for a local secretary who does not canvass for his association is an idle name, while a local secretary who does his duty has necessarily to be a tout. (We do not use the word in an offensive sense.) If the National Deposit Friendly Society is genuinely anxious to work hand-in-hand with the medical profession we can tell it how to begin. It should co-opt as acting members of its General Committee representatives chosen by several hundred of the medical practitioners "with whom it now works in the most harmonious and satisfactory manner," and should take their views as to the rate of remuneration for medical service and the wage limit above which medical service cannot be rendered. There are other things that might be discussed in a general committee so constituted that medical interests could be properly looked after, but the two points which we have mentioned would be good ones upon which to begin.

"THE REMOVAL OF SUPERFLUOUS HAIRS."

To the Editors of THE LANCET.

SIRS,—Your correspondent "Bath" in THE LANCET of Oct. 20th, 1900, will find a recently prepared sulphuret of calcium effective in the removal of hairs. The sulphuret of calcium is easily prepared by passing sulphuretted hydrogen through milk of lime until the colour of the lime changes to a bluish tint. After a few weeks the preparation becomes weakened, due probably to the gradual oxidation of the sulphuret. I am, Sirs, yours faithfully,

Nov. 16th, 1900. J. J. R.

"MOTOR-CARS FOR MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—Kindly allow me to say a few more words on the above subject and I will not further trouble you. First, Mr. Truman, so far as I can gather, has not said a word in support of the motor-cars for medical men's use. Secondly, the subject is not a "foreign" one to your columns as my remarks were entirely confined to the utility of motor-cars for medical men at the present time and not for general purposes. Thirdly, an art critic need not necessarily be a practical painter. Fourthly, the "man in the street" often has a shrewder notion of things in general than he is credited with.

I am, Sirs, yours faithfully,

Nov. 12th, 1900. MOTOR CAR.

NEW EDITIONS OF SCIENTIFIC WORKS.

To the Editors of THE LANCET.

SIRS,—Every week almost sees new editions of general text-books and books on special subjects It would be a great boon to many practitioners who, like myself, cannot afford to keep throwing away the older editions and investing in the latest and yet desire to keep up-to-date, if authors and publishers when issuing a new edition could see their way to publish an appendix giving the alterations and additions of such work. They would not be likely to lose by it, as those who can afford it would still buy the complete work, while the appendix would appeal to a wider circle. May I ask for your powerful support of this appeal? I am, Sirs, yours faithfully,

Nov. 19th, 1900. APPENDIX.

THE LATE HARMAN JOHN TARRANT.

WE have received another letter calling our attention to the advertising methods of this unfortunate man. Tarrant died early in September in Sydney—a fact which we have learned since our last publication of reflections upon his actions.

A POINT IN ETHICS.

To the Editors of THE LANCET.

SIRS,—A and B are friendly practitioners in the same town. C is well known to both. During A's absence on holiday C sends for B because he does not wish to have the services of A's assistant whom he well knows. B tells C that he attends for A and that A must be informed of it when he returns. C agrees to this, but does not inform him. The day after A returns more medicine is sent for from B, which he declines to supply, sending a note that his attendance was for an emergency and that now, A having come home, C must apply to him. Subsequently A and B meet and the matter is mentioned by B, but A seems annoyed and says that C ought to have known better—in fact, almost blames B for going. Three months afterwards C again sends for B and says he wants him to attend and remarks that he is going to have what doctor he likes. Ought B in these circumstances to attend, and can A blame him for taking the case when C palpably wants to change his medical attendant?

I am, Sirs, yours faithfully,

Nov. 26th, 1900. NEMO.

*** B can attend C without infringing medical etiquette, but he should point out to C that such changes in medical attendance often lead to unpleasantness. It is sincerely to be hoped that A will not allow the matter to alter the harmonious relations between him and B.—ED. L.

"THE BATTLE OF THE CLUBS: A SUCCESSFUL PRECEDENT."

To the Editors of THE LANCET.

SIRS,—Under the above heading I read with much interest the annotation in THE LANCET of Nov. 24th, p. 1514, *re* the "Eastbourne Provident Medical Association" and its success. There is one point which to my mind is of great importance, and on which I should be glad of information—viz., How is the collector paid? Whether a fixed salary, or by commission, or part commission? For if either of the latter two it is obviously to his interest to cause as many persons as possible to join the association. In which case "collector" and "canvasser" are undoubtedly synonymous terms. A collector is quite as much human nature as a canvasser, and instructions to him not to canvass are futile, and in fact childish.

I am, Sirs, yours faithfully,

Ilford, Nov. 27th, 1900. C. B. TOWNSHEND.

THE PARKES MEMORIAL PRIZE.

To the Editors of THE LANCET.

SIRS,—I shall be glad if you will inform me through the medium of your paper the conditions of award of the Parkes Memorial Bronze Medal. I am, Sirs, yours faithfully,

Nov. 9th, 1900. DWARF.

*** The Parkes Memorial Prize is awarded triennially. It consists of a bronze medal and a sum of 75 guineas. The competition is open to executive officers on full pay of the Navy, Army, and Indian medical services, except assistant professors at Netley who are not eligible to compete during their term of office. Application should be made to the secretary, Parkes Memorial Committee, Royal Victoria Hospital, Netley.—ED. L.

CLARATMOS.

To the Editors of THE LANCET.

SIRS,—Permit me to correct a mistake which has inadvertently been inserted in THE LANCET of Nov. 24th, page 1508, *re* "Claratmos Patent Ventilating Screen." Messrs. F. W. Warren and Co. are described as the patentees, whereas I am the patentee and Messrs Warren and Co. are the manufacturers. I have used the screen in my own house and have found it invaluable, inasmuch as it admits air without impurities, a point of no small importance during the foggy winter season.

I am, Sirs, yours faithfully,

South Kensington, S.W., Nov. 26th, 1900. CALDWELL STEPHEN.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 29th, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain fall	Solar Radiation in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Nov. 23	29·76	S.W.	...	70	49	38	39	40	Foggy
" 24	29·73	E.	...	52	50	39	42	44	Cloudy
" 25	29·50	W.	0·23	63	53	44	50	50	Cloudy
" 26	29·68	S.W	0·01	59	51	45	44	45	Overcast
" 27	29·56	WSW	0·01	61	50	44	43	45	Overcast
" 28	29·19	ESE	0·04	51	49	44	47	47	Raining
" 29	29·13	E.	0·30	50	48	45	44	45	Overcast

During the week marked copies of the following newspapers have been received: *Public Health Engineer (London), Norfolk Daily Standard, Lancashire Daily Post, Science Siftings (London), Lincolnshire Echo, Birmingham Daily Post, Jersey Express, Hull News, Newcastle Daily Chronicle, Vegetarian, Liverpool Daily Post, Wiltshire Advertiser (Devizes), Norwood Review, Daily Mail (London), Blackburn Daily Telegraph, Country Life (London), Gainsborough Leader, Scarborough Daily Post, Western Mail (Cardiff), Glasgow Herald, Sheffield Daily Telegraph, Nottingham Daily Guardian, East Anglian Daily Times, Bradford Observer, Lisburn Standard, Pioneer Mail, Scotsman, Citizen, Leeds Mercury, Folkestone Express, Dundee Advertiser, Architect, Builder, Bristol Mercury, Perthshire Advertiser, Bailie, Yorkshire Post, Norwich Press, Bromwich News, Times of India, Radcliffe Times, Stirling Journal, Leith Observer,* *Modern Society, Accrington Observer, Grocer, Shields Morning Mail, Cigarette World, Rangoon Times, Reading Mercury, Hertfordshire Mercury, Local Government Chronicle City Press, Mining Journal, Consett Guardian, Australasian Medical Gazette, Morning Post, East Grinstead Observer, Local Government Journal, Manchester Courier, Surrey Advertiser, Woolwich Herald, Motor Car Journal, Fife Herald, Topical Times, Teignmouth Gazette, Rochdale Times, &c., &c.*

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2 30 P.M.), London Throat (2 P.M.).

TUESDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2 30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2 30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (5th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

THURSDAY (6th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9 30 A.M. and 2 30 P.M.).

FRIDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3 30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9 30 A.M. and 2.30 P.M.).

SATURDAY (8th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (3rd).—*SOCIETY OF ARTS.*—8 P.M. *Prof. J. A. Fleming:* Electric Oscillations and Electric Waves. (Cantor Lecture)

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish square, W.)—4.30 P.M. Annual Meeting. Cases and Specimens will be shown by Mr. A. H. Cheatle, Mr. C. H. Fagge, Dr. Lack, Mr. R. Lake, Dr. H. Tilley, Mr. P. M. Yearsley, Mr. Abbott, Mr. C. A. Ballance, and Dr. Milligan. A discussion will follow each item.

TUESDAY (4th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—Dr. S. Bontor: A Case of Carcinoma of the Breast.—Mr. A. G. R. Foulerton: A Case of Hæmangio Sarcoma of the Breast.—Dr. W. C. Bosanquet: Cystic Adenoma of the Supra-renal Body.—Dr. Thursfield: Two Cases of Congenital Morbis Cordis. And other cases.

WEDNESDAY (5th).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Mr. Targett, Dr. H. Spencer, and others Papers:—Dr. W. J. Sinclair: A Contribution to the Diagnosis and Treatment of Retroflexio-versio Uteri Gravidi.—Dr. E. R. Dawson: The Essential Factor in the Causation of Sex, a New Theory of Sex.

THURSDAY (6th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8 30 P.M. Clinical Eveening.

FRIDAY (7th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Dr. G. V. Poore: Dietetic Problems (Purvis Oration). Conversazione. Exhibitions will be given by Mr. J. J. Vesey, Mr. L. Miller, Dr. Pepperdene, Mr. E Clarke, Dr. M. Dockrell, Messrs. Meyer and Metzler, Messrs. Oppenheimer and Co., and Messrs. Van Abbott and Son.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith-road, W.).—Clinical Evening. Cases will be shown by Dr. L. Dobson, Dr. S. Taylor, Dr. R. Sinclair, Mr. C. B. Keetley, and Mr. H. Cane-Smith. Microscopic Specimens will be shown by Mr. D. Brewer.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Clinical Evening.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Discussion on the Treatment of Nasal Polypi (opened by Dr. L. Lack and Mr. C. Baber.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

MONDAY (3rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. A. Whitfield: Consultation. (Skin.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Davis: Some Medical Cases.

TUESDAY (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. G. Rankin: Consultation. (Medical.)

THE HOSPITAL FOR DISEASES OF THE SKIN (Stamford-street, Blackfriars).—5 P.M. Clinical Lecture:—Dr. C. F. Marshall: Secondary Syphilides.

WEDNESDAY (5th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—2-3.30 P.M. Mr. H. Pinch: Class. Clinical Microscopy 5 P.M. Sir Hector Cameron: Clinical Lecture.

LONDON THROAT HOSPITAL (204, Gt. Portland street, W.).—5 P.M. Dr. H. J. Davis: Nasal Obstruction. (Post-graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Maguire: Congenital Affections of the Heart.

THURSDAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Batten: Myopathies.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Mr. St. George Reid: A Short Sketch of the Ontogony of the Auditory Apparatus (with microscopical specimens).

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Saunders: Serum Inoculation for the Prevention and Cure of Disease,

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Murray: Medical Cases. (Post-graduate Course.)

FRIDAY (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—4 P.M. Mr. R. Lake: Consultation. (Throat.)

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention be given to this notice

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

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The Harveian Lectures

ON

PROGNOSIS AND TREATMENT IN PULMONARY TUBERCULOSIS.

Delivered before the Harveian Society of London on Nov. 1st, 8th, and 15th, 1900,

BY ROBERT MAGUIRE, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, AND PHYSICIAN TO OUT-PATIENTS, ST. MARY'S HOSPITAL.

LECTURE II.[1]

Delivered on Nov. 8th, 1900.

MR. PRESIDENT AND GENTLEMEN,—In my last lecture I discussed with you how the prognosis of tuberculosis of the lungs in the first stage of its course, that of "invasion," may be judged from the physical signs and the localisation of the lesions, and I considered, also, what effect pre-existent affections might have upon the future of the patient. Let us now pass on to the indications which may be given to us by individual symptoms and complications, still confining our discussion to the "first stage." The symptoms accompanying this stage are many and all are at times important for diagnosis, but those which help us in prognosis are but few, and they may be classified under the heads of Pyrexia, General Weakness, Digestive Disturbances, and Hæmoptysis. I have mentioned how the conditions previously considered require care in their estimation before one can found a prognosis upon them. But still more is this necessary in the case of symptoms. Not one of them alone is of much value, but I must point out to you how, when combined together or with the other conditions, they may be of some assistance. Pyrexia may be entirely absent, even though the temperature in a doubtful case be taken every four hours. So much, one might say, the better for the patient. So much the better, too, might we think the matter if there were but few physical signs, and those, too, limited to one particular area. But caution must be observed here. Such a state of things may be merely the result of a lack of reactionary power on the part of the general system, a lack of protective power; and if together with the conditions named there be tubercle bacilli in the sputum and extreme general weakness we can only consider the condition as very grave and indicating an unresisted attack of the bacillus. In no short time one frequently meets with a furious outbreak and rapid destruction of lung tissue.

But given bacilli in the sputum and little or no pyrexia, the local manifestation limited, but with the general strength well maintained, the prognosis is good. The indications are that the attack is not powerful, the resistance to it is good and not fully called forth. For we should, let me remind you, consider the fever as the result either of bacillary poison or, on the other hand, of inflammatory chemiotaxic reaction. It is impossible to entirely differentiate the two, but I would provisionally put it to you that the maintenance of body strength, together with the presence of localised physical signs and the lack of marked pyrexia, would indicate a healthy reaction, while, on the other hand, localised and even very limited physical signs, with lack of marked pyrexia but with great diminution of physical strength, would show a lack of resistance to the bacillus, not only on the part of the lung, but on that of the whole general system.

Yet, leaving the question of maintenance of general strength out of the discussion, one may roughly say that the higher the pyrexia the worse the prognosis in this stage, and *vice versâ*. And yet once more we must use caution, especially with neurotic patients. Such patients may show a very high temperature when there is really nothing much wrong with them, and in the absence of physical signs their condition is very confusing. Nothing but great experience can prevent the physician from being led into error in diagnosis by such a physical state, and the same error is easily made in prognosis. It happens not infrequently that tuberculosis of the lungs, like enteric fever, may have a most turbulent outbreak and very soon lapse into a very ordinary mild and tractable attack. Now, my colleague, Dr. Kingston Fowler, has shown that the only form of pyrexia which can be absolutely said to be tuberculous is that in which the morning temperature is higher than that of the evening. For the diagnosis of pulmonary and other forms of tuberculosis there cannot be any question of the value of this observation, and especially when other indications are doubtful. For prognosis too, this sign may be of use as indicating a very pronounced tuberculous poisoning. On this point even the large record of out-patient cases which I have used cannot help us, and we must appeal for facts to the in-patient department. Since taking the charge of in-patients I have paid special attention to the matter, and at present for convenience of observation the evening temperature is marked on the charts in red and the morning temperature in black. It is very remarkable, however, how very rarely in the course of a case of pure tuberculosis this sign appears. Nor is this to be wondered at when we remember the many known causes of the pyrexia. Tuberculous infection and its accompanying tissue reaction or chemiotaxis are, in the first stage, causes of fever. Whereas later we have added to them poisoning by the staphylococcus and pneumococcus. Pyrexia due to tuberculous poison alone must necessarily be rare and not always is it of the reversed type. Therefore, it must be only seldom that the pyrexial condition can help us in prognosis. But somewhat approaching this type is a pyrexia in which the morning temperature never reaches the normal, albeit the evening temperature may be only slightly higher. Such a pyrexia, even alone as a sign, is of very unfavourable augury, and the higher the morning temperature and the nearer it approaches to the evening temperature the worse is the outlook for the patient.

In regard to the foregoing remarks it is necessary that I should say that they refer to temperatures taken in the mouth. For really scientific results one should place the thermometer in the rectum and this is done now, I believe, in most of the open-air sanatoria. But in ordinary practice there are obvious objections to this method and I have striven here to give opinions which may be made use of only in ordinary practice.

General weakness at the commencement of a tuberculous attack must manifestly be harmful, and indeed, as I have hinted above, increases greatly the gravity of other symptoms. Particularly (if one may analyse the state) must weakness of cardiac and vaso-motor action be considered a bad sign. The patients who have blue and cold extremities almost invariably do badly. Nor does this remark contradict what I have previously said as to the occasionally bad prognosis to be given to florid subjects, for often that florid appearance is a sign of vaso-motor weakness and not of a healthy circulation. This feebleness of circulation, and with it of the general system, carries with it a bad prognosis, not only because it indicates a prospective lack of resistance of the tissues to the tuberculous poison, but also because it usually interferes greatly with such valuable means of cure as over feeding and residence in high altitudes and the open-air, valuable as at times these remedies may be in counteracting this very condition. The same must be said of digestive disturbances accompanying an attack. They interfere with the application of systematic treatment. But I should like also to say a few words about the prognosis of cases which show gastric derangement as their first symptom. It has long been known that an irritation of the pneumogastric nerve endings in the lungs may first show itself by a reflex irritation of the endings of the same nerve in the stomach. The diagnosis of such an occurrence is often very difficult, since even for some little time the lung lesion may be so slight as to be indiscoverable on the most careful examination. But sooner or later the lung lesion does show itself, and in my experience such cases eventually do badly.

Let us now turn, however, to one of the best known of the symptoms which accompany the earlier stages of pulmonary tuberculosis—namely, hæmoptysis. This symptom is only too well known and causes far too much alarm. Yet it occurs so often in other disorders that I think one may say that hæmoptysis alone is most frequently not caused by lung disease. But given that it actually is produced by lung disease in the earlier stages, life to be accompanied by signs of lung mischief. 2. Always post-mortem laryngeal tuberculosis is accompanied by lung lesions. 3. Advanced lesion of the larynx may be accompanied by but slight lesion of the lungs and yet the former may be secondary and the latter primary. 4. The non-finding of lung trouble is no proof of its non-existence, for even the best observers may be deceived in this matter.

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[1] Lecture I. was published in THE LANCET of Dec. 1st, 1900, p. 1549

As an illustration of the latter argument I may mention a case which occurred in the out-patient department of the Brompton Hospital. A man presented himself one day who had unquestionable tuberculous ulceration of the larynx. He had also cough and all the appearances and symptoms of advanced tuberculosis of the lungs. But the most careful examination by myself and several other medical men who were attending the clinique, failed to find any but the most ambiguous physical signs in the chest. This might have been looked upon as a case of primary laryngeal tuberculosis, yet I was sure it could not be. On two other occasions, an interval of a fortnight elapsing between his visits, his chest was further examined and with the same result. But on his fourth attendance signs of cavity were found in almost every portion of the thorax. The cavities could not have formed in a fortnight. Undoubtedly they were present at his first examination but, from blocking by mucus or from some other condition, escaped detection.

Tuberculosis of the larynx is therefore always caused by infection of the larynx through the excretion of the lungs Similarly, too, the intestines become infected from the swallowing of tuberculous sputum I do not speak here of primary tuberculosis of the intestines, which is most common in children, but of the intestinal ulceration secondary to lung disease. That this is due to infection carried from above is shown by its localisation. It is invariably seen in its early stages near the ileo-cæcal valve. During my period of office as pathologist to the Brompton Hospital, Dr. Dodgson and Dr. Soltau Fenwick examined carefully the appendix vermiformis in all the post-mortem examinations. They always found it to be affected when other parts of the intestines were ulcerated and in a not inconsiderable number of cases they found the appendix alone to be affected. This points to the conclusion that the ulceration occurs where the swallowed secretions of the lung are allowed the longest contact with the mucous membrane of the bowel. The symptoms, of course, are those with which you are well acquainted—pain and diarrhœa, &c. The occurrence of this condition carries with it the gravest prognosis, and, indeed, nearly always introduces the fatal end.

As regards symptoms, there are only two which in this stage help us greatly in prognosis, and they are pyrexia and hæmoptysis. This, the second stage, is, unlike the first stage, never without pyrexia, and what has been said of the fever of the first stage applies also to that of the second stage, though without the limitations there mentioned; that the higher the fever, and again the more nearly the morning temperature approaches that of the evening, and the worse is the prognosis, may be taken as a general rule. But still worse is the so called "hectic" fever, where a morning temperature below normal is followed by an evening temperature of even eight degrees higher. This is a most serious condition and all the more so because, in my experience, no drug has the slightest effect upon it.

Hæmoptysis is a much graver symptom in the second stage than in the first, and is here dangerous. This results from the fact that while the hæmoptysis may still be caused by mere congestion, yet it much more frequently is due to ulceration of a blood-vessel from so-called caseous or suppurative arteritis. The dangers of its occurrence are: (1) loss of blood, a very serious matter in an already debilitated subject; (2) shock with cardiac failure; and (3) fright. The last-mentioned danger has not often been mentioned, and yet I have seen it occur. I differentiate it from the second danger, for I have known death occur from what I could conceive must be this and no other cause when only small quantities of blood have been expectorated or found in the lung tissue after death. There are doubtless other symptoms of the second stage, such as general weakness, emaciation, profuse night-sweats, &c., which are of importance in prognosis, but they have already been mentioned in a former part of this lecture, and they can be comparatively easily controlled by treatment, therefore they do not require detailed discussion here.

The third stage of pulmonary tuberculosis I have chosen to call that of "result" and not "cavitation," as has hitherto been done, and for the reason that "cavitation" is not the only final result of the tuberculous process, though that result always means destruction of lung tissue. Cavitation is nearly always accompanied by a certain amount of fibrous thickening round the walls of the cavity, and, *cæteris paribus*, the greater the amount of fibrosis the less dangerous is the presence of the cavity. But we may get fibroid change without any appreciable cavitation, and these two conditions, "cavitation" and "fibrosis," therefore constitute two separate forms of the "result" stage, each with its own particular elements of danger, and therefore to be distinguished in prognosis.

Pursuing again our former order of discussion we will deal first with the nature of the physical signs. The percussion note obtained over a cavity is the resultant of two conditions, the cavitation and the thickening of its walls, the one causing increased resonance, the other dulness, and hence we get the high-pitched resonance of the cavernous percussion note. Given, then, that we have diagnosed the presence of a cavity by other methods (and I have elsewhere described how this should be done), then the higher pitched the resonance the greater the resistance to the finger and the more favourable is the condition. This view is based upon the idea that such a condition of signs indicates a greater amount of fibrous tissue round the cavity, which I have above stated to be a desirable state. Moreover, the presence of "echoing" râles would indicate a complication of the third by the second stage and a further progression of tuberculous action. This, of course, is an unfavourable sign, but it must not be confused with the râles of bronchiectasis which may be present in the fibroid form of this stage. The differentiation of the two does not form part of our present subject. The localisation of the signs does not help us much in this stage, except in the respect that the more limited the area affected, naturally, the more favourable must be the prognosis. Again in this stage the influence of antecedent conditions in the prognosis need not be discussed. But one class of "individual symptoms" and complications becomes of the utmost importance. Dyspnœa, especially on exertion, but also during rest, is nearly always present and is unfavourable for prognosis. Yet its pathology and its influence on the prognosis differ in the two conditions of the stage. In the condition of cavitation the dyspnœa is due almost entirely to loss of lung tissue, and although in amount it is not usually so great as in the condition of fibrosis, yet its prognosis is more unfavourable. In the condition of fibrosis some of the dyspnœa no doubt is due to loss of lung-substance, but its greater part (as I have elsewhere shown) is caused by non-expansion of the thorax over the affected areas. The expansion of the thorax is of great importance in the sucking of blood into the heart, and if interfered with the supply of venous blood to the lungs for aeration is lessened and dyspnœa must result. But such a state is not so dangerous as is great loss of lung tissue, and consequently while the dyspnœa is greater in the fibroid than in the cavernous state its prognosis is more favourable.

In the third stage the state of the circulation and with it that of the general body condition must be carefully watched, for heart-failure is one of the most serious complications. Any sign of its appearance, such as blueness and coldness of the extremities and weakness of the heart-sounds, should place the physician on his guard. Pneumothorax, again, is a formidable complication, and while principally occurring in the third stage, may at times be found in the second stage. But its danger is, I think, mostly limited to the moment of its occurrence. Then, certainly, it may cause death from shock. But when once the shock has been recovered from I do not consider the prognosis of pneumothorax in a tuberculous lung to be so unfavourable as has been so often thought It scarcely requires treatment and often does well. Undoubtedly, like any other complication, it adds to the gravity of the condition, but lately I had four cases at one time among my in-patients at Brompton and all of them left the hospital free from pneumothorax and with their lung condition otherwise greatly improved. Pneumothorax is more common in cavitation than in fibrosis.

But hæmoptysis in this stage is a most serious matter, and its occurrence to any great amount must cause, to say the least, grave doubts of the patient's recovery. It is the greatest danger of this stage of the disease and is more frequent in the cavernous than in the fibroid state. As in the first and second stages it may be due to mere congestion or to ulceration of a vessel, but, if copious, it is most frequently caused by rupture of an aneurysm of the pulmonary artery in a cavity. I show you here what I think must be a unique collection of such aneurysms, occurring in almost every variety and with almost every form of surroundings. Their presence is a warning that percussion should always be very lightly employed, for a study of these specimens will convince you that the slightest jar of the thorax might be sufficient to cause rupture of the aneurysm. While I was pathologist at the Hospital for Consumption and Diseases of the Chest, Brompton, I only once failed to find such an aneurysm in a cavity after fatal hæmoptysis in the third stage Observe, too, that the aneurysms are often found in only small cavities, so small as to be detected only with difficulty. The aneurysms are caused by suction. During cough the air contained in the cavity is partially expelled and the cavity walls are compressed, but on the relief of the pressure the walls expand once more and before the full quantity of air can gain re-admission there is a period of negative tension in the cavity which acts as a suction power on the wall of an exposed artery. Finally, it must be remembered that for a long time, for many years in fact, tuberculous matter may remain embedded in the walls of an apparently healed cavity or in a mass of fibrous tissue, and though the disease is quiescent, yet at any time a fresh outbreak of the disease may occur. The patient, perhaps, need not be informed of this, for he can scarcely avoid it in any way than by the general attention to hygiene which he is bound otherwise to pay, but it should be remembered by the physician in formulating his prognosis.

I have not dealt with all the elements of prognosis, but only with those which seem to me to be of most importance. In my next lecture I will discuss with you a few points of treatment.

A Clinical Lecture

ON

THE OPERATIVE TREATMENT OF FIBROID TUMOURS OF THE UTERUS.

Delivered at the General Hospital, Birmingham, on Nov. 13th, 1900,

By EDWARD MALINS, M.D. EDIN,

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GENTLEMEN,—In the course of our comments upon the treatment of fibroid tumours of the uterus you have, no doubt, been struck with the considérable diversity of opinion expressed by various authorities. You will remember that some months ago the question of operative treatment was brought to our notice by some cases in the wards. I then resolved to put the next half-a-dozen cases which came under my observation to the test with a view of demonstrating to you the best plan generally to follow. I have, therefore, taken these six cases of supra-vaginal hysterectomy, not, indeed, as offering anything new, but with the object of submitting a short clinical account and arousing an interest in a class of cases which are frequent enough to warrant the statement that, like other and less desirable patients, they represent a type which is always with us.

No doubt in dealing with the question of treatment in this particular disease the greater principles include the less in discussion, but it is more especially with the operative methods that I wish to offer suggestions and to state my conviction that in the plan adopted we have in certain cases an ideal operation, one which amply satisfies the demands of the disease, and which, when favourably carried out, reflects with credit upon the surgical art of modern times—a cure effected with less reservation than is attached to many abdominal operations, a restoration fulfilling not merely the purpose of statistics or adding to the glamour of individual skill, of which, indeed, there is no monopoly, but an enduring benefit obtained by the patient and a solid satisfaction to those who minister to it. The operation is comparatively simple. I premise a preliminary preparation of the field, in which the vagina is also strictly attended to. The Trendelenburg position is a very desirable adjunct if it can be obtained: it adds greatly to the advantage of sight and facility of manipulation. The abdomen is opened in the middle line in the usual way and if possible the tumour is brought outside; if not, the first steps, at all events, can be done *in situ*. A ligature of strong silk is placed through the broad ligament near the pelvic wall and firmly tied, thus securing the ovarian vessels. A second ligature or a pair of rather long-beaked, narrow forceps is placed at the uterine end of the broad ligament, near to the cornu of the uterus; the part between them is cut through The round ligament is also tied. The process is repeated on the opposite side. The tumour is now much more moveable and the ovarian vessels are safe. The peritoneal covering just above the bladder is then separated in front by running a knife lightly across the cervix; the same is done behind, the ends meeting at the sides of the cervix. The bladder is then gently but well pushed down to separate it from the cervix; the uterine arteries can now be located. A blunt needle and silk ligature are passed below them and they are strongly tied. This may be either within the peritoneal fold or inclusive of it. Sometimes it may be more convenient to loosen the tissues containing the artery and to tie it separately in its continuity. The cervix or pedicle is now cut through from above downwards by a V-shaped incision at the front and back, forming two flaps which come readily together. It is recommended by some that the cervical canal should now be seared by actual cautery or that some strong antiseptic, such as carbolic acid or a solution of perchloride of mercury, should be applied to it. This I have never done, as I assume that the upper part of the vaginal canal and cervix are normally free from infective germs and that additional security has been afforded by the cleansing in this direction previously mentioned. The cervical flaps thus made are brought together by silk sutures, three or four in number. The peritoneum is brought over the end of the stump and attached to the corresponding structure posteriorly by Lembert's sutures of fine silk. Similarly the edges of the broad ligaments are joined all across the pelvis. Generally the stump where the ovarian vessels have been tied can be brought down to, or near, the angle at the side of the cervix and turned in under the peritoneal fold, thus covering all the wound over and forming a united line across the pelvis, which represents a neat finish to this part of the operation The pelvic cavity is then made perfectly clean and dry and the abdominal wound is closed. The latter is effected by running five or six silkworm gut sutures through the walls; these are held together on each side by a pair of forceps while the other sutures are put in. The peritoneal edges are brought together by a running catgut suture, the fascia by fine silk interrupted sutures and the skin by catgut sutures, continuous or interrupted; the silkworm gut sutures are then finally tied. But occasionally conditions are found which necessitate considerable modifications to this plan and which serve to tax our resources severely. When the tumour is intra-ligamentous growing more or less within the layers of the broad ligament and involving adjacent structures, it is impossible to eliminate it in this way. The best plan in such cases is to modify the procedure as follows. The broad ligament and the round ligament are tied on one side, whichever is the more free; the broad ligament is then cut through on the same side down to the level of the uterine artery, and this is firmly secured. The whole mass is then dragged to the opposite side and the cervix is cut across; the bladder being separated in front, the uterine artery is now found and ligatured. This assured the growth can be separated from between the layers of the broad ligament up to or near to the ovarian vessels These can be clamped or tied and the operation may be completed in the usual way. The altered relations of the ureter or inflammatory adhesions demand more caution and attention to detail Step by step the process can be accomplished, and as a rule a satisfactory ending can be obtained though more anxious and more prolonged in the performance. The cardinal points in all operations of this kind appear to stand out in relief—they are complete asepsis, perfect hæmostasis, and accurate adaptation of adjoinin parts; the peritoneum being ever kept clean and dry. Without doubt the Trendelenburg position materially lessens the difficulties; it is a factor which has conduced largely to the confidence and to the comfort of the operator, to the ease and celerity of the operation, consequently, therefore, to its success.

The indications for operation upon such cases present themselves generally in a definite form and may be received as reliable reasons for interference. I am well aware that the majority of fibroid tumours call for no active surgical interference. I have under observation a number of such patients, some of more than 20 years' standing, many of whom are content, if not satisfied, to pursue the uneven tenour of their way with placid acquiescence and belief in the powers of nature. At times their faith is shaken, they falter for the moment in their confidence, but soon drift again into the position of masterly inactivity. Fostered by semi-invalidism and with no lack of comforts they can afford to exist and even to enjoy bad health. Such a condition, in the well-to-do classes at all events, is often accepted with passiveness born of hope for the future. In the working-classes this attitude is intolerable; this expectant probation is an illusion—they must do or die; they cannot supinely wait. Hence comes an influence in our advice as to operative treatment. It must inevitably be allowed to play an important part, and, I think, may justly be considered to be an element in the pursuit of active measures. 1. Social position, therefore, becomes to some extent a guide in the selection of cases for operation. 2. Excessive and persistent hæmorrhage undoubtedly is a ground for interference—hæmorrhage which has resisted for a length of time rest, hot douches, and therapeutics of tried and of unknown efficacy. I have little confidence in these so called hæmostatics. The continued use of ergot is lauded as a standard prop by some in such cases—it is a broken reed to lean on and often fails when most trusted for help. Nothing that I know of medically admits of a safe prediction as to results in cases of this kind. We know that oftentimes the bleeding is erratic. We learn, too, that the drug last administered at a venture often gets the credit—the outcome of credulity which is met by a specious and hollow success. 3. Occasionally the pain and discomfort due to pressure symptoms entail a consideration of interference. This is most frequent when the tumour is in the pelvis, where it encroaches upon neighbouring viscera or nerves or distends the uterine walls, giving rise to suffering of a severe kind. As the tumour rises from the pelvis in its growth these symptoms often subside, and it then happens that the only symptoms arise from the weight and discomfort of the mass. The effect is a mechanical one, disarranging functions and causing inability to obtain rest for any length of time in one position or to move about with ease. Still, large tumours may exist with very little complaint on the part of the patient who by long continuance becomes accustomed to, and tolerant of, the burden. There is a mutual adaptation of the patient and the tumour to each other. 4. Rapid growth of the tumour is a first indication for the review of surgical treatment. But even here we often meet with difficulties in the formation of a decisive opinion. The ways of fibroids are dubious and inconsistent. The rate of growth is sometimes visibly fast, it may then stop without apparent cause and remain stationary for a length of time. In such circumstances it provokes a revision of our advice and an alteration in the patient's inclination to submit to a serious operation for its removal. When the rate of growth is unquestionable, and particularly if there are signs of associated complications, our path becomes more clear and our duty imperative. There is less need for conservative surgery when the functions of the uterus and ovary have fulfilled their destiny, but there is great need of help when signs of degenerative changes occur or complications threaten to gain the mastery of the patient.

But, it may be asked by some, why wait until untoward signs or symptoms appear? why not operate early in order to avoid the greater peril of a more severe operation when the growth is larger and circumstances are less favourable? These questions indicate the trend of modern surgery based upon sound judgment and the experience gained in the success of operative details. But few will pretend that because a fibroid tumour is present the patient must be operated upon. What I have already remarked shows how faulty such a practice would become. There are, however, numbers of patients to whom a life of misery would be avoided, an untimely death prevented, and restoration to usefulness achieved if a timely warning had been heeded. Nor is this picture overdrawn. The testimony of expert witnesses proves how real are the dangers which environ the subjects of fibroid growths. Martin of Berlin furnished an analysis of 205 cases of fibroid tumour which had been submitted to operation. Discussing the changes to which they are liable he states that in at least 38 out of the number, or in about 18 per cent. of the cases, changes took place in the fibroids that seriously endangered the life of the woman. The great majority of cases, says a high authority,[1] demand operative treatment. The danger of operation is much less than the danger to which the woman is exposed from the various accidents which are liable in this disease. Dr. G. E. Herman[2] quotes Dr. Matthews Duncan whose words are always entitled to respect: "A woman with an enormous fibroid will not live to be an aged woman." Writing of the degenerative changes in the tumour, changes in the heart, pressure symptoms, &c., Dr. Herman says that these are thus not merely contingent risks but actual and persistent evils. "A well-advised patient will therefore welcome relief by operation." Mr. Bland-Sutton,[3] with the enthusiasm of his skill, advocates early removal of such kind of tumours as involving less operative danger and a diminished peril to life. He performed 28 operations with two deaths. Dr. W. Duncan[4] publishes 68 cases with four deaths, and Dr. W. J. Gow stated at a meeting of the Obstetrical Society of London that in 18 months he had saved 16 out of 17 cases. The largest number of statistics is given by Dr. Herman from Olshausen. Thus in 806 cases of supra-vaginal amputation of the uterine body there were 45 deaths, or 5·6 per cent., and 520 cases of removal of the whole uterus (so-called "panhysterectomy"), with 50 deaths, or 9·6 per cent.[5] Additional evidence of success might be brought from many operators, but enough has been said to be suggestive of serious consideration in our views of operative treatment and to point to the direction in which the surgery of our time is capable of extending beneficial aid.

CASE 1.—Operation in this case was performed on June 19th, 1900. The age of the patient was 45 years. There was history of influenza some two years previously, since which the general health had failed. The body was thinner and the abdomen was steadily getting larger, with pain in the back and inability to move about with ease. The abdomen was occupied by a large, rounded, smooth, elastic tumour reaching about four inches above the umbilicus per vaginam. The cervix was high up posteriorly. The body of the uterus was not well made out, but it moved with the mass bimanually. There was a bruit at the base of the heart. There was no albumin. The catamenia varied in amount and regularity. The operation was performed in the manner which has been described. The growth, which was interstitial from the back of the fundus, weighed 10 lb. 2 oz. The ovaries were large and cystic. The highest temperature was 100° F., on the day after operation, and the highest pulse was 108, on the same day, after which the normal condition was resumed and good recovery followed, the patient leaving the hospital on July 16th.

CASE 2.—The patient, a married woman, aged 28 years, was operated upon on July 11th, 1900. Previously to her marriage, which took place in October, 1899, she had menstruated irregularly and profusely. After her marriage she noticed a "lump" in the lower abdomen which rapidly increased in size. Menstruation had become constant. There was pain in the back and difficulty in movement was complained of. A central, hard, irregular tumour was felt in the abdomen, reaching to the lower level of the umbilicus and extending to each side. A mitral bruit was marked. There was no albumin. The patient expressed a wish for operation in the face of the pain, the hæmorrhage, and the rapid growth of the tumour. This was carried out in the usual way. The growth was nodular and hard and sprang from the posterior wall of the uterus; it weighed 3 lb. 12 oz. The ovaries were large and cystic and the broad ligaments were short. Nothing eventful followed the operation and the patient went home on August 4th. She has since written to say how well she is.

CASE 3.—The patient, a pale, thin, anæmic woman, aged 39 years and unmarried, was operated upon on July 26th, 1900. A year previously she had noticed a "lump" on the left side of the abdomen and a few months ago another one on the right side. Menstruation was irregular and profuse and the patient suffered from pain and weakness. In the left iliac and hypogastric region an elastic, rounded, smooth tumour could be felt. To the right of the middle line a hard mass reached in the pouch of Douglas below, and bimanually it was felt to be incorporated with the uterus. At the time of operation the left side was found to be occupied by an ovarian cystoma, and on the right was a hard fibroid. The whole was removed with the uterus. The fibroid weighed 2 lb. 8 oz. The ovarian cyst contained 40 ounces of thin, mucoid fluid. For a few days after the operation the temperature continued at 101° F; the patient was flushed and restless, with no increase in the pulse-rate. A week later after a normal interval the temperature again rose, but subsequently the patient did well. She left the hospital on August 21st, and after a few weeks' convalescence returned to her duties.

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[1] Penrose. Diseases of Women, p. 232.

[2] Diseases of Women, p. 836.

[3] Transactions of the Obstetrical Society of London, vol. xxxix., p. 292.

[4] Pamphlet, 1900.

[5] Op. cit., p. 846.

CASE 4.—In this case the operation was performed on August 7th, 1900, upon an unmarried woman, aged 44 years, who for two years previously had noticed a swelling in the abdomen. Menstruation was profuse and irregular and there were clots. Several times there had been retention of urine. In the hypogastrium a hard, rounded mass was felt which was continuous with the uterus. The cervix was pushed up posteriorly. Bimanually an irregularity of the mass was noticed. There was a systolic bruit at the base. There was no albumin. The tumour, which weighed 2 lb., sprang from the anterior and posterior walls of the fundus; posteriorly it was covered by the uterine wall, anteriorly it was sub-peritoneal. The left ovary was normal but the right was enlarged and cystic. There were numerous small, broad ligament cysts. The highest temperature reached was 100 4° F. and the highest pulse-rate was 88. The patient left the hospital on August 30th in a good condition.

CASE 5.—The patient, who was 51 years of age, had been married for 13 years but had had no children and there had been no miscarriages. 18 months previously she had noticed that her abdomen was getting larger and that recently it had been increasing in size more rapidly. Menstruation was fairly regular but profuse. She had been getting thinner generally and had suffered from pain and discomfort after food and on movement. The heart sounds were normal and there was no albumin. The abdomen was occupied by a firm hard mass reaching above the umbilicus; its circumference measured 39 inches. From the umbilicus to the right spine it measured eight inches and to the left spine seven inches. Per vaginam the cervix could be felt high up in front with a hard mass behind, continuous with the growth above. The patient was anxious for operation. This was done on Sept 12th, 1900, in the same way as in the previous cases. The tumour was dumb-bell shaped, the lower hard mass filling the space of Douglas, the larger growing from the fundus. Its weight was 5 lb. 8 oz. There were some spaces with reddish-coloured thin fluid inside. The recovery was rapid and the patient returned home to the country on Sept. 29th.

CASE 6.—The operation in this case was performed on Sept. 27th, 1900. The patient, who was 33 years of age, was married on August 29th. Some weeks before there had been retention of urine. Since the time of her marriage the abdomen had been getting rapidly larger. Menstruation was profuse and painful, and the general health of the patient had been failing. There were a hard mitral bruit, sickness, and anæmia. A mass was felt in the abdomen reaching obliquely across from above the umbilicus on the left to behind the uterus below and bulging into the right iliac fossa on its way. The cervix was high up above the symphysis. The patient was advised to go to the seaside to improve her general health before any operation. This she did with much benefit. The operation revealed a large fibroid mass, nodular and hard, growing from the fundus; it weighed 4 lb. 3 oz. The ovaries did not show any change. The recovery was not marked by any incident worthy of notice. The patient returned home on Oct. 20th and has continued to improve in health and appearance.

Vaginal hysterectomy.—You have opportunities, not infrequently of seeing this operation. In the time at my disposal now I do not intend to carry you into the details of the operation which you must see and judge for yourselves. It is applicable to the smaller cases of tumour, which are, as a rule, accessible from this aspect. Not that it is confined to these only, for some operators prefer this route and extract tumours by it which reach to the level of the umbilicus.[6] In this operation I usually tie the broad ligament on each side instead of using clamp forceps. Occasionally it will be seen that the uterus has to be divided anteriorly in order to deal with adhesions or after difficulties in extraction. It is the exception to find that patients so operated upon go wrong; as a rule the cases give rise to very little anxiety and are singularly free from rise of temperature or pulse. When by splitting of the uterus the complications cannot be overcome there is yet another plan to fall back upon—morcellation—that is, cutting away piece by piece of the uterus until it is all, or sufficient, taken away to make a satisfactory termination. This is tedious and troublesome, but it repays the time and the attention given to it when ablation cannot be otherwise attained

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[6] Pryor: Pelvic Inflammation p. 214.

THE BOWEL LESION OF TYPHOID FEVER.

BY T. J. MACLAGAN, M.D.

THE cause of typhoid fever, the true nature of the poison which gives rise to it, was long obscure. We now know that it is a minute organism, the typhoid bacillus, first described and figured by Eberth in 1880. It is a short thick bacillus with rounded ends, which is largely reproduced in the system during the course of the disease to which it gives rise and is found abundantly in the glands which suffer during an attack of typhoid fever. This bacillus is directly or indirectly the cause of all the phenomena of that disease—the bowel lesion among others. That lesion is indeed the most prominent and important result of the action of this poison, constituting as it does the characteristic and essential feature of the disease to which it gives rise. How does the bacillus cause this lesion?

An organism which grows in, and at the expense of, another is a parasite. A distinctive feature of parasitic organisms is that each has its own nidus, its own special habitat, in which it flourishes and is reproduced, and in which its vital activity and morbific effects are chiefly manifested. The parasite of ringworm attacks the roots of the hair of the scalp; that of sycosis the roots of the hair of the moustache and beard; the trichina spiralis finds its home in muscle; hydatids have a special affection for the liver; and so through the whole parasitic world each parasite has its own special organ or tissue in which it is reproduced and which is the chief seat of its action as a disease-producing agency.

What applies to the grosser parasites applies equally to the very minute ones which constitute the poisons of specific diseases. The tubercle bacillus specially affects the lungs and glands of susceptible subjects; the poison of erysipelas attacks the skin, that of pneumonia the lungs. So with the poisons of the specific fevers: that of scarlet fever finds its nidus in the skin and throat; it is in these localities that it is specially reproduced and its specific action manifested, and it is in the discharges from the throat and in the peeling cuticle that the poison, therefore, most abounds. The poison of small-pox has its nidus in the deeper layer of the skin and exists in greatest abundance in the pustules which form there; it is, indeed, the very rapid reproduction of the poison in that locality which causes the disturbance which results in the formation of the pustules. The typhoid poison finds its nidus in a particular set of glands in the small intestine; it is there that its action is specially manifested, and it is in the affected glands and in the discharges which come from them that the poison exists in greater abundance.

What imparts to each of the specific fevers its distinctive and characteristic feature is not any peculiarity of the general febrile disturbance but the existence of a special local lesion. The seat of this local lesion is the nidus of the parasite: in scarlet fever the skin and throat; in measles the skin and mucous membrane of the respiratory tract; in small-pox the deep layer of the skin; and in typhoid fever the intestinal glands. The action which takes place in this nidus is the vivification of this poison, an action which in its results is analogous to the fecundation of non-parasitic organisms. It is the first act in the play, the first incident in the series of events which make up the history and course of an attack of any of the specific fevers.[1]

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[1] *The only one of the specific fevers* which has no local lesion is relapsing fever: it is also the only one in which the special poison of the disease (the spirillum) is found largely in the blood. It has no local lesion because the blood is the special nidus of its parasite.

It is from this point of view, from the point of view of the essentially parasitic nature of the typhoid poison, that we have to approach the subject of its mode of action and of the nature and mode of production of the bowel lesion of typhoid fever. That the typhoid poison causes that lesion and that the lesion is peculiar to, and distinctive of, typhoid fever are two established pathological facts.

There are two sets of glands in the intestine—those situated in its mucous lining and those which have their seat in the submucous coat. In the mucous lining are found the glands of Lieberkühn, distributed all over the bowel, but more abundant in the large than in the small intestine. They are small tubes closed at their deeper extremity. In the submucous coat are found (*a*) Brunner's glands which have their seat in the submucous coat of the duodenum and consist of minute lobules with branching ducts which open on the mucous surface of the bowel; (*b*) solitary glands or lymph follicles, consisting of small round or oval masses of adenoid tissue which are scattered more or less all over the bowel; and (*c*) the agminated glands or Peyer's patches, which consist of masses of lymph follicles grouped together in the submucous coat. They are found in the jejunum and ileum, chiefly in the ileum, and most abundantly at its lower part, near the ileo-colic valve. These patches vary in length from half an inch to one and a half inches; they are oblong in shape, their long axis being that of the bowel. They are largest and most closely packed at the lower end of the ileum. These are the glands that specially suffer in typhoid fever. The solitary glands are also affected to an extent which corresponds to their small size and more sparse distribution. Brunner's glands do not suffer. The brunt of the disease is borne by the Peyer's patches. These glands are not equally developed at all periods of life. In infancy they are small and not easily detected; as years go on they become larger, and by the time that the age of 15 years is reached they are prominent objects in the intestinal wall and remain so till middle life. They then begin to get smaller and gradually dwindle away till in old age they disappear. Their period of greatest activity is from 15 to 35 years of age; it corresponds exactly to the period of greatest susceptibility to the action of the typhoid poison. The immunity from typhoid fever enjoyed by the very young and the very old finds its explanation in the life-history of these glands. They scarcely exist in the infant and they dwindle away in old age. The typhoid bacillus may enter the systems of such subjects and circulate in their blood, but it finds no nidus, no soil in which it can be vivified and reproduced; it is, therefore, without action on them. For it is in these glands, and in these glands only, that the typhoid poison finds the material necessary to its vivification and reproduction; it is in them that it commences its course as a disease-producing agency; it is in them that its morbific effects are most pronounced; and it is the destructive action which takes place in and around these glands that gives rise to the most formidable and fatal complications of typhoid fever.

How is this effect brought about? What is the mode of action of the typhoid poison on these glands? and what is the mode of production of the lesions which are found in the post-mortem room? Let us trace the course of events in one gland from beginning to end, for what takes place in one gland is what takes place in all, the whole bowel lesion being but the sum total of the lesions of the individual glands. A typhoid germ having entered the circulation may or may not reach one of these glands, may make the round of the circulation again and again, and may ultimately pass out of the system by one or other of the eliminating channels without ever coming in contact with its nidus, and therefore without doing any harm. That is possible; and probably such an event is of not infrequent occurrence, especially in infants and old people; but we are now dealing with a case in which the poison does come in contact with, and enter, one of the glands which constitute its nidus. A bacillus can enter only one gland; this may be a solitary gland or it may be one of Peyer's patches. The chances are very much in favour of its being one of these patches at the lower end of the ileum, and that simply because by the ordinary doctrine of chance the germ, no matter whether it enters the system through the lungs or by way of the stomach, is more likely to be brought in contact with one of these numerous patches than with a small solitary and isolated follicle. The germ then enters one of these patches; but it cannot at once affect the whole gland; it enters only one of the numerous follicles of which the gland is composed; it is there reproduced, giving rise, say, to four others (though it may with equal probability be ten or a dozen); these four soon have 16 descendants; these 16 have 64, which in turn act like their parents, and so the process goes on, the germs ever increasing in number, and doing so with ever-increasing rapidity as they become more numerous; they escape into the circulation, pervade the system, grow in the tissues, and invade other glands in the bowel. Meantime the morbid process advances in the one first attacked—follicle after follicle is rapidly affected till the whole gland is invaded. This rapid increase of the typhoid poison within its structure necessarily causes increased vascular activity and increased flow of blood to, and corresponding excitement in, the gland. For the bacillus, in virtue of its nature, takes from the blood the same materials which the tissues of the gland take up. The excitement thus produced in the gland results in proliferation of its cellular elements and consequent increased size and thickening of the gland, which thus becomes a prominent object in the intestinal wall. This marks the completion of what may be regarded as the first stage of the bowel lesion. The gland is inflamed, swollen, hard, and a prominent object in the intestinal wall, but still entire and unbroken. In a certain number of cases the lesion goes no further, the inflammation terminates in resolution, the swelling subsides, the gland returns to its normal condition, and the disease comes to an end by the middle or end of the second week. It is only in a minority that this favourable result takes place. In most cases the morbid process continues and the inflammation increases till the gland softens, dies, breaks down, and sloughs away. This it does during the third week. By the beginning of the fourth week the sloughing process is generally completed and there is left behind a clean sore which soon begins to heal. This terminates the second and, in favourable cases, the final stage of the disease.

That is the normal course of events in a Peyer's patch in an ordinary typical case of typhoid fever in which convalescence begins at the end of the third or beginning of the fourth week. But though the story of one gland is the story of all, the general picture of the events and incidents which make up the complete history of the bowel lesion is not quite so simple, and that mainly because the individual lesions which constitute the sum total of the bowel troubles are not quite contemporaneous, and, therefore, not equally far advanced at any given time. The glands are not all attacked at the same time. One always suffers first, then others follow at varying intervals. The morbid process is thus not equally advanced in all. In those first attacked the destructive process has reached its height and they begin to soften and break down, while others are still only in the stage of thickening and enlargement. As a result of this we constantly find in the same bowel, especially in cases which prove fatal during the third week, two sets of lesions, the hard and the soft, the *plaques dures* and the *plaques molles* of Louis. They are exactly the same lesion at different stages of development. The hard would have broken down and become soft had the patient lived a little longer. Louis thought that the *plaques molles* were more common than the *plaques dures*, and in the post-mortem room no doubt they are so, for most, and in many cases all, of the glands slough, break down, and become soft before death takes place. Whether or not, therefore, *plaques dures* are found after death depends on whether or not there has been time for the most recently affected glands to soften and break down before the fatal termination. They are more likely to be found in cases which prove fatal during the third week than in those which run on into the fourth or fifth. All the soft lesions were hard before they became soft, and all the hard will become soft if time is given them to do so, unless, indeed, they terminate in resolution.

The morbid process is most pronounced at the lower end of the ileum near the ileo-colic valve. From this it has

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That poison finds in the blood what the poison of small-pox finds in the skin and the poison of typhoid fever finds in the intestinal glands—that something which a nidus supplies to the parasite and which is essential to its vital activity. In this respect, in its peculiarity of finding its nidus in the blood, the spirillum of relapsing fever resembles the plasmodium malariæ, and the disease to which it gives rise is stamped with some of the characteristics of intermittent fever. It is indeed a sort of clinical link between the continued and intermittent fevers; it is highly contagious and occurs in widespread epidemics; it therefore takes rank among the contagious fevers, but it has a relapsing or intermitting course, it has no local lesion, one attack confers no immunity from a second, and the poison is found abundantly in the blood. In these respects it resembles malarial fever.

been supposed that the lesion commences there and spreads upwards. The reason why the lower end of the ileum suffers most is that the glands which are specially affected in typhoid fever are most abundant and most closely packed at that end. The typhoid bacillus finds the material necessary to its growth and propagation in greatest abundance there; it is this concentration of the susceptible glands and consequent richness of the soil that makes the morbific action of the bacillus so pronounced in that locality. The discharge from one gland may, and probably often does, irritate neighbouring glands, but the ones to suffer in this way will be those below, not those above, the discharging gland, for the trend of the bowel contents is downwards, not upwards; and probably one reason why the lesion increases in severity as we descend the ileum is that the discharges from all the upper affected glands must pass over those below them; the lower we descend the greater the disturbance from this cause.

Yet another agency comes into operation here: the swelling and turgescence of the mucous membrane at the ileo-colic outlet so narrows that opening that the passage is likely to be less free than usual, causing some retention in the ileum of its irritating contents. These are adjuvant causes, but, after all, the primary reason why the typhoid lesion is most marked at the lower end of the ileum is that the Peyer's patches are largest and most numerous in that locality; they are so abundant that there is little room for healthy bowel between the lesions.

The state of the glands and the changes which take place in them as a result of the action of the typhoid poison have been described by many pathologists. The best of the early accounts is that given by John Goodsir who describes the morbid changes as consisting in "the development of cells within the constituent vesicles of the patches to such an extent as at last to burst them or cause their solution, the continued increase in the number of cells proceeding from as many centres as there are vesicles in the patch, the conglomeration of the whole into one mass above the submucous and under the mucous membrane, the distension of the latter and the necessary ulceration and sloughing of the mass arising from the circumstance"[2] All descriptions of the lesion agree with Goodsir's. They all describe it as essentially consisting in swelling and thickening of the glands due to proliferation of their cellular elements. Malory, the most recent observer, describes and figures this increased development of cells, which he says "may take place diffusely through the lymph nodule, but may also start at the centre or at the periphery."[3] The change which takes place in the affected glands is an acute proliferation of their cellular elements and cellular and granular contents and consequent swelling of the follicles. This must be caused by acute irritation arising within the substance of the patch, for there is no appearance of external irritation or disturbance and no increased vascularity of the mucous surface till the follicular changes are well advanced. The cause of the whole disturbance is the rapid reproduction of the typhoid bacillus within the substance of the follicles.

It has been supposed by some that the phenomena of typhoid fever, including the bowel lesion, are caused, not directly by the typhoid bacillus, but by a toxin produced by the bacillus in the blood. Such a poison would in virtue of its nature be equally diffused through the blood and would necessarily affect all the glands equally and at the same time. But it is matter of demonstration that the intestinal glands are not all affected at the same time. In the same bowel there are constantly seen lesions at various stages of development, some only at the stage of hardening and swelling, while others have gone on to the stage of softening and sloughing; and some glands escape altogether, as is evidenced by what is observed in cases of fatal relapse; there the lesions of the first attack are seen to be clean and healing, if not quite healed up, while those of the relapse are still in the sloughing stage. Only on the view that the poison is particulate and not equally diffused through the blood can this be explained, for were it equally diffused and a toxin the cause of the disturbance all the susceptible glands would suffer, they would all be affected at once, at the time of death the morbid process would be equally advanced in all, and relapses with fresh lesions would be impossible.

This toxin hypothesis is not only cumbersome and unnecessary but is also less satisfactory than that which attributes the essential phenomena of typhoid fever to the direct action of the bacillus. There is no evidence of the existence of a typhoid toxin and no adequate reason for postulating its existence. There is ample evidence of the existence of the typhoid bacillus; it is a common acquaintance, we know it by sight, we recognise it as the cause of typhoid fever and do not for a moment question its claim to be so. Why go in search of a problematical cause when we have to our hand one which we know to be in active existence and whose action gives an adequate and reasonable explanation of the phenomena with which we are dealing?

But though I regard the view which ascribes the essential phenomena of typhoid fever to the action of a toxin as untenable, and look upon the bacillus as competent to produce them all by its direct personal action, though I claim this important rôle for the bacillus, and believe that it is directly by its action that the essential phenomena of typhoid fever are caused, I by no means exclude from consideration the possibility of other morbid agencies coming into play. On the contrary, I believe that after the glandular lesion has reached the sloughing stage other agencies do come into play, and that to these agencies are to be ascribed many of the more serious symptoms which are apt to show themselves in the third and fourth weeks of the illness. For with the process of sloughing and suppuration there come into play other morbid agencies—agencies which not only prolong the illness but add much to its gravity. These agencies are the various forms of cocci (streptococci, staphylococci) which are associated with the processes of sloughing and suppuration. It is at this stage that toxins might not unreasonably be supposed to come into play, the toxins, not of the typhoid bacillus, but of the cocci which accompany the suppurating stage of the bowel lesion. This stage of typhoid fever resembles both clinically and pathologically the stage of secondary or suppurating fever of small-pox, which shows itself on the eleventh or twelfth day of that disease when the variolous eruption enters on the stage of suppuration, this secondary fever being caused not by the small-pox bacillus, but by the organisms associated with the process of suppuration.

Had we nothing to deal with in typhoid fever but those symptoms and lesions which are the direct and necessary result of the action of the typhoid bacillus, were the general symptoms of the disease only those caused by this bacillus, and were the bowel lesion limited to such disturbance as essentially results from its direct action, it is probable that all cases would terminate at the end of the second stage, that typhoid fever would be bereft of most of its dangers, and that the percentage of deaths from it would be very much smaller than it is. The typhoid bacillus acts solely on the glands of the submucous coat On the mucous, the muscular, and the peritoneal coats it has no direct action; and yet it is to lesions involving one or more of these coats that the most serious and formidable complications of typhoid fever are due. In the early stages of the disease there are swelling and hardening of the glands, but no inflammation or unusual redness of the mucous membrane. Not till the glandular lesion is well advanced and has entered on the sloughing stage does the mucous membrane give evidence of being seriously involved in the morbid process. It is not the typhoid bacillus but the irritating discharge from the gangrenous and sloughing glands that causes the redness and turgidity of the mucous membrane noted in the post mortem room, and the diarrhœa which is symptomatic of it during life

So with the muscular coat; when it is invaded, as it often is, the destructive effects produced are caused not by the typhoid bacillus but by the irritating discharges which come from the sloughing gland lying on its surface. In their destructive course these discharges may penetrate the muscular coat and invade and even penetrate the peritoneal lining of the bowel. In the production of the bowel lesion of typhoid fever there are thus two agencies at work: (1) the typhoid bacillus; and (2) the irritating discharges of the sloughing glands. The former operates during the whole course of the disease; the latter comes into play towards the end of the second week; and not till it comes into action are serious symptoms apt to show themselves, for it is not till this sloughing process affects the mucous lining of the bowel that diarrhœa is apt to occur; it is not unless and until the muscular coat with its free blood-supply and larger vessels is invaded that serious hæmorrhage occurs; and it is not until by the continued destructive action of this process the muscular coat is penetrated and the peritoneum invaded that we have evidence of peritoneal inflammation with its attendant dangers.

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[2] London and Edinburgh Monthly Journal of Medical Science, 1842.
[3] Journal of Experimental Medicine, New York, November, 1898.

For clinical purposes cases of typhoid fever may be divided into three classes: (1) those in which the glandular lesion does not pass beyond the stage of inflammatory thickening but terminates in resolution without sloughing, and in which convalescence commences at the middle or end of the second week of the fever; (2) those in which the lesion terminates in sloughing of the glands but in which the process is limited to the glands and the mucous membrane immediately over them, and is accompanied by no evidence of active disturbance and no serious indications of bowel irritation, and in which convalescence usually begins at the end of the third week; and (3) those in which the sloughing process is more extensive and in whose course diarrhœa, hæmorrhage, abdominal distension, peritonitis, with attendant typhoid general symptoms show themselves during the third and fourth weeks of the disease and in which life is seriously threatened by these complications. The fact that it is only a minority of cases of typhoid fever that come under this third class, and only in a minority, therefore, that the serious symptoms which characterise it occur, show that these symptoms are no essential part of the typhoid process, no essential part of the action of the typhoid bacillus on the bowel. And a very little consideration will show why there should be so great a variety in the severity of the bowel lesion in different cases. For what is the state of matters? Up to a certain point the local lesion consists only in inflammation of some glands situate in the submucous coat of the bowel—from a clinical point of view the least important of all its coats. So far as any local effects are concerned the lesion, while still only in the inflammatory state and limited to these glands, is a comparatively trivial one, so trivial that it causes no disturbance, no local symptoms of any kind, and gives rise to no trouble by which its existence could be diagnosed. We know that the lesion is there only from what we know of the natural history of the disease, for at that stage it has no clinical symptoms.

The advent of the stage of sloughing alters the whole aspect of affairs, for then we have to deal, not with simple inflammation, but with gangrene and all its attendant dangers. These dangers may or may not declare themselves, but they are always there and often do come very much to the front. Hitherto the lesion has been limited to the unimportant submucous coat and has consisted in proliferation of the cellular and granular contents of the affected glands, but now, when sloughing sets in, we have to deal with a more or less virulent destructive process which spreads to other coats; affecting the mucous coat it causes turgidity, redness, inflammation, and destructive ulceration; spreading to the muscular coat with its free blood-supply it exposes the sufferer to all the risks of serious hæmorrhage and to the still greater risks attendant on extension of the mischief to the peritoneal coat. But even that is not all. The dangers attendant on gangrene are not only its local destructive action on the affected textures; there is also the very great danger of septic poisoning, a danger which is specially marked when the structure involved is so rich in lacteals and in veins as that which suffers in typhoid fever. What we have to deal with after the second week in bad cases of typhoid fever is not only the symptoms, local and general, caused by the typhoid bacillus, but those due to the absorption into the system of septic material derived from the sloughing and gangrenous sores—sores which are situate in a mesh of veins and lacteals whose function it is to absorb and carry things into the system. That, more than the direct action of the typhoid bacillus, is the cause of those alarming symptoms, general as well as local, which characterise the late stages of bad cases of typhoid fever. The local symptoms are those of gangrenous ulceration of the bowel; the general symptoms are those of septic poisoning.

From this pathological standpoint we may now survey the symptoms to which the bowel lesion gives rise during life and weigh the clinical importance of each.

Diarrhœa.—This is not an essential feature of typhoid fever; many cases run their course from beginning to end without its occurrence, while in not a few the bowels are constipated during the whole course of the malady. These are generally mild cases in which the bowel lesion is not sufficiently severe to give rise to any symptoms, and in which we know that it exists only from what we know of the natural history of the disease. Mere inflammatory swelling of glands situate in the submucous coat, without any participation of the mucous lining in the mischief (and that is what we have to deal with during the first week of the disease), is not likely to cause diarrhœa or any other local symptom. It is not till the glands begin to slough and break down and the mucous membrane over them becomes involved in the morbid process that diarrhœa is apt to occur. Such diarrhœa is symptomatic, not of inflammation of the glands of the submucous coat, but of the extension of the ulcerative process to the mucous membrane. In fatal cases in which diarrhœa has been a marked symptom during life the turgid redness of the mucous membrane around and between the ulcers gives ample post-mortem evidence of the extent to which that membrane had suffered during life.

The amount of diarrhœa varies much. There may be only two or three loose stools in 24 hours or there may be 10 or 12. Their frequency depends on the extent and severity of the local lesion. Up to a certain point looseness of the bowels is rather favourable than otherwise; beyond a certain point it becomes unfavourable. It is obviously desirable that the separated sloughs should be got rid of and not be allowed to lodge about in the bowel, irritating it and tending to poison the system. Two or even three free stools a day favour the discharge from the bowels of their sloughy and injurious contents; by so doing they more than counterbalance any weakness resulting from their occurrence. More than three such stools a day is more than is desirable, and anything beyond that should, if possible, be checked. Persistent and frequent diarrhœa occurs only in severe cases and is always an unfavourable symptom. It means that the bowel lesion is very extensive and that there is much ulcerative destruction and inflammation of the mucous as well as of the submucous coat. The stools in typhoid fever are generally pale in colour. In milder cases they are of the colour and consistence of pea-soup; when diarrhœa is more marked they are thinner and more like ochre. In very severe cases they may be dark in colour from oozing of blood from the ulcerated surfaces. The occurrence of frequent dark-coloured stools is one of the gravest complications of typhoid fever. The stools are always more or less offensive and have an alkaline reaction.

Hæmorrhage.—Bleeding from the bowel is generally regarded as one of the gravest complications of typhoid fever, and yet we find such distinguished observers as Trousseau and Graves and Griesinger recording the opinion that such hæmorrhage may be innocuous and in some cases even beneficial. The importance to be attached to it, its attendant danger, and its prognostic significance depend on its amount and on the period of the disease at which it occurs. The intestinal arteries enter the bowel at its mesenteric attachment and subdivide in the muscular coat, sending good-sized vessels to ramify between the longitudinal and the transverse fibres; passing to the submucous coat they enter it after further subdivision and diminution in size, and ultimately reach the mucous coat much diminished in calibre. Hæmorrhage may take place from the vessels of any of these coats. From the mucous coat it may take place in one of two ways: it may be due to rupture of distended and engorged veins or it may take place in the ordinary course of ulceration. When due to rupture of veins it occurs early in the case, is not of great amount, and is not unlikely to do good by relieving congestion. When it occurs in the course of the ulcerative process it is of arterial origin and occurs later. It can do no good, but neither, as a rule, does it do much harm, as the vessels of the mucous membrane are not large enough to be a source of serious bleeding. From the submucous coat blood can flow only during the process of ulceration. Such hæmorrhage can never be salutary, but neither is it likely to be very injurious, for the same reason as applies in the case of the mucous coat, the vessels are not large enough for free hæmorrhage.

Bleeding from the vessels of the muscular coat is always serious. It never takes place at an early stage of the disease, because it cannot occur till after the gland has sloughed and the irritating discharges from it begin to eat their way into the muscular coat. When once this coat is invaded there is always the risk of serious hæmorrhage. The affected glands are situated at the side of the bowels by which the vessels enter it—its mesenteric attachment. They are right over the larger vessels of the muscular coat, and should one of these be opened in the progress of the ulcer there is likely to be a considerable loss of blood. The risk of this accident is directly as the number of glands affected; it is, therefore, more likely to occur in severe cases in which many glands suffer than in mild ones in which the special lesions are less numerous. It must be borne in mind, however, that one ulcer may suffice for the purpose and that a profuse hæmorrhage may suddenly impart an aspect of gravity to a case which up to the time of its occurrence had been looked upon as quite mild. This is one of the possible accidents which make a guarded prognosis advisable in all cases of typhoid fever.

The amount of blood lost varies. It may be so profuse as to precipitate a fatal termination. It always does harm and materially affects our prognosis. It indicates the existence of at least one progressive ulcer, and there is no saying where such an ulcer may stop; it may open into other vessels or it may invade the peritoneum in its destructive course. The occurrence of profuse hæmorrhage has sometimes been diagnosed before any blood has passed per anum, pallor and prostration, failing pulse, and fall of temperature pointing to what is soon verified by the presence of blood in the stools. Cases, too, are recorded in which death took place before any blood was passed but in which it was found post mortem in the gut.

There is another form of hæmorrhage whose occurrence, though the actual loss of blood is not so great as in that which we have been considering, imparts even greater gravity to the case and more seriously affects our prognosis. I refer to those alarming cases in which during the third week or later the patient passes frequent dark-coloured, offensive stools. The dark colour is due to the intermingling with the stools of blood which comes not from the giving way of an artery but from a general oozing from the ulcerated surface. These malignant cases bear to typhoid fever the same relation that hæmorrhagic small-pox does to ordinary variola. They nearly all prove fatal.

Peritonitis.—This is an almost necessarily fatal complication in typhoid fever. It is so because of the cause which gives rise to it. In an odd exceptional case it may be caused by a splenic infarctus or rupture of a softened mesenteric gland, but in the vast majority of cases it is due to perforation of the bowel. The destructive ulcerative process which invades the muscular coat may also completely penetrate it and eat its way through the peritoneal lining as well. Peritonitis means perforation. There may be only one perforation or there may be several. Generally there is only one, and it is quite enough for all lethal purposes. The opening may be not much larger than a pin-point or it may be large enough to admit the point of the finger. The symptoms are the sudden onset of acute pain in the abdomen, increased abdominal distension, cessation of abdominal movement in respiration, pinched aspect of the face, feeble, thready pulse, and all the symptoms of collapse from which there is no rally. In the production of this accident the typhoid bacillus plays no direct part. Indirectly it is, no doubt, the remote cause of this as of all other phenomena which occur in the course of the disease to which it gives rise. But its direct action is limited to the glands of the submucous coat. The immediate cause of the destructive ulceration of the muscular and peritoneal coats, and therefore of perforation, is the irritating discharge from the sloughing glands. When the affected glands have sloughed and separated the action of the typhoid bacillus on them is at an end. *Not so that of the irritating discharge* which accompanies the processes of sloughing and suppuration. This new destructive agency comes into play as the typhoid bacillus is retiring from the field and continues its destructive action *independently of* it and on whatever *structure* it comes in contact with. It may all be carried away with the sloughs as soon as they separate and so do no great harm; or it may, from tardy separation of the sloughs or unusual severity of the attack, be retained at the seat of the lesion long enough to enable it to eat into, and even penetrate, the muscular and peritoneal coats. An agency which much increases the danger from this cause is the swollen condition of the ileo cæcal outlet. By such swelling this outlet is materially diminished in size, the passage downwards of the contents of the small bowel is correspondingly retarded, the sloughs and irritating discharges from the ulcerated surfaces are unduly retained in contact with these surfaces, with the certain risk of causing them to eat more deeply into the bowel. The more numerous the glandular lesions and the more severe the attack the greater is the chance of perforation. But here, as in the case of severe hæmorrhage, it is to be noted that one ulcer may suffice and that perforation may suddenly come like a bolt from the blue in a case whose symptoms up to the moment of its occurrence were of the mildest character.

The points to be noted in connexion with the bowel lesion are:—1. That the structures on which the typhoid bacillus exercises its specific effects are the solitary and agminated glands situated in the submucous *coat of the small intestine*. 2. That the change which it causes in these glands is inflammatory in nature and essentially consists in proliferation of their cellular and granular contents, with consequent swelling and hardening of the glands. 3. That this inflammation is generally sufficiently severe to cause gangrene and sloughing of the affected glands. 4. That the direct action of the typhoid bacillus is limited to the glands of the submucous coat; and that it has *no direct action on the* mucous, muscular, or peritoneal coats. 5. That the sloughing process which destroys the glands necessarily also destroys the mucous membrane situated over them. 6. That with the process of sloughing and suppuration there come into play other and new morbid agencies, the various forms of cocci associated with these processes. 7. That to these new agencies rather than to the typhoid bacillus are to be attributed all the more serious complications and all the formidable symptoms, general as well as local, which are apt to show themselves during the third and fourth weeks of the disease.

Cadogan-place, S.W.

CONCERNING CERTAIN APPARENTLY INJURIOUS CONSTITUENTS OF POTABLE SPIRITS.

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PRELIMINARY COMMUNICATION.

THE phenomena exhibited by the human subject when poisoned by the ordinary potable spirits are very varied, and are caused no doubt by complex conditions which may, however, be divided into two classes—viz., those that depend upon the individual and those that depend upon the composition and nature of the spirit drunk. It is to the latter that we have directed our attention. These differences in the phenomena produced by the alcoholic beverages ordinarily consumed are more marked in the initial stages of alcoholic poisoning. To put it in plain language, it is when a man begins to get drunk and when he begins to get sober that he is apt to find out the quality of the liquor which he has taken. In the intermediate stage between these *two conditions*—viz., that of deep drunkenness—it matters but little. As the ethylic alcohol is common to all potable spirits, changes other than quantitative in this substance cannot be the cause of what may perhaps best be termed the subsidiary effects (*Nebenwirkungen*) of acute or chronic alcoholism. The main points in which potable spirits differ *inter se* are with regard to their aldehyde, compound ether, higher alcohol (fusel oil), and certain volatile base contents. This communication is devoted to the question of the aldehyde contents of various potable spirits and liqueurs, and especially to one particular aldehyde—viz., *furfural*.

The source of furfural in the manufacture of whisky, and of beer to a less extent, is a class of substances known as pentosanes; these are present in, and derived from, the cellulose of the grain husks. Under the influence of heat in the presence of acids furfural is formed from them. The substances which we have examined in this connexion are whisky fresh from the pot still and mature, brandy, *gin*, rum, various impure and cheap spirits used in the colonies—such, for instance, as "Cape smoke"—and also a number of Spanish, Portuguese, Chinese, and Japanese cheap alcoholic drinks. These *substances* all contain aldehydes and furfural in varying proportions, the latter substance in some cases (according to quantitative estimations made by Professor Hewitt) to the extent of 0·03 gramme per litre. The *presence of* furfural in, for instance, whisky can be easily demonstrated by taking a teaspoonful of whisky in a test tube, diluting with an equal volume of water, and adding a few drops of a sodium carbonate solution, and then a few drops of solution of aniline acetate. If the test tube be shaken up and allowed to stand a rose-pink colour will soon develop if furfural be present, and the deepness of the colour will be approximately proportional to the amount of this substance in the sample of whisky under experiment.

The experimental part of our work may be divided into two parts. We first endeavoured to ascertain the physiological action of furfural upon animals and man. In this connexion we made experiments upon cats, dogs, and rabbits and observations upon two men. By means of these experiments we found that doses of furfural of from 0·1 to 0 05 gramme injected subcutaneously caused paralysis of the voluntary muscles, and later clonic and tonic convulsions, probably due to asphyxia, with rapid and irregular breathing. An odd point about these symptoms was their transient nature; immediately after the injection of the drug the animal would fall down completely paralysed, its tongue and lips would become bluish, and its breathing sometimes very slow and convulsive and at other times irregular and rapid; it would then pass into a stage of clonic and tonic convulsions, in many cases it would vomit, and, finally, would begin to recover, being at first dazed, but rapidly becoming apparently normal. The whole cycle of symptoms would often be completed in from 20 minutes to half an hour. Sensation never seemed to be affected, the conjunctival reflex was always to be obtained, and when the voluntary muscles were paralysed strong reflex irritation (faradaic current) was generally responded to by changes in the respiratory rhythm. Smaller doses always caused symptoms of transient irritation, such as ataxia, tremors, and twitching, especially of the facial muscles. In the case of larger doses than 0 5 gramme death was produced from asphyxia due to paralysis of the respiratory muscles. Almost identical symptoms were produced when the substance was given by the stomach mixed with milk or water, in doses of about 0·5 gramme in cats. The effect of the drug was less marked when given with milk and much more marked when administered upon an empty stomach. In the case of man 0·1 gramme of furfural was taken two hours after lunch by two men; the pulse and respiration were unaltered, but about half an hour afterwards pain (like neuralgia) was felt at the back of the neck and extending up to the occipital region, and a sensation of throbbing and pulsation in the vessels of the head. A dull headache ensued which in one case lasted for the rest of the day. Both in the case of man and in the cases of animals the urine gave a furfural reaction with aniline acetate after the administration of the drug.

The second series of experiments which we undertook were made to ascertain whether the removal of the furfural, or to speak more accurately the aldehydes from the potable spirits, produced any change in the symptoms of alcoholic poisoning. One of the differences, *inter alia*, between raw and matured spirit is the quantity of aldehydes which they contain, matured spirit containing a smaller quantity than is contained in the raw spirit. Up to the present the obtaining of an aldehyde-free spirit has been a matter of some difficulty; we were, however, able by the use of a method described fully elsewhere by Professor Hewitt to remove entirely the aldehydes from any given spirit.

The symptoms of alcoholic poisoning produced by equal doses of the spirit free from aldehydes and the spirit containing aldehydes were compared in the case of animals. The method adopted was to render an animal paralytic and anæsthetic with the potable spirit under observation before and after the removal of the aldehydes and to watch its recovery—i.e., its return to what was presumably its normal state. Speaking generally it was found that the return from what may be termed profound drunkenness in the cases of animals was more sudden and was accompanied by less secondary symptoms when aldehyde-free spirit had been given. In the case of the spirit containing aldehydes the animal during the transition stage was restless, wandering from one part of the laboratory to another, and seemed, generally speaking, remarkably uncomfortable. Even when the gross symptoms of alcoholic poisoning had passed off the animal did not behave normally for some time, refusing the food offered to it, and showing marked signs of bad temper. These secondary phenomena were entirely absent in the case of the aldehyde-free spirit. The animal woke up and attempted to stand; if it could not, it went off to sleep again. When it was sober it appeared perfectly normal and if offered food took it

The interest of these observations lies in the fact that these disagreeable symptoms, which seem analogous to those occurring in the human subject after too free potations, seem to be more referable to the aldehydes in the spirit, including furfural, than to the spirit itself or any higher alcohols. Fusel oil was present in the spirit both before and after distillation.

The aldehydes are pharmacologically active, their action depending, according to Loew, upon their combining with the amido groups (NH_2) of the proteid molecule; their antidote, or at least one of their antidotes, is ammonia, which forms with them an innocuous compound. This fact has a bearing upon the subject in hand, for the substances which have a reputation amongst alcoholics as "morning pick-me-ups" contain either ammonia or simple or substituted amido groups, or just those groups which are capable of neutralising aldehydes. If the residue which is left behind after distilling the spirits with phenyl hydrazine sodium sulphonate be treated by appropriate methods the aldehydes are liberated. It is to the pharmacological action of this distillation residue that we are at present directing our attention, and we hope to be able to publish our results with it shortly, as well as a more exhaustive account of those enumerated above, with the literature of the subject.

SUGGESTIONS FOR THE PRACTICAL TREATMENT OF TYPHOID FEVER.

BY WILLIAM EWART, M.D. CANTAB., F.R.C.P. LOND.,
SENIOR PHYSICIAN TO ST. GEORGE'S HOSPITAL AND TO THE BELGRAVE HOSPITAL FOR CHILDREN.

UNTIL the time shall come for the prevention and cure of typhoid fever by germicides the chief objects of our treatment should be: (1) to limit the extension of the ulceration; (2) to treat the ulcers; and (3) to obviate their giving rise to hæmorrhage or perforation. For the present my remarks must be limited to the medical aspects of treatment.

Stagnation of putrid fæces is probably one of the chief dangers. Though it may be to a great extent prevented it is often overlooked. When stagnant the more fluid are the fæces so much the more likely are they to lead to toxic absorption. Whilst, then, there is an indication for reducing their fluidity, there is undoubted advantage in any method which provides for their ready evacuation. The difficulty lies at the seat of ulceration, where the accumulation due to paralysis of the bowel may amount to obstruction. Much of the alarming tympanitis of bad cases is probably due to the resulting fermentation in the delayed intestinal contents, and this points to the importance of emptying the cæcal pool. On the whole, a lessened fluidity or a moderate solidity of the contents of the lower bowel would seem to be preferable to the opposite extreme, which is a characteristic of the worst forms of typhoid fever. The lesser evil of constipation incidental to an astringent treatment is one easily overcome by daily injections. Due attention to these essential points might perhaps have yielded better results from the various antiseptic remedies which have been tried and subsequently discarded. For the treatment of enteric ulcers, as for that of ulceration in general, an adequate alimentation and local sanitation and antisepsis are the first requisites. If any local effect can be obtained from the internal administration of medicines some mildly astringent influence is apparently the best and the same is also indicated as a prophylactic against hæmorrhage.

Relative inactivity of the liver is the inevitable consequence of the pyrexia, of the immobility of the patient, and of an exclusively fluid diet. Much of the value of Brand's treatment is, I believe, due to the relief which it affords in that direction. Systematic cool sponging is also efficacious and it is available in all cases; whilst high temperatures may call for the gentle use to the skin of ice wrapped in flannel. But in my experience the cool bath is rendered unnecessary by the administration of mercury which excels all medicinal antiseptics in being at the same time a powerful hepatic stimulant and in providing for the bowel a sufficient supply of its normal antiseptic the bile. We should not lose sight of the mechanical factors. Our anxiety to avoid peristalsis may have been excessive. *Distension* of the thinned and ulcerated membrane is the real danger. In view of a possible hæmorrhage or perforation moderate contraction of the bowel is the better state and is in itself protective, though active peristalsis is obviously to be avoided. An attempt to carry out some of these principles is contained in the following suggestions, which for the sake of brevity will not include any reference to diet and to nursing, as these matters are now receiving greater attention and are better understood.

The postural treatment.—Often in the course of an enteric attack there is obvious fulness and tension and extensive dulness over the right iliac fossa, and a sensation of weight will be conveyed to the hand when placed behind the loin, whilst the left iliac fossa is soft to the touch and resonant. Now it will be found that if the patient be placed for a few minutes on his left side and once more examined in the supine posture the conditions are entirely reversed, the right flank being resonant and soft and the left iliac fossa or the descending colon dull and resistant. Repeated observation of this result has for the last three years led me to arrange the bed so as to keep the patient at intervals, or in some cases permanently, in a position of slight inclination towards the left. *A partial lateral decubitus* which I have usually found to be sufficient for the purpose may easily be obtained by placing a bolster or a firm pillow under the right side of the mattress so that the body is propped over towards the left. A better method, which has the advantage of not disturbing the patient, consists in inclining the bedstead by blocks of suitable height placed under its two right feet, whilst the patient maintains the dorsal decubitus. Inasmuch as a slight elevation of the foot of the bed is a decided help, a double inclination may be obtained by using three blocks of uneven heights. The bed in this case looks uncomfortable but I have not heard of any complaint on the part of the patient. Either of these methods will fulfil an indication of the first importance by emptying the cæcal pool which I regard as an obstruction and as responsible for fæcal stasis higher up and for the toxic typhoid state. When the first method is resorted to there is no object in its being enforced continuously so long as the state of the bowel is carefully watched and the cæcum and lower ileum are kept empty. In anxious cases the other plan is decidedly to be preferred and should be kept up during the period of danger. The methods in question are, in my experience, free from risk and from appreciable discomfort and I have not been led to suspect that any undesirable strain is thrown upon the diseased bowel.

The medicinal treatment.—The remaining indications have appeared to me to be best carried out by the treatment recommended some years ago by Mr. W. B. Wedgwood of King's Lynn. Though it will not avail against the fatality of the worst attacks it has, so far as I have been able to judge, mitigated the severity of the great majority of cases, and has almost always led to an early amelioration manifested by the disappearance of sordes, the cleaning of the tongue, the clearing of the complexion, and, above all, the return of the appetite. For an adult 20 minims of the liquor hydrargyri perchloridi and from 15 to 20 minims of the tinctura ferri perchloridi with one drachm of syrup of orange or lemon and an ounce of water are administered every six hours throughout the attack, and for 10 days after defervescence to obviate a relapse. Diarrhœa, if present, is quickly stopped, except in the worst cases, and the constipation which often ensues and coincides with an excellent progress is remedied by daily injections of glycerine. The results have been so satisfactory that the administration of alcohol is hardly ever necessary and is carefully avoided lest it should dull the appetite or burden the liver, but port wine is invariably given during convalescence. In the now considerable series of cases treated in this way salivation has never been observed, and the treatment is always well tolerated provided the dose is administered at an interval from milk meals, even should, as is my invariable rule, the milk be peptonised.

To which of the ingredients the greater share of usefulness belongs it would be hard to say. In my opinion they are both valuable. An astringent effect of the iron upon the entire intestine is rendered probable by its constipating effect upon the lower bowel. We may, therefore, reasonably assume that it acts as a local application to the ulcers, whilst it tends to constrict the bowel and its blood-vessels against the risk of hæmorrhage. The many-sided virtues of mercury are probably exerted upon the hepatic, the lymphatic, and the mucous systems, and it is not unwarrantable to suppose that its prolonged administration in frequently repeated doses may be an element in the disinfection of the alimentary canal.

Curzon-street, W.

THE TREATMENT OF A CASE OF ACUTE DILATATION OF THE STOMACH.

BY GEORGE COATES, M.A., M.D. OXON.

THE following case of acute dilatation of the stomach in an infant, three weeks old, who finally recovered and in whom the recovery seemed to be entirely due to systematic washing out and cleansing the stomach, appears to be worth recording. I have called the case one of acute dilatation of the stomach, as that was the main feature, though from the collection of cases of hypertrophic pyloric stenosis in infancy in a paper by Dr. Eric Pritchard[1] I have no doubt that stenosis of the pylorus, either spasmodic or structural, was the cause of the dilatation.

The patient, a girl, was born on Jan. 24th, 1900, and weighed 7 lb. 13 oz. She seemed quite healthy and apparently remained so for nearly three weeks. Her mother endeavoured to nurse her, but failed after trying to do so for some days. She was then fed on humanised milk, from a dairy company. On Feb. 14th she began to be frequently sick. From the 17th to the 19th the vomiting suddenly changed its character: she was sick only once in the 24 hours, but then, the nurse said, a very large quantity, at least a pint, came away soaking all her clothes. At the same time her micturition became very scanty and the bowel contained only small quantities of mucus stained almost black with altered bile. Her stomach was manifestly enormously dilated, whilst from the absence of residue of food in the bowel and the very scanty micturition it was evident that little or nothing passed through the pylorus; but whether there was stenosis of that opening or whether the enormous dilatation of the stomach had produced there such a kink that nothing could pass through it was not evident. The treatment devised was to feed her at intervals of from two to three hours with small measured quantities of food, and one teaspoonful of the following mixture was given after each meal to aid digestion and to try to prevent fermentation from taking place in the dilated stomach: acidi hydrochlor. dil., 25 minims; glycerini pepsini acidi, one and a half drachms; acidi carbolici purissimi, half a grain; aq. ad one and a half ounces. On Feb. 19th Dr. Thomas Barlow saw her with me and confirmed the diagnosis and treatment. On the 28th, as she was slowly but steadily losing ground, nutritive enemata were given; each enema consisted of one ounce of peptonised human milk with two drops of brandy. These enemata were given every three hours until the end of May and, with the exception of a few days when there was some diarrhœa, they were always retained and were absorbed. The bowel was washed out once a day with soap and water. Early in March she had a severe attack of gastro-intestinal catarrh with sickness and diarrhœa. The vomit contained greenish-yellow muco-pus mixed with curds. The stools were frequent and foul-smelling. She had fever, the temperature varying from 99° F. in the morning to 102° at night, and a loud endocardial mitral regurgitant murmur was developed. She lost flesh very rapidly, her weight being 5 lb. 13 oz. on March 17th—a loss of 2 lb. since birth. Her condition at this time looked perfectly hopeless. She was in a state of extreme emaciation, with shrivelled dry skin and a distended abdomen. The front abdominal wall was so thin that the liver area could be distinctly recognised from the dark colour of that organ showing through it. The dilated stomach could also be easily made out, and slowly moving peristaltic waves were seen passing over it from time to time. For a few days milk was entirely stopped by the mouth and she was put on raw meat, meat juice, and warm water as food, and sulpho-carbolate of soda and carbonate of bismuth as medicine. A few days later, as her temperature never rose above 99° and the diarrhœa had stopped, human milk was given as well. On March 19th she had still lost weight, being now 5 lb. 11 oz. at seven weeks from birth, when she ought to have weighed over 10 lb. From her constant loss of weight and general condition it was obvious that she must die unless the state of her stomach could be improved, and as a last resource it was determined to wash it out with a solution of sodium bicarbonate, 25 grains; sodium sulpho-carbolate, 15 grains; euthymol, half a drachm; aq. ad one and half ounces. On March 22nd a No. 12 soft elastic catheter, indiarubber tube, and glass funnel were used; the catheter was passed through the mouth every morning about three hours after a meal. When the catheter entered the stomach some wind would generally escape and then from three to four ounces of thick slime and curdled milk would be evacuated through it. The stomach was then washed out and the resultant fluids were measured. Immediately after the stomach was cleansed a teaspoonful of the following mixture was given: spiritus ætheris chlorici, 15 minims; bismuth carbonate, 40 grains; sodium bicarbonate, 12 grains; sodium sulpho-carbolate, half a drachm; decoctum hæmatoxyli, six drachms; aq. cinnamom. ad one and a half ounces; and a quarter of an hour later she was fed with from two to three ounces of human milk freshly drawn off. She was fed alternately from every two to three hours with from two to three ounces of human milk and one ounce of meat juice. She was not put to the breast as it was considered important that she should have no opportunity of overfilling the stomach. From this time her improvement was decided; she spent very comfortable days but used to get rather restless by evening and was decidedly uncomfortable during the night. The day after the washing out was commenced she began to pass much more urine; three days later and subsequently she had almost normal motions. At the end of March the meat juice was stopped and she was put regularly to the breast. By April 2nd she had gained two ounces. By the 6th she had gained two more ounces. As her nights were so bad and the days were so good she was from this time washed out regularly night and morning at about three hours after ameal. Each time about three ounces of slime and curd were removed. On the 16th she had improved so much that a trial was made to see if washing out in the morning only would do, but her nights became restless again, and the evening washing-out of the stomach was resumed. By May 1st she had gained over one pound, her weight being 6 lb 13 oz She made uninterrupted progress, so that by the 12th the residue of slime and curd removed was reduced to between one and a half and two ounces. After the 19th she was only washed out occasionally. On the 23rd, after 48 hours' interval, only one and a half ounces of residue were found. On the 30th her weight was 8 lb. 4 oz She had improved steadily ever since and on July 17th she weighed over 12 lb. Her heart was now perfectly normal, the murmur having disappeared on March 29th.

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[1] Archives of Pediatrics, April, 1900.

There were two points that are worth noticing: 1. The patient's sensations of hunger were apparently caused by the absence of digestible food in the stomach She always showed signs of hunger two or three hours after feeding, even though her stomach, as ascertained by the catheter, might contain three or four ounces of slime and curd. After this had been removed, the stomach cleansed, and two or three ounces of milk given, she would appear to be satisfied for over two hours, although the stomach really contained less material than when she was very hungry. Her sensations of repletion depended on the nutritive value rather than on the quantity of the matter in the stomach. 2 Her attack of severe febrile muco-purulent gastro-intestinal catarrh was rapidly followed by the appearance of a loud mitral systolic murmur which resembled in every way one due to rheumatic endocarditis. Soon after the stomach was brought into a healthier condition and the catarrh and fever had subsided, the murmur disappeared, and the heart has since then appeared to be healthy.

Cases of febrile disturbance, accompanied by some gastro-intestinal trouble and followed by excited action of the heart and the development of an endocardial murmur, usually at the mitral orifice, are very common in children, and this case appears to show that the endocardial infection may have entered the body from the alimentary canal. It is always dangerous to generalise from only one case, but this one shows that an extremely severe attack of acute dilatation of the stomach was cured by systematically cleansing that organ twice a day. As the treatment was persevered with the residue of slime and curd became less, and though at first from day to day no great difference could be seen, after every few days it was clear that the food given was being better digested, that less slime was secreted, and that the stomach was in a healthier condition and was regaining its normal functions.

The main point in the treatment appears to be the removal of the residues of slime and curd. This is analogous to the removal of residual urine and mucus in cases of aggravated catarrh of the bladder where the prostate is much enlarged. These residual fluids kept at the temperature of the body form most excellent incubating media for various species of bacteria and promptly infect and contaminate any fresh liquids, whether milk or urine, added to them. Drawing off the residual fluid and washing out the stomach in this case were quite as satisfactory in their results as emptying and washing out the bladder are in these cases of cystitis. Here I may mention that there was some difficulty in getting the catheter to pass the larynx and to enter the œsophagus, but with a little patience it could always be done. Towards the end of the treatment, when the stomach had been restored to a healthy condition, it was evident that it had regained its power of emptying itself through the pylorus. The child had regular natural stools and since then has shown no signs of having an abnormally large stomach or narrow pylorus. I have to thank Dr. Barlow for his valuable aid in February and March.

Brechin-place, S.W.

A CASE OF COMPLETE TRANSVERSE SEPTUM OF THE VAGINA IMPEDING DELIVERY; URETHRAL COITUS.

BY E. RUMLEY-DAWSON, L.R.C.P. LOND., M.R.C.S. ENG.

THE patient was a primipara, aged 21 years, to whom I was called when in strong labour. Her history was as follows. She had had scarlet fever when she was six years of age, but her mother had never mentioned that the attack was in any way unusual, neither had she any recollection of pain or discomfort on sitting down or on micturition. She had never received any injury in the genital region. She had always been regular in her menstrual periods and they were not excessively or abnormally painful. She had never had any symptoms to lead her to think that there was anything abnormal in the vagina. She always had some leucorrhœa but had not seen a medical man for it. The nurse noticing that in spite of strong labour pains no progress seemed to be made at last sent for me.

On examining the patient in the left lateral position the index finger unknowingly and without pain passed direct into the bladder. On more deliberate and ocular examination the external genitals were quite normal but the urethral orifice was found to be very dilated, while the vaginal orifice was small. The finger passed less than an inch into the vagina, meeting with an obstruction which, when a labour pain set in, felt like a large "bag of waters," and bulged with the pain. No cervix could be found and no fornices. The child's head could be felt per vaginam to be pushing down on to the obstruction and making it bulge. On examining per vaginam and rectum it was quite easy to get the obstruction between the fingers. It was found to be a rather thick transverse septum or diaphragm; this could also be plainly felt on examination per urethram and vaginam. The septum between the finger-tips was felt to be about one quarter of an inch thick at the insertion into the vaginal wall, thinning down to the centre and becoming thick again at the opposite vaginal insertion. It was evident that a complete transverse vaginal septum was preventing the descent of the head. No hole or aperture could be found anywhere in the septum, but no examination under an anæsthetic was made. The bulging down of the septum by the advancing head so stretched it that even a small hole would have been revealed. The septum was not in the site of the hymen.

Though the patient denied being aware of any abnormality, sexual intercourse it was admitted had been difficult from the first; while several months after marriage it became impossible, still later there had been less difficulty as the urethra was gradually dilated. The dilatation of the urethra had followed as the result of repeated attempts at coitus; she had not, however, been troubled with incontinence of urine, though urination had become more frequent. This increased frequency may have been partly or even entirely, due to the pressure of the enlarged pregnant uterus. The septum was incised with a knife between two "pains," the incision was then enlarged with a finger tearing it through, the "waters" were ruptured, and the child very shortly after was delivered quite easily and naturally.

Remarks.—Cases of transverse septum of the vagina are distinctly rare, and when leading to urethral coitus, and later impeding labour, they become still more rare. Vaginal septa are either transverse or vertical, but only the former will be considered now. Transverse vaginal septa are either congenital or acquired—i e., inflammatory in origin. The one now described was evidently congenital, for though she had had scarlet fever there was no history of genital inflammation.

Dr. C J. Cullingworth[1] has recorded two cases of transverse vaginal septa. The first case, that of a widow, aged 38 years, was due to an attack of "inflammation at the age of 12 of the genital organs." There was an opening in the "thin and flexible septum" large enough to admit a uterine sound. Though she had been married nearly six years she was never pregnant and was "not aware of any difficulty or inconvenience in her marital relations." In the second case the septum obstructed labour; it was evidently a congenital case. There was always slight leucorrhœa, and pain at the periods was "excessive" during the previous three years on the first day only of the flow. Under ether an opening of the size of the urethra was found in the septum, this was dilated and torn through, delivery soon following.

Dr. Cullingworth remarks that probably in all cases of transverse vaginal septa there is an opening, though often very small, and these small openings show how very enterprising the spermatozoa are. Further, he says that, "as in many other forms of vaginal abnormality, the urethra is often found much larger than usual"; possibly in his case also coitus had taken place per urethram. In atresia hymenalis it was pointed out by Oldham that the urethral orifice is more patulous than it is normally. Dr. C. R. Prance[2] records two cases of transverse vaginal septa. Neither of the patients were pregnant; the first was unmarried and the second was married but was sterile; she soon became pregnant after the opening in the septum—of the size of a pin-hole only—was enlarged and the septum was destroyed. Dr. Gervis[3] also narrates a case. The patient was a woman, aged 22 years. There was an annular hymen which was fairly defined, so that the septum was not a misplaced hymen. She had constant leucorrhœa in the intervals of her menstrual periods. A small probe only could be passed through the hole in the septum, which was very thin. "Whether it was congenital or due to early adhesive inflammation it was difficult to decide" Dr. Cullingworth[4] in his paper says that the septum usually consists of "a thin, not very vascular, and easily lacerable membrane." Dr. R. S. Fancourt Barnes[5] gives a case of a primipara, aged 21 years, where a "thick septum at least two inches in thickness existed." There was a small hole which admitted a uterine sound when some pressure was exerted in its introduction. The septum impeded labour.

These cases of vaginal septa are quite distinct from cases of cicatricial contraction or occlusion of the vagina. These latter have led to Cæsarean section to remove the child when the vagina has been so obliterated as to prevent birth per vaginam. Such a case was narrated by Staude in a paper on Cicatricial Contractions of the Vagina Impeding Labour. It led to an interesting discussion of the subject and its etiology.[6] Dr Galabin has recorded a similar case[7]

Concerning the dilated condition of the urethra, the result of admitted urethral coitus, most of the recorded cases of the latter have been in instances of *absent vagina* In THE LANCET[8] of 1869 it is mentioned that Dr. T. A. Emmet in his book on "Vesico-Vaginal Fistula" (1868) records two cases of coitus per urethram. In both cases the uterus and vagina were absent. The urine was easily retained in spite of the dilated urethra, "which was so patulous that the index finger could be introduced without difficulty" in one of the cases, while "in connexion the bladder had been entered without either party being aware of the malformation." Dr. J. C. Gooding[9] records a case in which the lower portion of the vagina was undeveloped. The retained menses had burst through the urethra. The bladder could be entered with the greatest ease, even with two fingers, and this digital examination of the bladder was painless. There was no incontinence of urine. The patient was married and coitus was followed by immediate desire to micturate. Professor Langenbeck[10] recorded the following case. The patient was 23 years of age; menstruation began at the age of 14 years and the discharge took place per urethram. She had been married for three years. "Coitus was effected by the urethra." The vagina was entirely absent and the uterus was rudimentary.

In the case the subject of this paper the vagina was *not absent*, and it subsequently fulfilled its function as the parturient passage, but the transverse septum in it prevented its proper use in coition and led to the urethra becoming used and consequently dilated. There can be no doubt that previously to, and just after, marriage there was an opening in the septum by which the menses escaped and by which eventually the spermatozoa were able to reach the uterus. That the patient became pregnant must have been due to intercourse having occurred per vaginam. Subsequently to impregnation on an occasion of forcible coitus, perhaps even the identical occasion of her impregnation, the opening in the transverse vaginal septum must have been torn; its edges thus freshened would be approximated by the collapse of the vaginal walls; this tear then evidently eventually healed up, so that at the time of labour no opening on examination could be detected Thus the upper part of the vagina and the already impregnated uterus became completely shut off. Urethral coitus must have followed as a result of this practical occlusion of the vagina, which probably became more and more marked as towards the latter half of the pregnancy the increasing size and weight of the fœtus and uterus helped to force and bulge down the vaginal septum and thus entirely obliterate the vagina for practical purposes. So patulous had the urethra become that the index finger passed quite easily and painlessly into the bladder.

Leyton, N.E

AN OBSCURE AND COMPLICATED CASE OF CARCINOMA OF THE STOMACH.

CHARLES FRANCIS STEELE, L.R C.P. LOND., M R C.S ENG.

CASES of carcinoma of the stomach, which are more or less atypical, are not uncommon, but it is, I think, rare to find practically none of the cardinal symptoms present, as in the case which I am about to describe, especially when the disease is well advanced. The patient was seen during his last illness, to my knowledge, by seven medical men, yet—and I think not unnaturally so—the real state of affairs was not diagnosed, or indeed suspected, until the day before his death. In addition to the obscurity of its diagnosis the case presented interesting complications.

A well-to do man, aged 46 years, consulted my father, Dr. Charles Steele, for the first time on August 1st, 1900, complaining of debility and depression, also of pain in the lower right chest and behind the lower right ribs, which was aggravated by gentle pressure. The hepatic region was tender in front, but the liver itself was not enlarged. The tongue was coated with a yellowish fur. "*Rheumatic*" pains in the shoulders, the upper arms, and the pectoral regions were complained of. His general condition was a good deal relieved by saline aperients and rest in bed, and on August 12th he was able to sit up and take food, which he much relished. It was suggested that when he became stronger a "course" at Droitwich might prove beneficial. In consequence of this remark the patient, a self-willed man, insisted upon going forthwith to Droitwich, and he went there on August 16th. The reports from his medical adviser there were not encouraging; the weakness progressed steadily, and after a stay of 18 days he was prevailed upon to return to his home. At Droitwich, by reason of the marked and increasing weakness, and also the presence of several fawn-coloured patches on the right chest in front and on the back and legs, his malady was diagnosed as Addison's disease. No nausea or vomiting was complained of.

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[1] THE LANCET, April 13th, 1889, p 726.
[2] THE LANCET, Dec 21st, 1889, p 1273.
[3] Transactions of the Obstetrical Society of London, vol xxiv., p 210.
[4] Loc cit.
[5] Transactions of the Obstetrical Society of London, vol. xxv, p. 99.
[6] Brit. Med Jour, Epitome, July 1st, 1893.
[7] Transactions of the Obstetrical Society of London, vol. xviii, p 252.
[8] THE LANCET, Feb 20th, 1869, p. 260.
[9] THE LANCET, March 22nd, 1879, p. 430
[10] Brit. Med. Jour, vol. ii., 1879, p 61

It was at this stage (on Sept. 4th) that the case came under my care, Dr. Steele being away on his holiday. I found the patient in bed, lying on his back. He had apparently stood the journey well. He was of slight build, of dark complexion, and of somewhat anxious expression. The sclerotics were slightly jaundiced, the mucous membranes were markedly anæmic, and the tongue was coated with white fur. During my examination he complained bitterly of pain in the back and chest when turning on his side or when sitting up. On looking at the coloured patches I concluded that those on the legs, being scaly, were due to an old psoriasis of which there was a history; the other patches on the chest and back were caused by the microsporon furfur and faded without treatment. Over the lower right ribs was a distinct bulging, the intercostal spaces being obliterated. The bulging was of about the size and the shape of a small inverted saucer, and it was bisected by the anterior axillary line. Pressure over this area caused considerable pain, which was most intense at one particular spot. On percussing over this bulging the note was deficient in resonance and a distinct thrill was felt. With this exception nothing abnormal was found in the chest. There was no cough. The heart sounds were normal. The pulse, which was full, was regular and of high tension; it was 120, and at no time did it fall below this until his death. The temperature was 100·2° F. and it oscillated slightly above and below this, being at its highest at night. The urine was normal in appearance and there was no albumin or sugar. The bowels were confined. The limb muscles were flabby and wasted. There was no nausea or pain after food. As Dr. Steele also had found, the abdominal muscles were held so rigidly contracted and pressure caused so much discomfort that a satisfactory examination of the abdomen could not be made, but no growth was felt. I concluded that a cyst, which was possibly hydatid but also conceivably of a cysto-sarcomatous or simple nature, was present either in the upper and anterior part of the right lobe of the liver or else between this and the diaphragm. On the following morning in consultation an exploring-needle was thrust into the bulged area and about a drachm of clear pale yellow fluid was withdrawn. An exploratory incision was advised with drainage of the cyst, should such be found, but to this the relatives would not consent. The treatment was therefore purely symptomatic: pain was greatly relieved by morphine and the bowels were kept active by soapy water and turpentine enemata. The swelling appreciably diminished in size, but the wasting and prostration still continued.

On Sept. 16th Dr. R. Shingleton Smith, physician to the Bristol Royal Infirmary, saw the patient with me. At this stage he was in a very critical condition, being intensely anæmic, prostrate, and quite helpless. He lay continuously on his back, apathetic, and listless, and he still complained greatly of pain when he was shifted on to either side or when he was held sitting up in bed. Neither at this time nor during his illness was there any nausea or vomiting, and his food—broths, meat essences, milk, &c.—was well taken and retained. The abdominal muscles were so wasted and the general debility was so great that a much more thorough examination of the abdominal viscera was possible than had been the case heretofore. On pressing deeply beneath the left costal margin two hard lumps of the size of walnuts were to be felt placed side by side but separated by a small interval. A diagnosis of carcinoma of the stomach was made and a hopeless prognosis was given.

In answer to leading questions bearing on the diagnosis the following points in the past history were brought to light. Two years previously a medical man had been consulted, the patient being away from home for change of air, and he had stated that there was a "growth beneath the heart," and on the patient expressing doubt the medical man had exclaimed: "I can feel it as distinctly as I can feel the watch in my waistcoat pocket." It does not appear, however, that he expressed any opinion as to the nature of the growth or mentioned the stomach in connexion therewith. Six months later a quantity of "corruption" was brought up. The medical adviser then consulted considered that the patient had been poisoned, but nothing of this sort ever recurred. Six months later bleeding from the anus occurred, evidently due to piles, which were operated upon, and the bleeding ceased forthwith. There was no history whatever of any nausea or vomiting or pain in the epigastrium, though he had at times complained of uneasiness after food. Only within three months of death had there been any weakness or wasting.

At the necropsy, which I made on the afternoon of Sept. 17th, death having taken place at 6 A.M. on that morning, I found the liver very adherent to the parietes excepting over the area corresponding to the bulging on the surface. Why there should have been so much pain and swelling in this region I do not pretend to know, but I can only suppose that an "adhesion cyst" existed which had been induced to absorb by the drachm or so of fluid withdrawn by the exploring needle. The liver was not enlarged and showed nothing abnormal beyond a thickened capsule. The stomach was not adherent or dilated and the entire length of the lesser curvature was felt to be occupied by a hard mass. The stomach, after ligature, was removed and opened. The contents, three or four ounces, consisted of a pale yellow, thickish fluid. There was no blood. The cancerous mass measured four inches long by two and a half inches wide and it was about one inch in thickness; the pylorus itself was not involved. On the mucous surface of the growth was a large shallow ulcer, measuring two and a half inches by one inch. The edges were blunted and only slightly raised, the floor was ragged, and there was no fresh blood upon the ulcer. The specimen was placed in spirit; it is now in the museum of the Bristol Royal Infirmary. Scattered throughout the great omentum were nodules of growth varying in size from a small pea to a filbert. The pancreas was adherent to the spine, a little enlarged and indurated. The spleen was not enlarged. The kidneys and suprarenal capsules were normal. No other growth was felt. The thoracic cavity was not examined.

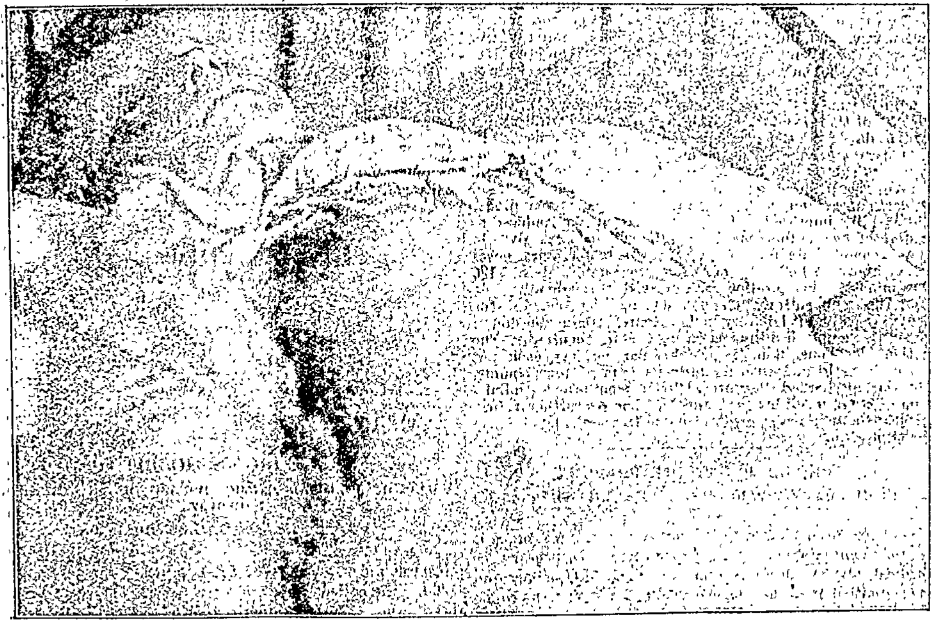
The case is remarkable for two reasons: (1) the condition of the liver, where so little mischief gave rise to so much pain and bulging on the surface; and (2) because, although there was such extensive disease of the stomach, there were so few symptoms to indicate it. It is in those cases where the growth is on the posterior wall of the stomach and does not involve the pylorus that carcinoma is likely to be overlooked. My father informs me that, in his experience, the pain and stiffness on movement, which were so marked in this case, not uncommonly point to malignant disease of, or in close proximity to, the spinal column.

Clifton.

AN INSTANCE OF EXCESSIVE ENTERIC RASH IN CHILDHOOD.

By ARTHUR MAUDE, L.R.C.P. Lond., M.R.C.S. Eng.

The accompanying illustration gives a picture of the plenitude of the rash in a case of enteric fever. The patient was an ill-nourished boy, aged 12 years. The rash first appeared on the tenth day and it reached its greatest development five days after. The spots were then so numerous that an attempt to count them absolutely failed, and a comparison with the excellent plate in Murchison's book showed far more than two spots to one. They numbered certainly many hundreds; they were crowded over the abdomen and the chest, they were numerous on the back, the arms, the thighs, and the neck; they occurred on the cheeks and forehead, and they even invaded the margin of the mucous membrane of the lips. This great intensity of rash lasted from about two to three days and was followed by fresh crops of a few spots for several days more. The spots were typical in every way, though a few were of unusually large size and of unusually irregular oval outline. The type of disease was severe and at the height of the rash the child was extremely ill. The rash was beginning to fade when the photograph was taken. Dr. J. S Tew, the medical officer of health of the West Kent Combined Districts, kindly examined by the Widal reaction for me at the height of the rash. He found marked clumping action with 1 to 40, but the agglutination was not specially rapid, nor



Showing very excessive typhoid rash in a boy aged 12 years. On comparing the rash with the well-known plate in Murchison's work (Continued Fevers) the spots were quite two to one.

were the clumps particularly large. The child was one of a large family of young children, nearly all of whom were affected with severe enteric fever and most of whom had very pronounced rash. Another child had a copious, but not unusual, rash for two weeks; this ceased and the temperature fell to nearly normal for two days, after which a fresh outcrop of rash preceded a marked relapse.

There are certain peculiarities in the occurrence of typhoid rash in children which I have found well illustrated in these cases. The first appearance of rash in children is often earlier than in adults; it occurs frequently by the fourth day. Again, crops of spots may present themselves for a week after a normal temperature has been established. Rash is uncertain in childhood; it is either very pronounced or very slight. Most of the classical writers on enteric fever in childhood (Rilliet, Eustace Smith, Murchison, and West) agree that rash is less frequent and that even in severe cases spots are often quite absent or very sparse. They agree that the spots are less commonly confined to the abdomen and are frequently on the back, particularly about the interscapular region, the loins, and the limbs. This may possibly, however, be due to the facility with which young children, even with enteric fever, are turned about and examined on their posterior aspect.

Another child in my group of cases showed well-marked *taches bleuâtres* straggling faint bluish patches near the umbilicus, having the shape and marginal outline of wet spots on porous blotting paper. It has lately been suggested by Dr. Julius Dreschfeld[1] that such patches are caused by the irritation of pediculi, but with proper deference to so high an authority I must accept the suggestion with profound reserve. By the older French writers, especially Louis and Taupin, sudamina were regarded as very frequent, or even specific, indications of typhoid fever, but I doubt if the opinion would be held now. Probably the patients whom they observed were treated in wards which were kept at a higher temperature than is now customary.

Westerham, Kent.

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[1] Allbutt's System of Medicine, vol. i., p. 814.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

PSORIASIS WITH INSANITY; THYROID TREATMENT; RECOVERY.

BY H. DE MAINE ALEXANDER, M.D. EDIN.,
ASSISTANT PHYSICIAN, PERTH DISTRICT ASYLUM, MURTHLY, N.B.

THE following case may be of interest on account of two affections for which the thyroid treatment has been advocated having occurred in the same case, the mental affection following the skin disease.

A man, aged 33 years, was admitted into the Perth District Asylum on March 3rd, 1898. His history was as follows. He was a servant in a country house. He had developed psoriasis eight months previously and was treated medically without much improvement; indeed, the disease progressed. His life being rendered unbearable by the taunts of his fellow-servants and mental depression ensuing he had to leave his situation. He wandered about the country for a day or two and then gave himself up to the police as he was "frightened" of himself and had suicidal feelings. He was certified as insane and was admitted to this asylum. He had suffered no previous illness and there was no history of intemperance. His father and mother had both had rheumatism. Psoriasis was well marked on the extremities, the buttocks, and the back; it was more diffuse on the chest. Itchiness and hyperæmia were well marked. The scalp was in a seborrhœic condition. The bodily health otherwise was of an average character. He was depressed, suspicious, inclined to impulsiveness, and he asserted that he was suffering from "the bad disorder" and that his body was "crawling with lice"—due probably not been successful in meeting with cases of the disease. He would like to ask whether Mr. Corner and Dr. Singer had referred to two separate bacilli as the cause of the gangrene and whether the different cases referred to were due to separate bacilli or were they only varying stages of virulence of the same organism.—Mr. C. A. BALLANCE congratulated Mr. Corner and Dr. Singer upon the interest of their communication. He should not be inclined to perform amputation before making a bacteriological examination, if there were means of finding the bacilli at hand. Mr. Corner and Dr. Singer had referred to the fact that Sir George Humphrys treated such cases without dressing. He would like to remark that that surgeon treated all his cases without dressing, leaving the wound exposed to the air. The results he obtained were comparatively good, bearing in mind that it was in the days before Listerian surgery.—Mr. CORNER, in reply, said that there were only three kinds of bacilli recognised. The bacillus aerogenes capsulatus was the commonest.

Dr. S. BONTOR read a paper entitled a case of Non-malignant Cancer of the Breast. The patient, who had died at the age of 77 years, had had the growth in the left breast 23 years It never ulcerated or gave pain, but latterly there had been some inconvenience from the sense of constriction of the chest. There were several secondary deposits in the right breast and in the skin over the abdomen, but there were no enlarged glands, or signs of involvement of distant organs. The growth commenced as a hard lump in 1877 when she was 54 years of age. The skin became very scaly. She died from asthenia. There had been many cases of chronic cancer recorded but all had ended from extension of the growth. This case showed no signs of extension or glandular affection. The cancerous nature of the growth was assured by both macroscopical and microscopical appearances.—The PRESIDENT remarked that the case was a typical one of atrophic scirrhus lasting a long time and besides the fact that there was no internal reproduction it did not present anything very unusual. He called to mind a similar case which had lasted for 14 years and then a sudden outburst had taken place. In another after an interval of nine years an acute outburst of carcinoma had occurred after an attack of influenza. It would be interesting to know what explanation there was of such long quiescent intervals.—Mr. BALLANCE referred to a case resembling that related by Dr. Bontor. The patient developed carcinoma at the age of 70 years in both breasts. The disease had no effect upon her general health and she did not die until she reached the age of 82 years. It was a well-known fact that carcinoma supervening in the aged was a process of slow growth.

Mr. ALEXANDER G. R. FOULERTON exhibited macroscopic and microscopic specimens from a case of Endothelioma (hæmangio sarcoma) of the Breast and Axillary Glands. The tumour was removed from a woman, aged 59 years, in whom it had existed for three years. The breast and two axillary glands which were removed at the same time were of a uniform deep red colour. The new growth consisted mainly of columns or tracts of cells supported by fibrous trabeculæ. These cells formed the walls of a number of small capillary blood-vessels, from some of which extravasation had taken place. Mr. Foulerton regarded the tumour as an endothelioma of the variety known as hæmangio-sarcoma. He thought that the endotheliomata arising from the cells lining the large lymph sacs—the peritoneum, pleura, and pericardium, the lymph spaces of connective tissue the lymph vessels, and the blood-vessels—formed a definite class of malignant new growth which might with advantage be classified as distinct from the carcinomata on the one hand and from the sarcomata on the other.—Mr. S. G. SHATTOCK suggested that the tumour in question should be referred to the Morbid Growths Committee; he thought that the specimens admitted of a different interpretation to that placed upon them by Mr. Foulerton. He referred to a case published by Mr. H. T. Butlin which presented a remarkable resemblance to that related by Mr. Foulerton. This was the first case published of villous carcinoma of the breast. He had examined the specimens very carefully.—Dr. A. F. VOELCKER quite shared Mr. Shattock's view. They were dealing, he felt sure, with a carcinoma and not with an endothelioma.—Dr. LAZARUS-BARLOW had examined the microscopical specimen and felt convinced that the growth was a hæmangio sarcoma, chiefly on account of the masses of cells around the blood-vessels which were essentially a part of the growth.—Mr. FOULERTON, in reply, remarked that when endothelium took on growth away from its normal environment it might become columnar.

Dr. W. C. BOSANQUET exhibited a Cystic Adenoma of the Left Suprarenal Body which had occurred in a woman, aged 56 years, who had been under the care of Dr. J. Abercrombie at Charing-cross Hospital. She had died from hæmorrhage due to carcinoma of the stomach. The cyst was originally of the size of a Jaffa orange; it lay behind the peritoneum in front of the left kidney with the descending colon to its outer side. The rest of the suprarenal body was adherent to its upper and back part. It was freely moveable in all directions. During life it had given rise to no symptom, the patient having been conscious only of some weight and fulness in the left hypochondrium. It was easily made out on palpation and there was diminished resonance on percussion over it. On incision the wall of the cyst was found to be about one eighth of an inch thick and was tensely distended with turbid yellowish mucoid material. Microscopically the wall consisted of an external fibrous layer lined by a varying amount of cells similar to those forming the suprarenal cortex. The right suprarenal body was the seat of a small adenoma. A few instances of similar cysts were recorded in the Transactions of the Pathological Society; it was curious that those occurring in women were all situated on the left side.—Dr. VOELCKER remarked upon the fœtal rests found within the kidney having a structure resembling the suprarenal bodies.

Dr. HUGH THURSFIELD showed a specimen of Primary (?) Sarcoma of the Stomach in a child nearly four years of age. The child had growths which appeared later than that of the stomach in the jaw and in the thyroid gland. These could not be examined post mortem, permission being refused. The stomach was dilated and enormously thickened, the walls in some cases being fully three-quarters of an inch thick. Microscopical examination showed it to be a small round-celled sarcoma. Records of new growths of the stomach showed sarcoma to be very rare as a primary growth and uncommon even as secondary growths; the usual form that the growth took was that of isolated nodules rather than of a diffuse growth. Four cases had been recorded in the Transactions of the Pathological Society, and a stomach strikingly similar was preserved in the Museum of the Royal College of Surgeons of England, but with these exceptions there did not appear to be any specimen resembling the present on record and almost certainly none in so young a child.—Dr. VOELCKER drew attention to a case of sarcoma of the stomach recorded by Dr. Sidney Martin in the reports of the Middlesex Hospital for 1890 or 1891.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 15th, Mr. J. RUTHERFORD MORISON, the President, being in the chair.

Dr. D. DRUMMOND related the history of, and exhibited, a young man, aged 26 years, who eight months ago was admitted into hospital in a Condition of Extreme Lethargy and who had continued in this condition, displaying no sign of sensibility and no reaction to stimuli of any kind, until two or three weeks ago, when he first showed signs of consciousness of his surroundings and displayed return of muscular movement, first by masticating food and later by movement of the hand and arm and monosyllabic speech. During this period of seven and a half months the temperature, pulse rate, and respiratory rate were all subnormal; the reflexes were diminished. Nutrition had been maintained by feeding through a pharyngeal tube and by massage.

Dr. G. R. MURRAY showed a case of Paroxysmal Hæmoglobinuria. The patient was a man, aged 25 years, who had malaria five years ago and had also had syphilis. For the past two years he had worked as a river boatman. Two years ago, after having fallen into the water, he had his first attack of hæmoglobinuria, since when attacks had been frequent in winter and rare in summer. The man was now anæmic and displayed slight enlargement of the spleen. After exposure to cold he felt chilly, had aching pain in the loins radiating forwards, and passed only one small sample—two or three ounces—of dark porter-coloured urine. At these times the temperature rose to 101° F. During and after attacks the red blood corpuscles were much diminished as compared with previous counts.

Dr. R. A. BOLAM gave a Lantern Demonstration of the Spectra of the various Pigments which might be observed in Specimens of Urine. With reference to Dr. Murray's case he demonstrated the pigment to be methæmoglobin and the deposit to contain large quantities of oxalates.—Dr. DRUMMOND, the PRESIDENT, Dr. T. BEATTIE, and Dr. BOLAM took part in the subsequent discussion.

Dr. VICKERMAN H. RUTHERFORD showed four cases of Lupus after Treatment by Roentgen Rays. The extent and duration of the disease had been variable and in one there was also consolidation of the right apex. Some of the cases had shown slight improvements but in none could he claim cure.—Dr. F. O. COLEY referred to another method of treatment—namely, that of sunlight, the heat rays being intercepted by blue glass. Recovery, in his experience, had been incomplete but gave an encouraging degree of success.

Dr. D. W. PATTERSON (for Dr. J. LIMONT) exhibited the following cases: (1) Morphœa; (2) Lichen Ruber Planus; (3) Figured Specific Rash; (4) Cheiro-pompholyx; (5) Dermatitis and Staining from Lyddite; (6) Fibroid Tuberculosis Cutis; and (7) Pityriasis Rosea.

Dr. H. B. ANGUS showed a patient after Plastic Operation on the Musculo-spinal Nerve—a boy who 16 months ago from fracture of the middle third of the humerus had his musculo-spinal nerve involved in the callus. Operation was performed three months ago; the nerve was freed, a strip of muscle being interposed between it and the bone. The boy now showed complete recovery from previous paralysis.

Dr. ANGUS also showed the result of Extensive Compound Comminuted Fracture of the Lower End of the Humerus. The patient was a boy who had sustained a year ago a severe crush in a coal-pit with extensive laceration of the soft parts, separation of the lower epiphysis of the humerus, and comminution of the diaphysis. He had been sent to hospital for amputation. Two inches of the shaft were excised and wired to the lower epiphysis, the wound having been cleansed as far as possible. A useful and almost perfect arm was the result.—A long and interesting discussion ensued as to the septicity or asepticity of coal-dust, in which Dr. J. ADAMSON, Dr. W. ROBINSON, Dr. MURRAY, Dr. A. H. DAVIS, Dr. I. G. MODLIN, Dr. H. P. BENNETT, and Mr. G. G. TURNER took part. The colliery medical officers alleged that dust from the virgin coal was aseptic.

Mr. J. D. WARDALE exhibited three cases illustrating Various Degrees of Involvement of the Orbit, some of which had been treated by excision and others by caustics, but all of which had recurred.—The PRESIDENT, Mr. A. M. MARTIN, and Dr. BOLAM discussed these cases, the last-named asserting that the reason for local recurrence in cases of rodent ulcer was that surgeons went wide rather than deep.

Mr. WARDALE also brought forward a patient who exhibited Double Dislocation of the Lens, the one forward into the anterior chamber and the other backward into the vitreous.

Dr. ANGUS (for Dr. G. H. HUME) exhibited a specimen of a Large Hydronephrotic Kidney from which 146 ounces of fluid had been aspirated previously to removal. There was a history of injury but he rather regarded the condition as congenital. The boy also exhibited two plates of cartilage at the sites of the third branchial clefts. His mother and sister had the same congenital defects.

Dr. BEATTIE exhibited two similar specimens of Enormous Sacculated Aneurysm which had both sprung from the anterior and convex surface of the junction of the ascending with the transverse arch of the aorta. The one had eroded and pointed through the manubrium sterni, the other through the ribs and costal cartilages to the right of the sternum. Both sacs contained a large amount of dense laminated clot and both specimens exhibited diffuse specific aortitis. The pressure symptoms in each case were related. The patients had died, one from increasing respiratory difficulty and the other from cerebral embolism.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on Nov. 16th at the Evelina Hospital for Children, Mr. R. Clement Lucas being in the chair.—Mr. Alfred H. Tubby showed an infant suffering from Imperforate Anus and Recto-Vaginal Fistula in whom an Anus had been Formed by Operation. When the patient was admitted in March last there was no anal orifice and the motions issued from the vagina. A probe was passed through the vaginal fistula into the distal end of the rectal cul-de-sac, and an antero-posterior incision was made through the skin and underlying tissues on to the point of the instrument. The rectal mucous membrane (exposed by enlarging the incision) was brought down with some difficulty and sutured to the edges of the skin wound. A large rubber tube was inserted into the orifice thus made. The sutures, however, gave way and the newly-made orifice contracted, so that three months later the operation was repeated and an excellent result ultimately obtained. No attempt had yet been made to close the vaginal fistula.—Mr. Clement Lucas, Mr. D'Arcy Power, and Mr. H. B. Robinson discussed the case.—Mr. Tubby also exhibited a Cavernous Angioma which he had removed from a male child, aged five months. It formed a firm mass, of the size of an orange, filling up the left side of the scrotum and extending to the external ring. It had a tough, elastic feel, without impulse or transparency, and diminished in size when steady pressure was applied. On its surface were some convoluted coils which gave the impression of large dilated veins. The testicle lay below the growth, the nature of which was not certainly diagnosed before operation. After removal the tumour was found to consist of venous sinuses embedded in connective tissue and fat. Its main blood-supply was derived from the left corpus callosum of the penis.—Dr. George Carpenter showed a boy, aged three and a half years, with many Subcutaneous Fibrous Nodules. There was neither a family nor a personal history of rheumatism; the child had not suffered from sore-throat nor did he present any evidence of cardiac mischief. The liver and the spleen were slightly enlarged. The nodules affected mainly the extensor tendons of the hands, feet, wrist, and ankles. They appeared at the age of 14 months, and since the patient had been under Dr. Carpenter's observation (September, 1898) they had increased in number. Galvano-puncture of individual nodules had been practised with a considerable measure of success, but no remedy had been found that prevented fresh nodules appearing. Radiograms had failed to reveal any changes in the bones. Microscopically a nodule had been found to be made up of fibro-nuclear tissue. He had met with at least three other cases of nodules without rheumatism, but they had not been under observation so long as the present one.—Mr. Clement Lucas exhibited by skiagram a case of Fracture-dislocation at the Elbow. The patient, a lad, aged 10 years, fell heavily upon his right elbow. There was a complete dislocation inwards of the ulna, which was rotated so that its greater sigmoid cavity faced directly outwards. In addition the end of the humerus was split obliquely so as to cut off a fragment consisting of the external condyle, the capitellum, and part of the trochlea. As the injury resisted all attempts at reduction Mr. Lucas (five weeks after the accident) excised the joint with a view to restore mobility to the elbow.—Mr. F. C. Abbott mentioned an almost identical case in a girl, 10 years of age, who had fallen upon her outstretched forearm, causing a dislocation of the radius and ulna backwards. Failing under an anæsthetic to reduce the dislocation he cut down upon the ulna, sawed through the base of the olecranon process, and found an oblique fracture of the capitellum and external condyle, which had united in a somewhat forward tilted position. Reduction was prevented by callus from that fracture. After gouging away some bone he was able to reduce both bones. The olecranon was then wired and the external wound closed. The patient had regained excellent movement with the exception of complete extension.—Mr. Sydney Stephenson showed, for Dr. Septimus Sunderland, a case of Hygroma of the Neck in a boy, aged three years. A swelling at the angle of the right inferior maxilla was noticed at birth. This had gradually become larger until the present time, when it had become as big as a medium-sized pear and extended to the clavicle.—Mr. Clement Lucas, Mr. Abbott, and others discussed the case.—Mr. Walter Edmunds showed a case of Unilateral Coxa Vara in a boy, aged eight years, who had been noticed to limp for about three years. The right leg could be flexed and extended fully, but abduction was limited. The pelvis was tilted, the great trochanter on the affected side was raised, and the right buttock was widened. A skiagram showed the neck of the right femur to lie at a right angle with the shaft of the bone and the upper part of the shaft to be slightly bowed outwards.—Dr. Wayland C. Chaffey showed an instance of Brachial Monoplegia in a newly-born infant with early rigidity. The facts of the case were as follows. The child, now aged four and a half treatment. Although met with in children this condition was rare in adults.—Dr. W. G. Lowe exhibited an Iron Nut and Screw, with a Circular Piece of Bone, which he had removed by trephining from a man's skull. The man had been thrown out of a cart and had pitched on his head on the hard road upon the nut, with the result that the nut had passed through the skin, had punched out a piece of bone in the region of the occiput, and lay buried in the hole it had made in the skull, the circular punched-out piece of bone lying loose on the surface of the dura mater. The curious part of the case was that the injury gave rise to hardly any symptoms except a temporary dimness of sight and that the appearance of the wound aroused no suspicion that a foreign body had passed through it, this being discovered only at the time of the operation. A fracture of the bone only was diagnosed. The patient made a good though rather tedious recovery.—Mr. W. F Haslam showed a preparation from a patient on whom he had recently performed Gastro-jejunostomy for Symptoms of Pyloric Obstruction. The man, aged 67 years, was greatly emaciated, and though no tumour could be clearly felt it was thought that the case was probably one of malignant disease of the pylorus. Puckering and thickening were felt in this situation at the operation, but the patient was in too feeble a condition for prolonged examination. He died five days after operation from broncho-pneumonia. At the necropsy the pylorus would easily admit the finger and there was an ulcer rather larger than a shilling of a simple nature in this position. The obstruction was evidently the result of violent spasm of the pylorus, due to irritation from the ulcer.—Dr. T. Wilson read a paper on the Varieties and Treatment of Prolapse of the Uterus and Vagina.

PLAISTOW AND CANNING-TOWN MEDICAL SOCIETY.—A meeting of this society was held at the Public Hall on Nov. 15th, Mr. R. J. Carey being in the chair.—After the formal business was disposed of Mr. J. J. Harvey read a paper on Dysmenorrhœa. He divided his cases into the clinical varieties of spasmodic, congestive, and obstructive dysmenorrhœa. The spasmodic form was often a neurosis, the pain being either clonic or tonic and most severe before the flow. The congestive form was commonly due to chronic endometritis and was generally associated with bladder and rectal troubles. The obstructive form was a frequent result of stenosis of the cervical canal, the pain being in direct proportion to the resistance to be overcome. Pelvic peritonitis and hæmatocele were remote effects. For treatment during the attack he recommended a combination of sedatives and anti-spasmodics with hot rectal injections. After the period treatment should be directed to remove any constitutional weakness, such as chlorosis, and a local examination should be made. He cited very successful results of dilatation by sounds, in some of which cases it was found necessary to keep in a stem pessary for a month after dilatation.—A discussion followed in which Dr. J. S. McDonogh, Dr. C. W. Taylor, Mr. Sydney Williams, and Mr. G. Charlesworth took part.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society took place at 20, Hanover-square, W., on Nov. 28th, Dr. J. H. Stowers, Vice-President, being in the chair.—Dr. P. Abraham showed a case of Lupus Erythematosus in a man, with very unusual distribution.—Dr. T. D Savill showed: (1) A typical Adenoma Sebaceum in a young child; (2) a case of Molluscum Fibrosum (some discussion followed the exhibition of this case and an opinion was expressed that it might be classed as an instance of Von Recklinghausen's disease); and (3) a case of Xeroderma.—Dr. Russell Ryan showed: (1) A case of Psoriasis simulating a Syphilide; and (2) a case of Alopecia Areata which had apparently been cured within four months by treatment with a 10 per cent. solution of lysol.—Dr. Walsh showed: (1) A case of Symmetrical Tophi in an elderly man (these were of unusual size and some of them had broken down, forming abscesses); (2) a Senile Pigmented Wart on the Cheek of an old woman; and (3) a photograph of a case of Ichthyosis Hystrix.—Mr. G. Pernet showed, for Dr. Radcliffe Crocker, a case of Psoriasis of somewhat unusual aspect and distribution.—Several microscopical specimens were also exhibited.

THE "Croce di Benemerenza," or "Cross of Merit" has recently been conferred, among others, upon Mr. Francis Murphy, L.R.C P. Edin., medical officer to the English Pilgrimage of Holy Year.

Reviews and Notices of Books.

Food and the Principles of Dietetics. By ROBERT HUTCHISON, M.D., M.R.C.P. Edin., Assistant Physician to the London Hospital and to the Hospital for Sick Children, Great Ormond-street. With Plates and Diagrams. London: Edward Arnold. 1900. Pp. 548. Price 16s.

ACCORDING to the author's acknowledgment the appearance of this book is owing to the students of the London Hospital, since but for their encouragement it would never have appeared in its present form and so the author dedicates the volume to those to whom its contents in a series of lectures were first addressed. The lectures were given at the London Hospital some 18 months ago. The subject of food, its composition, and the principles of dietetics in health and in disease has been dealt with most comprehensively and we have read through the chapters with considerable interest. No pains in making the information accurate have been spared and this is especially apparent in the chapters devoted to patent and proprietary foods, the analysis of which, in a great number of instances, the author has undertaken himself or has had conducted at his own instigation. This section of the subject is one, of course, with which we are intimately brought into contact every day, the purveyors of new foods constantly submitting them for criticism and analysis to our analytical staff. Dr. Hutchison makes abundant references to the figures of analysis published from time to time by THE LANCET, and he acknowledges drawing considerable information in the chapter on Sherry from THE LANCET Commission on that subject. Again, he quotes a number of THE LANCET analyses of other wines, and especially those which are said to be suitable to diabetics and to the gouty. Information on these and related subjects is constantly in demand by general practitioners and Dr. Hutchison has placed this information conveniently at their disposal in the volume before us. He speaks with no uncertain voice of the special foods of various makers; when he can speak fairly and honestly of their merits he does so, and when he cannot he records what in his opinion are their demerits. We quite endorse his remarks on medicated wines. The use of malt and meat wines, he says, can on no grounds be recommended. In the first place, they are not worth the price charged for them, for it is far cheaper, and probably better, for an invalid to get beef or malt extract separately and to use them in conjunction with, if need be, a definite quantity of sound wine of reputable history; in the second place, as we have pointed out, it is open to doubt whether the malt ferment is not destroyed, so far as its digestive action is concerned, by the action of the alcohol to which it is exposed when dissolved in a fortified wine such as port or sherry. We have also explained that it is practically impossible to dissolve the nutrient matters of beef in a liquid containing as much alcohol as port wine does. Dr. Hutchison concludes that the manufacture and sale of medicated wines (coca wine, and others) should be strongly deprecated by the medical profession. In the chapter upon Spirits and Malt Liquors he very properly says that it would be a great mistake to regard spirits as simply mixtures of alcohol and water. This of course applies especially to genuine brandy, for it is well known that the stimulating influence of a real matured grape spirit is due to certain by-products of the type of ethers. On the other hand, whisky is a valuable stimulant where the action of alcohol pure and simple is desired. He speaks very strongly as to the importance of employing genuine liqueur brandy in cases presenting signs of profound nervous and cardiac prostration. We have advanced the same argument again and again in the columns of THE LANCET. Amongst the spirits which possess by-products of an ethereal nature the author mentions pot-still whisky, rum, and genuine brandy, but on page 341 he says that it is the possession of volatile ethers in large amounts which mainly distinguishes brandy from whisky. That is the experience gained in THE LANCET Laboratory, and in modern whiskies we have never found any volatile ethers at all. In the chapter on Tea, Coffee, and Cocoa we note that he remarks that the addition of alkali (to cocoa) is a favourite device, especially with Dutch manufacturers. We doubt if this statement is generally correct. We at any rate have hardly ever found free alkali in cocoa, but we have almost without exception found the presence of an added salt which appears in the ash obtained by igniting the cocoa as carbonate of potassium. On page 140 in describing plasmon he says that it consists of the proteids of milk rendered soluble by combination with bicarbonate of soda. Although plasmon will be found to be distinctly alkaline, and especially a solution of its ash in water, yet no appreciable quantity of bicarbonate of soda will be found. This at least was our experience according to a recent analysis. The chapter on Soups, Beef Extracts Beef Juices, Beef-tea, and Beef Powders is a very valuable contribution and Dr. Hutchison's remarks on the relative nutrient value of these food preparations should be widely known. The same holds good for the chapter on Artificial and *Predigested Foods and Artificial Feeding*. Broadly speaking the work may be divided into two parts: a first in which the composition of all classes of food is considered, and a second in which the principles of feeding in infancy, in childhood, and in disease are carefully discussed. We have said enough to show that the work may be cordially recommended as dealing most instructively with a subject which is not generally studied with that care which its importance demands. Nowadays we are presented with all manners and kinds of food-stuffs, some undoubtedly of value but others undoubtedly worthless, and it is important that all those who are concerned in the subject of dietetics (and who are not?) should have some reliable information upon which to found an opinion. From time to time we ourselves place this kind of information before our readers in our analytical columns as new preparations are brought forward. Dr. Hutchison has collected similar information in his book and the results are up-to-date and ably compiled, while his own views and experiences are entitled to careful attention and study.

The Opus Majus of Roger Bacon. Edited by JOHN HENRY BRIDGES, F.R.C.P. Lond., some time Fellow of Oriel College. Second edition. London: Williams and Norgate. 1900. 3 vols. *Price 31s. 6d.*

NEARLY three years ago[1] we noticed in these pages the appearance of Dr. Bridges's notable edition of the Opus Majus of Roger Bacon. The appearance of a second edition demands a further notice now. The second edition comprises besides the two original volumes a supplementary volume—the third—which gives the results of Dr. Bridges's further labours on the text. He has now collated it with a manuscript unpublished at the time when his earlier work appeared and has thus been enabled to make a large number of emendations. Considerations of expense have deterred the University publishers from reprinting the work, but its editor, with great public spirit, has given us the benefit of the latest lights by issuing a complete list of corrigenda in the form of an appendix to the new volume. The main bulk of the volume consists of a reprinted text of the first three parts of the work in which the emendations of these parts are incorporated. Possessors of the first edition will thus be enabled to complete their texts by merely purchasing the small supplementary volume which constitutes Volume III. of the new edition.

In our earlier notice of this work we directed attention rather to the later parts which deal with the physical sciences than to the three parts now published in an amended text. To these parts of the work our professional prepossessions naturally led us. But the parts now re-published, which deal respectively with the Causes of Error, the Relation between Philosophy and Theology, and the Study of Languages, are by no means wanting in interest from any point of view. Even a topic upon which we look so little for enlightenment from the thirteenth century as the bearing of science on religion yields unexpected interest in Roger Bacon's hands. What, for example, could be more suggestive than his comparison (p. 58) of Apollo with Æsculapius. In his view the deities of the pagans are distinguished men whom superstition has invested in later times with imaginary divinity. According to this theory Apollo was a profound philosopher who first among the pagans taught the art of medicine. All honour to him therefore. But to his son Æsculapius, who enlarged the art and taught it by a better method, still greater credit is due. "For," says he, "Apollo cured by means of incantations and remedies of that class but Æsculapius arrived at his art by experience." This sturdy faith in natural science, notwithstanding the commanding claims of magic and of revelation, is the groundnote of all Bacon's writing It is on this basis that he claims preeminence for Aristotle, who procured authority from Alexander the Great to send 2000 men into various parts of the world to carry on researches into the nature of things, who cleared the errors of earlier teachers and extended the bounds of philosophy, aspiring to complete what the ancient patriarchs had left although unable in his single person to accomplish what he took in hand. "For," adds the author, "human discoveries never arrive at finality" (p. 66).

But we must not now pursue this theme since the work is too full of interesting points to be at all adequately exhibited by illustration in the space at our disposal. One word must, however, be added on the subject of the text. What we have above said will have given some indication of our sense of the indebtedness of scholars to the literary enthusiasm and public spirit which have prompted Dr. Bridges to undertake this labour of love. We should, indeed, regret it if any word of criticism should seem to belie our sense of this obligation or to mar the acknowledgment which we desire to make of a great service worthily rendered to the republic of letters. Yet we must confess to a wish that the editor had allowed himself a little greater freedom in the work of textual revision. At its best a Latin book is tiresome to a modern reader and Bacon's sentences are sometimes obscure. Often long, they are not infrequently rambling and tax the reader's attention to a point at which a consciousness of the mere words deadens his apprehension of the sense. But when to these difficulties there is added some corruption of the text of such a nature as to mutilate the sense the result is distracting. We have noted a peculiarly grievous example of such mutilation on p. 81 where a sentence, or rather words, occur which are destitute of meaning until the words "si quis autem" are supplied from a footnote. We recognise the literary piety which has made Dr. Bridges cautious to a fault in the work of restoring the text, and while we would not blame the temper we must claim the liberty sometimes to differ from him as to where in practice "the line" should be drawn.

LIBRARY TABLE.

French Cookery for English Homes. William Blackwood and Sons. 1900. Price 2s 6d.—Good cookery means that food is prepared in an appetising manner and so, presumably, that it will be easily digested and assimilated. Therefore

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[1] Scientific Error, THE LANCET, Jan. 29th, 1898, p. 320.

We may assume that our readers have read the remarkable narrative, but as, like all good clinical records, its value is in its details, which are easily overlooked in the strong general impression of the main facts, we venture to advise them to read it a second time. The patient was an infant seven days old, born prematurely by three weeks. On the seventh day (viz., August 27th) the operation of circumcision was performed. It is simply said of this part of the history that "the child did not breathe well under the chloroform. He lost more blood than usual." In these few words we have doubtless the secret of the condition which was soon to occupy all Dr. Keith's strength and ingenuity for 14½ continuous hours The somewhat unusual features of the case were the slow development of the paralysis of respiration and the failure of heart power which caused the child to become cyanosed and to have repeatedly all the appearances of a dead child. We are not told the exact hour of the operation, but after it the child slept for some hours and awoke in the afternoon looking quite natural. But he did not care to take the breast and at 9 P.M. he became very wideawake and screamed for two hours. On being fed at 11 P.M. he took little milk and was very sick. He slept heavily till 3 A.M. of August 28th, when the nurse noticed that his face was cyanosed and took him to Dr. Keith's room, who found him very ill. Very soon breathing stopped entirely. The saving clause at this stage is that the heart was to be heard beating. Dr. Keith immediately commenced artificial respiration, to which the child, happily, responded; but the improvement only lasted a few minutes, when the child was again apparently dying. The heart became very rapid, the colour was worse, and though artificial respiration was again commenced it was more "from a sense of duty" than from any expectation of success. And to this means of keeping the child alive Dr. Keith devoted himself for the period of 14½ hours. At the end of 12 hours a very feeble attempt at inspiration was noticed. This was only once in a minute, but the intervals grew shorter and shorter; in another hour the child was inspiring entirely. There was yet no attempt at expiration, but the change in the condition of the patient was so marked that Dr. Keith began to hope. In the course of the day a supply of oxygen gas was procured, and the constant play about the mouth of the oxygen produced a decided change for the better in colour, in the creaking sounds which had begun to be audible in every forced respiration, and in the strength of the heart beats. At 5.45 P.M. Dr. Keith was able to discontinue, with an occasional exception, the artificial inflation of the lungs. But he was not yet free from anxiety, so he sent to London for an assistant to watch the case, which continued for four or five days to need the most constant and intelligent attention in the varying conditions which threatened life. At one time the child became very cold. He could not take milk-and-water or effectually seize the nipple. But he could take brandy-and-water of which he was given 20 minims every hour. He had screaming fits with offensive motions. On the 29th the temperature began to rise and on the 31st it reached 105° F. Antitoxin in grain doses was given twice and seemed to act antipyretically. On the interruption of the oxygen inhalation which, perhaps unjustly, was suspected of producing pyrexia, the cyanosis returned and the breathing became shallow. The last shock which this little patient gave to his attendants was so late as 4 30 P.M. on the 31st, when, suddenly, without the slightest warning and after one or two catches in his breathing, the respirations stopped entirely. Artificial respiration, oxygen, and brandy removed the grave condition, and thenceforward the child entered on his convalescence. The skin of the abdomen and upper part of the chest after the prolonged artificial respiration was "like raw meat," but the lesions caused by the successful efforts to save life did not long persist.

Patience and resource are qualities of the highest value to the practitioner. A practitioner without hope should not practise medicine. It is not often, of course, that he is rewarded by such direct life-saving as in the case to which we allude. Nor is it an everyday occurrence for him to meet with circumstances and symptoms so urgent and so apparently hopeless. But the good practitioner will try to anticipate such calls on his help. They are not, after all, rare. Every obstetric case has in it the possibilities of complications which tax all the perseverance of the medical adviser. There is no greater trial to the patience and ingenuity of surgeon or physician than dealing with hæmorrhage or convulsions, and no one of us can ever guess when he may find himself confronted with these symptoms in their most critical form. He is the best practitioner who can hope against hope, who can impose on himself the duty of employing the indicated remedies with perseverance where nature is equal to the task of healing disease with the kindly help of her true servant, the medical man. Such a case as the one recorded in our columns by Dr. Keith refutes the scepticism of those who think that medicine has no power. Such scorners will perhaps tell us what the history of the case would have been without artificial respiration or oxygen or brandy and without the moral and intelligent qualities of the physician who used them in turn.

An inquest held recently at Mirfield in Yorkshire is worthy of note because it illustrates with unusual force and clearness the danger to the public arising from the immunity with which cozeners and impostors ply their trade as long as they extract money from their victims under the guise of healers of disease. The inquiry was held upon the body of the wife of an innkeeper whose death, according to the medical evidence, given after a post-mortem examination had been held, was due to cancer in the breast and secondary deposits in other organs of the body, it being also added, as might be expected, that had the unfortunate woman consulted a surgeon at an early stage of her disease a timely operation would, in all human probability, have saved her life. As a matter of fact, however, she had been attended by a "medical herbalist" who was called as a witness and who himself described the course which he adopted. It consisted in hypnotising his wife and asking her while in a state of trance to diagnose the case and to prescribe. This she appears to have done, stating that the patient was suffering from a cancerous tumour, that it would be possible to "scale it away," and recommending the use of an ointment and medicines which the husband supplied. The "prescriptions" were produced in court, being apparently harmless concoctions of herbs, and it was further elicited that they were varied from time to time while the visits of the patient and the hypnotising process were repeated weekly. At some period during the progress of the disease the herbalist, according to his evidence, recommended the deceased to obtain other advice than his, recognising that the case was one of some gravity. He does not appear, however, to have refused to continue his supply of herbal compounds, and he stated in reply to an expression of natural astonishment on the part of the coroner that he honestly believed in what he did. The credulity of the victim and the effrontery or ignorance of the person claiming to diagnose and to prescribe for cancer by hypnotising his wife—without, by the way, making any personal examination—seem to have surprised the coroner, who, however, could only leave two questions to the jury: whether the death of the woman was accelerated by the treatment which she had received, and whether the herbalist had persuaded her from going elsewhere for treatment. An affirmative answer to the first of these questions would have justified a verdict of manslaughter, and we need not discuss the result of such an answer to the second, as the jury found a verdict of death from cancer, and were of opinion that no blame attached to anyone.

It is possible to wish that a trial at assizes could have followed and served as a warning to quacks at large. If, however, that which the herbalist did or omitted to do in this case did not legally justify a verdict of manslaughter it would be well if the law could be so amended as to strike at the root of the evil and to protect others besides those whose lives may be in danger. Police interference for the protection of the ignorant is not unknown where their pockets are in peril. If a gipsy beguiles a kitchenmaid of half a crown by promising her a dark-eyed husband and other ingredients of happiness we send the gipsy to prison because an Act of Parliament enables us to treat fortune-tellers as rogues and vagabonds. Anyone may deceive his fellow-men or fellow-women into parting with their money as long as he makes a pretence of healing disease and does not claim to possess certain defined qualifications which are not necessary to his trade. If, for instance, a man says or suggests falsely that he is a doctor of medicine in an English university he can be dealt with; but he may profess his contempt for the education implied by such a degree and proceed to trifle with the deadliest diseases with hypnotism, Christian Science, herbalism, and so forth, and no one can put a stop to his lucrative career, not even when the result of his intervention is the loss of a life that might otherwise have been saved. The law, in short, takes care of the kitchenmaid's pocket as long as she risks her money only; when she risks her health or her life as well as her money the law does not interfere.

THE human mind is essentially hopeful and prone to optimism, and hence there comes about a tendency too readily to accept as established that which may at any given time be only a matter of inference. The history of medicine and of much of that which passes for science—surely HUXLEY'S view that "science is nothing but trained and organised common-sense" is a sound one—affords many illustrations of this faith, of a faith which clings tenaciously to the original position despite the evidence which has long since rendered such position untenable. When JENNER demonstrated that practically absolute protection against small-pox could, for the time being, be procured by vaccination, he allowed himself to predict, ere the time necessary for establishing such a proposition had elapsed, that such protection was lifelong. The reaction subsequently caused by the testimony of experience afforded the recalcitrant type of mind its opportunity, but now all sensible people protect themselves by vaccination and revaccination.

Again, when the idea of compulsory notification and isolation was first conceived there were enthusiasts who prophesied that by the application of these two principles certain diseases might eventually be "stamped out." At that time the natural history of infectious diseases was but imperfectly understood. Men thought that such diseases were the sole prerogative of the human race; they ridiculed those whose insight and genius led them to infer otherwise. Moreover, the idea that pathogenic organisms might have a saprophytic existence, or that the time spent by the organism in the human economy might be but a phase in the life-history of such organism, found no acceptance. The last decade of the century has, however, taught us that certain animals and insects may share in the propagation of disease, that pathogenic organisms may here and there maintain their existence in the soil, and that diseases are apt to have their variations in prevalence and intensity altogether irrespectively of what are commonly termed sanitary conditions. All these considerations have had their influence in modifying the position once taken up by those who spoke glibly of "stamping out disease," and now what may be termed the anti-isolationist is found declaring that isolation hospitals are not only useless, but are the centres of all sorts of horrors, so that it would be infinitely better to leave the infectious sick, as of yore, in their own homes.

We have before us a pamphlet written by Mr. E. D. MARRIOTT, a medical practitioner of Nottingham, which expounds this view. It would be useful if Mr. MARRIOTT and those of his opinion would consider the objects and scope of isolation hospitals before denouncing them. If inquiry on the point is made to the Local Government Board no reference to "stamping-out" will be found in the hospital memoranda of that Board. Curiously enough, however, in a Local Government Board report on the sanitary administration of Windsor which has recently reached us and of which a review will be found in our last issue we find crisp pronouncement on the matter. In the opinion of Dr. H. T. BULSTRODE, the author of the report in question, the objects of an isolation hospital are thus to be summarised: (*a*) to minimise the risks of infection from invaded houses to the remainder of the community; (*b*) to enable the sick to be separated from the healthy and the healthy to proceed with their occupation or education as the case may be; and (*c*) to provide for better medical control and nursing than is possible in the or temporary nuisance would not be interfered with. "It was not necessary that substantial damage should actually have been done, but the court would interfere if it could be proved that substantial injury would be caused unless the nuisance that was complained of was stopped." The unfortunate orchids were put out of court altogether, as, "the case ought not to be tested by the effect of the smoke on delicate exotics, but by its effect on an ordinary garden." He was satisfied that in this case the smoke was such that it would cause injury to an ordinary garden, so that the plaintiff was entitled to bring the action, the defendant must pay the costs, and if the occasion should arise the plaintiff could apply for an injunction. It really seems easier to obtain protection from smoke for the plants in a garden if they are only "ordinary," than for the people of some parts of our large towns who are apparently somewhat in the position of the orchids. It would be interesting to know if the Vice-Chancellor would look on human visitors from a tropical clime in the light of delicate exotics, and deny them protection because they were not "ordinary" It is said that in the well-known Crumpsall case Messrs. Levinstein are appealing against the decision by which they were fined at the last hearing of the case.

A RETROSPECTIVE GLANCE.

THE *Westminster Review* of May, 1832, contains an article on "Improvements in Medicine and Surgery" which may be commended to the attention of the rising medical generation. "It is a fact capable of demonstration," says the reviewer of 68 years ago, "that since the healing art reached that point of cultivation which entitled it to the name of science disease has been gradually decreasing both in frequency and fatality. And it is equally capable of proof that the degree of perfection with which anatomy has been studied at any successive periods may be safely taken as the rule by which the progress of all the other branches of the science may be ascertained." Rejecting Sydenham's dictum as to the uselessness of "searching into the bowels of dead and living creatures ...... to find out the seeds of disease," the reviewer emphatically endorses "Baillie's assertion that 'the dead body is that great basis on which we are to build the knowledge that is to guide us in distributing life and health to our fellow creatures'"; and then proceeds to quote the statistics of Sir William Petty "who died," he informs his readers in a parenthesis, "about 150 years since." According to Petty, the proportion of deaths to cures in St. Bartholomew's and St. Thomas's Hospitals was in his time one to seven, whereas in 1741 the corresponding mortality had diminished to one in 10, in 1780 to one in 14, and in 1813 to one in 16. Finally, exclaims the reviewer, "out of 12,494 patients treated in St. Thomas's Hospital 259 only were buried, or one in 48." Some remarks of His Royal Highness the Duke of Sussex are next quoted, among them being the statement "that comparing the value of life as it is now calculated to what it was 100 years ago it has absolutely doubled." The Royal Duke then went on to expose how at one time "the entire half of our population were destroyed by one disease—small-pox." Typhus fever used to "slay one out of every three whom it attacked," but at the time of writing the mortality did not amount to one in 16. Measles, scarlet fever, whooping-cough, and consumption were no longer regarded with extreme terror. From 1799 to 1808 about 27 per cent. of those who became ill with consumption died, but during the succeeding lustrum the mortality fell to 23 per cent., and from 1813 to 1822 it still further decreased to 22 per cent. "As anatomy was more attended to," continues the reviewer, "surgery proportionally advanced. . .... The extreme clumsiness and cruelty with which operations used to be performed could scarcely be credited. Thus, Fabricius of Aquapendente, preceptor of the immortal Harvey, describes what he considered was an improved and easy operation. 'If it be a moveable tumour I cut it away with a red-hot knife that sears as it cuts; but if it be adherent to the chest I cut it, without bleeding or pain, with a wooden or horn knife soaked in aqua-fortis, with which having cut the skin I dig out the rest with my fingers.'" It would be interesting to know with what object the soaking in nitric acid was performed; did the illustrious surgeon thus prefigure the advent of antisepticism? It is a pity he does not say whether he soaked his fingers as well. A concluding observation by the reviewer seems to indicate an amount of knowledge on the part of a certain class of irregular practitioners with which it is not at the present day credited: "It is little more than 50 years ago when Mr. Sharpe, one of the most eminent surgeons of London, denied the possibility of the thigh-bone being dislocated at the hip-joint, an accident which occurs daily and which the merest bone-setter in the kingdom can now detect." The final paragraph of this instructive article is noteworthy: "But it were a task equally difficult and unnecessary to enumerate one-tenth of the achievements of modern surgery (*tempus* 1832); and it were superfluous to add that it is to anatomy, and to anatomy alone, that all improvements in this department can be traced." After three-score and ten more years have passed what will be the opinion of our successors regarding the achievements of modern surgery, *tempus* 1900?

THE BOWEL LESION OF TYPHOID FEVER.

IN another column we publish an interesting article by Dr. T. J. Maclagan with the above title. The writer describes in graphic language the changes brought about in a Peyer's patch during an attack of typhoid fever. Now that in every infectious disease we expect to find a micro-organism in direct causal relationship with that disease there is a tendency to consider that the pathogenic organism is the sole cause of the lesions characteristic of the malady. Thus in pulmonary tuberculosis the bacillus of tubercle naturally holds the most prominent place, but we must not forget that other micro-organisms are responsible for the very active pulmonary disintegration which frequently occurs. So Dr. Maclagan points out that in typhoid fever elements other than the typhoid bacillus have to be contended against. The structures in which the pathogenic micro-organism directs its specific effects are the salivary and agminated glands situated in the submucous coat of the small intestine, and certain changes are thereby produced which essentially consist in proliferation of their cellular and granular contents, with consequent swelling and hardening of the glands. Further, this inflammation is generally sufficiently severe to cause gangrene and sloughing of the affected glands. Dr. Maclagan explains that the direct action of the typhoid bacillus is limited to the glands of the submucous coat and that it has no direct action on the mucous, muscular, or peritoneal coats. But the sloughing process which destroys the glands necessarily also destroys the mucous membrane situated over them. With the process of sloughing and suppuration there come into play other and new morbid agencies and the various forms of cocci associated with these processes. To these new agencies, rather than to the typhoid bacillus, Dr. Maclagan attributes all the more serious complications and all the formidable symptoms, general as well as local, which are apt to show themselves during the third and fourth weeks of the disease. We believe this view of the pathology and bacteriology of typhoid fever to be a sound one, and, as already pointed out, it is analogous to what is found in other diseases. It would likewise lend support to the treatment of typhoid fever by intestinal antiseptics which some authorities so strongly recommend. In this connexion we may also call attention to the views expressed by Dr. Owen Paget in a letter which appears in this issue.

ANNUAL REPORT OF THE IMPERIAL BACTERIOLOGIST TO THE INDIAN GOVERNMENT.

THIS report for the year 1899-1900 has just reached us and is a record of very varied work. The laboratory is, or possibly we should say was, situated at Muktesar, but in September, 1899, most of the buildings with their valuable contents were destroyed by fire and the work of six anxious years was within three hours all done away with. The report is chiefly taken up with experiments and investigations for the prevention of rinderpest. The subject is too intricate to be conveniently summarised here and the matter is not yet fully worked out, but the report shows that protective inoculation carried out with due consideration for the strength of the dose in proportion to body-weight will confer immunity for a period of between 70 and 80 days. Experiments were also made with the locust fungus, but up to the date of the report no data had been obtained on which to found an opinion as to the value of this method of killing locusts. A curious disease affecting horses appeared in Roorkee, but its pathology has not yet been made out. Major A. W. Dawson, I.M.S., attributes the symptoms and death to aconite poisoning. Various other diseases are dealt with, such as "surra," a complaint due to a trypanosoma but one of a different species from that which is responsible for the disease known as "dourine." The whole report will be found to be of extreme interest both to medical men and to veterinary surgeons.

ST. BARTHOLOMEW'S, ST. THOMAS'S, AND BRIDEWELL HOSPITALS AND THE LAND TAX.

A VERY curious case has been decided by Mr. Justice Wills, the plaintiffs being the Lord Mayor and others, the Governors of St. Bartholomew's, St. Thomas's, and Bridewell Hospitals, who sought for and obtained a declaration that property known as Maidstone-buildings, Southwark, belonging to these institutions, is exempt from land tax, the difficulty of the question arising from the fact that for at least 120 years the tax had been paid apparently without demur by the tenants, except in 1835, when it was paid by the governors. The statute originally creating the land-tax (4 William and Mary, c. 1) was passed in 1692, "for granting to their Majesties an aid of four shillings in the pound for one year for carrying on a vigorous war against France," but "vigorous wars" and other calls upon the public purse caused it to be renewed from year to year until in the thirty-eighth year of the reign of George III. the impost was made a permanent one. The original Act, by its 25th section, exempted certain learned foundations and charitable institutions from the payment of the tax, and in particular it was not to charge "any of the houses or lands belonging to Christ's Hospital, St. Bartholomew's, Bridewell, St. Thomas, and Bethlehem Hospital in the City of London and borough of Southwark, or any of them" The following section possibly introduced some obscurity by making lands belonging to some of the institutions enumerated in Section 25 liable to pay the tax if let to tenants, and small verbal alterations were introduced in those Acts which renewed that of 1692 and in the Act of George III. mentioned above which did away with the necessity of renewal, while in respect of some of the foundations the lands exempted by the original Act were to be lands belonging to the "scites of the said Colleges, Halls, or Hospitals." On behalf of the defendant, the surveyor of taxes for the parish of St Saviour's, Southwark, two principal points were raised—namely, that the payment of the tax for so long showed that the land in question had throughout been subject to taxation under the statutes and that the exemption on its true construction only referred to property belonging to the hospitals in the sense of supporting their actual buildings. With regard to the first of these points Mr. Justice Wills in a long and learned judgment declined to make the deduction asked of him, and with regard to the second decided in accordance with what seems to us to be provided in tolerably clear terms by the section, that the lands in question having belonged to the hospitals at the time when the original Act was passed are and should always have been exempt from land-tax, whether let to tenants or not Why the tax was first paid at some time in or about 1780, or possibly before that, we need not speculate; presumably the persons asked to pay, not being connected with the hospitals except as their tenants, were not aware of the privilege accorded, and those who paid it in 1835 paid it as a matter of routine without reflection or inquiry. There is assuredly nothing surprising in the exemption and we are inclined to wonder whether any other charitable institutions may be contributing to imperial or local revenues in ignorance or forgetfulness of public or private Acts under which they might claim relief. It is on the face of it unjust, as we have often urged, that charitable institutions supported by public subscription as such should be burdened with the same payments as private individuals or wealthy corporations existing for the benefit of the members composing them. Hospitals pay rates under a statute passed in the reign of Queen Elizabeth, when charitable institutions did not exercise their benevolence on the same scale as to-day and when their needs were not so conspicuous. Nevertheless, a decision of the House of Lords in 1760 declared them to be exempt from the payment of rates and they continued to be so for more than a century. In 1866 another decision given in a case relating to dock companies declared that hospitals were rateable, and Parliament has never thought fit to rid them of the burden thus re-imposed upon them It is interesting to observe from the case before Mr. Justice Wills that in the seventeenth and eighteenth centuries the legislature recognised the claims of charitable institutions and learned societies for consideration more fully than they are recognised at the close of the year 1900.

POISONOUS GLAZED WARES.

A REPORT recently presented by the United States consul at Mayence includes a warning to purchasers of silvered glass and porcelain which ought not to be overlooked. The silver is applied to certain kinds of this ware by a galvano-caustic process which involves immersion in baths highly charged with cyanide of potassium. The surface thus treated is not perfectly smooth but is covered with innumerable fine cracks. In these the cyanide is absorbed and, it is said, cannot be removed during manufacture, although we should have thought, considering how extremely soluble cyanide of potassium is, that it could be easily washed out. As a natural consequence the use, even the handling, of the ware is apt to be followed by poisonous effects. One firm, it is stated, has abandoned this branch of manufacture because of the danger involved in it not only to the public but to the workmen employed. These glazed products are exported chiefly from Frankfort, Stuttgart, and Berlin. Until some non-poisonous means of plating the goods has been devised it is difficult to see how the very real danger which their use entails is to be avoided. No known process of after-washing can be relied upon to cleanse the minute cracks in the glaze, and even if this were possible, the position of the employés would not be improved. The German official authorities are not slow to interfere with manufactures which are proved to be injurious and they can doubtless be trusted to deal with this matter effectively. In the meantime the purchasing public will do well to regard the timely caution which we have quoted from the *Times* and to abstain from buying the articles in question.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE lectures at the Royal College of Physicians of London for 1901 will be delivered as follows:—The Milroy Lectures will be given by Dr. J. F. Sykes on Thursday, Feb. 28th, Tuesday, March 5th, and Thursday, March 7th, at 5 P.M.; the Goulstonian Lectures will be given by Dr. Henry Head, F.R.S., on Tuesday, March 12th, Thursday, March 14th, and Tuesday, March 19th; the Lumleian Lectures will be given by Dr. J. F. Payne on Thursday, March 21st, Tuesday, March 26th, and Thursday, March 28th; while the Croonian Lectures will be given by Dr. W. D. Halliburton, F.R.S., on Tuesday, June 11th, Thursday, June 13th, Tuesday, June 18th, and Thursday, June 20th.

ISOLATION ACCOMMODATION AT COLCHESTER.

AN outbreak of diphtheria at Old Heath, a suburb of the borough of Colchester, has afforded opportunity for, or given rise to, a far from edifying discussion in the local press between Mr. Edgar Hunt, a medical practitioner, and Dr. George Brown, the medical officer of health of the borough. Other medical men have found themselves involved in the controversy and the general result is not, we fear, calculated to enhance the regard in which the medical profession is held in East Anglia. The correspondence, which occupies many columns of one of the local newspapers, can fortunately be briefly summarised. The isolation hospital, as far as we can judge from the several letters, is not up-to-date, and hence, among other things, it has been unable to cope with the demands recently made upon it. But this is not all. It is affirmed by Mr. Hunt that there is no proper disinfecting apparatus available, an allegation which in our view is sufficiently serious for a town of the size, importance, and obvious aspirations of Colchester. It is difficult to comprehend how a body of enlightened popular representatives, such as we imagine the members of the Colchester Corporation to be, should in these days regard it as consistent with their duties to leave their district without the modern facilities for isolation and disinfection. The treatment meted out to the patients at the fever hospital has been called in question, and this matter has perhaps unduly prolonged the correspondence above referred to. Mr. Hunt was anxious to obtain a written statement from the medical officer of health as to whether or not it was his practice to make use of diphtheria antitoxin at the hospital, and seeing that the destination of the reply was presumably to be the local newspaper the medical officer of health was not unnaturally averse to be thus catechised. There can hardly, we think, be any doubt in the minds of the medical profession in Colchester as to the great value of diphtheria antitoxin, especially when it is used early in an attack, and it is to be feared that the public debate which has taken place upon the subject in the press of Colchester may have produced a somewhat erroneous impression upon the minds of those who have followed the controversy. The pages of THE LANCET and the reports of the Metropolitan Asylums Board will afford a good estimate of the true position with regard to this remedy. Mr. Hunt is anxious for a Local Government Board inquiry into the outbreak of diphtheria, and presumably, also, into the administration of the hospital, but perhaps the exercise of a little common-sense and an adaptation to the necessities of the situation might obviate such a course. We see that references are made to the water-supply of the invaded areas in relation to the outbreak, but it may be well to point out that water-borne diphtheria is by no means a common occurrence, and that time might be better occupied in a house-to house inspection with a view to searching out and controlling cases of suspicious sore-throat. If the hospital staff and the accommodation are inadequate they should be promptly increased.

MALARIA AND MOSQUITOES.

AT a recent meeting of the Society of Arts at which Professor Ray Lankester presided, Major Ronald Ross, I.M.S., read a paper upon Malaria and Mosquitoes. After giving an account of the symptoms and course of malarial fever he proceeded to discuss the subject of prevention. Measures of prevention might be either public or private. The latter he would not discuss, but the former demanded examination on the ground of expense, for municipalities and the like authorities should not be required to spend money without there being a good prospect that the sums laid out would not be wasted. Koch's theory that mosquitoes should be let alone but that people should be cinchonised Major Ross considered as impossible to put into execution in a British colony, such as, for instance, Sierra Leone. The best method in his opinion was destruction or removal of the mosquito by means of surface drainage, cutting down undergrowth, and the use of various culicides. In our opinion Major Ross's ideas are very sound. The experiments of Sambon and Low seem to show that in Italy at all events immunity can be obtained by living in a mosquito-proof house between sunset and sunrise. They also apparently demonstrated the fact that the Italian mosquito does not bite during the day or possibly that the malaria-carrying variety only bites at night. But other experience would point to the fact that the extirpation of the mosquito would be the most effective measure of protection. In some countries mosquitoes bite viciously all through the day, as, for instance, in Lapland and in the Araxes valley. In the latter locality mosquitoes exist literally in millions, and are much more troublesome by day than by night. A medical man who travelled through this valley in 1884 was severely bitten during the day but only rarely, if at all, at night. Though he had never had any symptoms of malaria while away, some 18 months after his return, while hard-worked at a hospital, he developed sundry severe attacks of hæmoglobinuria, presumably due to malarial infection. A mosquito-proof house would have been no good in this instance, but a reduction in the number of mosquitoes would undoubtedly be of benefit.

THE DIFFERENCE BETWEEN A FRESH EGG AND A NEWLY-LAID EGG.

NINE times out of ten the trader, we fear, conveniently ignores the question of the difference between the newly-laid egg and the fresh egg, his concern being only to realise the best prices for his eggs, to which end he keeps them dubbed "new-laid" or "fresh" as long as he can before they become obviously "shop 'uns." A species of fraud is thus being commonly practised upon the public and it would be very satisfactory if some definition could be established which should sharply require the assortment of eggs into three classes, to be respectively known as "newly laid," "fresh," and "shop." A difficulty at once arises as to when an egg may fairly cease to be considered newly laid and when it has entered upon the "fresh" stage. There can be no doubt of the dietetic difference between an egg, say, one day old and another a week or more old. From the moment it is laid the egg, it is certain, undergoes definite changes of the precise nature of which we are ignorant, but which nevertheless affect the dietetic value of the contents. Eggs when kept, as is well known, gradually lose water by evaporation, and water is an essential constituent of the albuminous fluid. Indeed, the loss of water thus occurring is sufficient to make the egg lighter and on this a test has been established as a means of differentiation. A fresh egg, it is said, should sink at once in a 10 per cent salt solution, but the longer it has been kept the nearer the surface will it float. Perhaps by carefully studying this phenomenon we may be able to determine the exact age of an egg, and if once it is accepted that a newly-laid egg shall be an egg not more than 24 hours old some system of control over the sale of eggs "newly laid" as distinct from the "fresh" and "shop" descriptions might be inaugurated. Such an instrument, giving very exactly the density of an egg, might conveniently be called the "ooscope." Some attempt at guaranteeing the history of an egg has been made by branding upon it the date upon which it was laid, but obviously this method can hardly be relied upon. One thing is clear; there is an important difference between an egg that is newly laid and one that is comparatively speaking "fresh." One essential point is that a newly-laid egg when boiled is milky or creamy as regards the white part of it, whilst an egg commonly spoken of as fresh but which is not newly laid furnishes on cooking a white that is transparent or, more correctly, slightly opalescent. Many attempts have been made to preserve eggs in their newly-laid state, but such preserved eggs never satisfy this test of a newly-laid egg. The question is a very important one, especially at a time when eggs are scarce and when it is probable that fraud in regard to palming off fresh eggs as newly-laid eggs is practised with some frequency. The question is also important in relation to foreign competition, for undoubtedly foreign eggs which are imported into this country are often sold as newly-laid eggs. We cannot help thinking that home producers and the trade generally could if they chose usefully combine their energies and skill towards providing a means which would enable the public to obtain some guarantee that the egg purchased is really newly laid. Certain it is that persons would pay a high price for the really newly-laid egg rather than have an egg which could in no sense be regarded as newly laid thrust upon them at a lower price.

THE COLLECTION OF INFANTS' URINE AND FÆCES FOR ANALYSIS

IN the *Deutsche Medicinische Wochenschrift* of Oct. 18th Dr. B. Bendix and Dr. H. Finkelstein describe a contrivance which they have found very satisfactory for the separate collection of the urine and fæces of infants, when analyses have to be made, as in the course of investigations on tissue change Nearly five years ago Dr. Bendix introduced an arrangement for the same purpose which answered perfectly well provided that a constant watch over the movements of the infant was maintained both by night and by day.[1] Dr. Bendix and Dr. Finkelstein eventually employed a considerably modified arrangement which they have found to be perfectly reliable and which has the advantage of not requiring constant supervision. The child lies on a stout sheet which is stretched between the top and bottom rails of a cot and which is torn in half from the foot to the centre. The inner edge of each of these halves is turned outwards on itself and fastened to the outer border of the sheet, so as to make two hollow cones like legs of a pair of drawers tapering to a point. An ordinary woollen combination garment with the buttons in front is then stitched to the sheet, in such a way that the seam begins in the middle line at the level of the angle of the scapula and on coming to the small of the back it divides and is carried on each side to the back of the knee. The back opening of the woollen drawers must correspond exactly with the commencement of the division in the sheet, the legs being carried into the folded halves of the sheet already mentioned. When the infant is put into the combination garment the upper part of the body and the arms are quite at liberty and the child has also considerable freedom of motion for the legs. To prevent the gluteal region from slipping down and to make the whole arrangement steadier the under surface of the sheet as far as the small of the child's back is supported on pillows, so that the upper part of the body is always horizontal. A waist-belt, having a number of buttons and held up by braces, is also provided. The urine is caught by means of a glass vessel, in shape not unlike the glass "adapter" used in chemical laboratories. At one end it is large enough to receive the penis and scrotum and suddenly tapers to a small tube which passes into the neck of a bottle. The wide end is encircled by an indiarubber ring from which two indiarubber straps proceed in front and two behind, all four being buttoned to the waist-belt. The fæces are caught in a pan placed underneath the sheet. All the parts of the apparatus may be obtained from Mr. Ernst Lentz, 18, Birkenstrasse, Berlin.

THE CAPE OF GOOD HOPE COLONIAL BACTERIOLOGICAL INSTITUTE.

THE report of the Director of the Colonial Bacteriological Institute at the Cape of Good Hope for 1899 is full of interesting reading By far the greater portion of the report deals with the question of horse sickness, which is a perfect scourge to horses, asses, and mules in South Africa. Dr. A. Edington has succeeded, after a long series of experiments, in devising a protective method of inoculation, the technique and results of which are set out at length in the report, but as last week we were enabled to lay before our readers a paper upon the same subject by Dr. Edington we need refer no more to the subject here. Another matter referred to in the report is that very fatal disease amongst cattle—namely, redwater. A method of protection against this malady by means of a protective virus has also been devised by Dr. Edington and "continues to find favour with the stockholders in infected areas." Experiments have also been made with the "locust fungus" for the destruction of locusts with most gratifying results, but, unfortunately, the funds provided for the support of the five travelling instructors proved quite insufficient and they therefore had to be withdrawn Owing to farmers and others whose interests were involved carrying out the campaign of destruction in a half-hearted way the results have been much less successful since the withdrawal of the instructors. The institute supplied in addition vaccine lymph, diphtheria antitoxin, and sundry other viruses and vaccines for protection against "lung sick," anthrax, and the like. Bacteriological examinations into various pathological tissues, suspected milks, blood, and water were made to the number of 138.

"CONSUMPTION SANATORIA" IN SCOTLAND.

WE have just received the report for the year ending October, 1900, of "Consumption Sanatoria for Scotland." These homes are situate at the Bridge of Weir, Renfrewshire, and form a portion of the many philanthropic establishments inaugurated under the auspices of Mr. Quarrier. At present there is no accommodation save for women patients, and, as the report points out, there is sore need for a like establishment for men who are in general the bread-winners and whose illness therefore presses hardly upon their families. During the year with which the report deals there were 81 cases admitted and at the end of October, 1899, there were 25 patients remaining in the home, making a total of 106 Of these 66 were discharged after an average stay of 134 days, as compared with 56 discharged in 1899 after an average stay of 156 days, while 40 were under treatment at the end of October. The method of treatment adopted is that in vogue at similar institutions—namely, full diet, an open-air life, and strict personal supervision with attention to rest and exercise. The results, says the report, are very encouraging. Of 60 patients 12 are returned as "cured." This term, however, is only to be taken provisionally at present. Under the heading of "almost well" 17 patients are returned, 15 were "very much improved," 10 much improved, five "slightly improved," and in one the condition remains unchanged. Inquiries into the after-condition of patients since the opening of the establishment in 1896 show that 44 maintained the improvement, 13 relapsed, five were much worse, five were lost sight of, and 17 died. The report rightly urges upon both patients and medical men the necessity of applying for treatment at an early stage in the disease. The Scottish sanatoria are perhaps not so well known as they should be on this side of the border, and we are glad to be able to put on record the good work which it appears that the Bridge of Weir Homes are doing.

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[1] Jahrbuch für Kinderheilkunde, 1896, vol. xliii, p. 23.

PAINTERS AND LEAD POISONING.

THE prevalence of lead poisoning among house painters and decorators is an old-standing evil, yet comparatively little has been done to mitigate it. In zinc there is to be found an excellent and a harmless substitute for lead, though it has not the "covering" power of lead; but it seems most difficult to break down trade customs and prejudices. In the manufacturing processes some improvements have been realised, the lead being now generally pulverised in closed receptacles so that the lead-dust does not fly about. Nevertheless, the cases of lead poisoning are still very frequent. In Paris the public authorities supply gratuitously sulphurous baths to all workers who manipulate lead. The expense which this occasions is more than compensated by the reduction in the number of days spent in the public hospitals by persons suffering from lead poisoning. But on the ground that prevention is better than cure the French painters recently held a congress which was attended by representatives of their trade in the principal towns of France. At this congress resolutions were carried denouncing the use of lead for the manufacture of paint and demanding that the law for compensation for accidents should be extended so as to apply to all cases of lead poisoning. So old is this grievance that in the reforming days which followed the revolution of 1848 a decree was promulgated by the French Government forbidding the use of carbonate of lead. Though this decree bears the date of August 24th, 1849, it has never been enforced. The Congress appointed a commission of five members to organise an agitation against lead paint and they held a first conference on Nov. 3rd last. The directors of two large Paris firms engaged in the manufacture of paint were present, as also was a representative of the Government, M. Alby, civil engineer. M. Finance, formerly a painter and now director of the Bureau of the Trade Associations at the Labour Office, contributed a paper full of statistics and technical information, setting forth the evils resulting from the use of lead and how easily zinc might be employed in its stead. Then the painters' delegates proceeded to interview the Minister of Public Works, asking him to enforce the decree of 1849, at least in regard to all work done for the State. The Minister gave a favourable reply and declared that henceforth only zinc should be employed in all State work. This was a good beginning and is an example which the British authorities might well follow. The representatives of the painters subsequently proceeded to the Ministry of Commerce and placed the resolutions which their congress had adopted in the hands of M. Millerand. The Minister replied that the Law on Accidents, though but recently enacted was still imperfect. It was nevertheless too soon to hope for its amendment. In the meanwhile, and in accord with his colleagues in the Ministry, he would do all that was necessary to enforce the decree of 1849 so that no more lead should be employed for the painting and decorating of State edifices. He hoped that the local authorities would follow the example given by the State, then it would only be necessary to persuade private employers to substitute zinc for lead. Thus it will be seen that this question has recently made good progress in France. We wish we could say as much in regard to Great Britain.

THE POISONING OF BEER IN MANCHESTER: A REPORT BY DR. NIVEN.

DR. J. NIVEN, the medical officer of health of Manchester, has presented a report to the hospital sub-committee dealing with the present outbreak of arsenical poisoning in Manchester. In his report he states that he first heard of the epidemic through Dr. E. S. Reynolds, who on Nov. 20th informed him that arsenic had been found in a sample of beer. At that time there was a large number of patients in the wards of the infirmary exhibiting a definite set of symptoms, and these patients, who had been admitted for some months previously, were all beer-drinkers drinking the cheaper kinds of beer. We shall publish the report in full next week.

ASEPTIC HAIRDRESSING.

WHETHER it be in the "Barber's Chair" in England or under the ministrations of the "*Figaro*" in Spain, hairdressing and shaving have always been associated with gossip and the exchange of ideas. But it is the rôle of the hygienist to step in and to indicate the evil consequences that may result from pleasant things. Even "*Figaro*," razor in hand, succeeds in "suggesting" Don Bartolo into a high state of fever; and the promiscuous use of razor, scissors, combs, and other implements by the hairdresser has on more than one occasion been denounced as a probable source of infection. Of course the better-class hairdressers are careful to keep all their instruments clean; but, as a rule, these are not cleaner than surgical instruments used to be before the days of antiseptic surgery. The question now arises whether a barber should not be as scrupulous in this respect as the operating surgeon. As barbers used to be surgeons they can only be flattered if to-day we draw their attention to the modern practices observed by surgeons. Nor is this a mere suggestion. The medical students and others of the Latin quarter in Paris have actually succeeded in conveying to hairdressers the lessons which they have learnt in the operating theatres of the hospitals. There are now several hairdressers in Paris who have adopted antiseptic methods. Nor does this occasion any particular trouble or expense. In front of each chair there is a gas-burner. Bone or celluloid combs are no longer employed; metallic combs are used instead. The barber turns on the gas, and before he commences operations he slowly passes his metallic comb several times through the flames. His scissors and razor are likewise thus purified by fire and his customer is reassured by witnessing this burning up of all the microbes before his hair is touched with the instruments. There remains, it is true, the brush which cannot be submitted to this fiery ordeal, but there is no risk of accidental cutting into the flesh with a brush. Also the risk from the brush is mitigated by the constant use of antiseptic hairwash in which thymol, on account of its pleasant odour, is the favourite ingredient. Thus have the principles of the operating-room been extended to the barber's shop, and it must be acknowledged that this is a distinct advance. The precautions may not be absolutely effective in every detail, still, they must tend to reduce very considerably whatever risk there may be. They are certainly characteristic of the times and of the influence that the discoveries of bacteriologists are exercising on our every-day life and habits.

"CERTIFICATION AND CLASSIFICATION OF DIARRHŒA DEATHS."

UNDER the above title a pamphlet has been reprinted from *Public Health* and issued by the Home Counties Branch of the Incorporated Society of Medical Officers of Health. It is published by Messrs. Rebman, Limited. It contains a paper entitled "A Plea for Uniformity in Classification of Diarrhœa Deaths," by Mr. Alfred Ashby, medical officer of health of Reading, in which he draws attention to the confusion arising from the present method of certifying and classifying deaths from "diarrhœa." The society above referred to before which the paper was read in April, 1898, appointed a committee of three of its members "for the purpose of taking steps to promote uniformity in classification of diarrhœa deaths." The committee, after an exhaustive inquiry, made two reports to the Home Counties Branch in April, 1899, and May, 1900, respectively. Acting on the recommendation of the Branch, the council of the society communicated with the Royal College of Physicians of London with a view to the appointment of a committee to deal with the question. The College appointed a committee the members of which issued a very valuable report in which they recognised the specific character of the disease generally termed "diarrhœa," assigned a definite name to it, and urged the entire disuse of its numerous other synonyms. We have already referred to this report in a leading article in THE LANCET of Feb. 3rd, 1900, page 320. The report is reprinted in the pamphlet now under consideration, together with the paper and reports already alluded to. The Home Counties Branch of the Incorporated Society of Medical Officers of Health deserves the thanks of the medical profession for the energy which it has shown in this matter. The conclusions arrived at by the Royal College of Physicians of London bear the stamp of authority, and it is therefore the duty of all practitioners to take note, in order that accurate statistics may be obtained of the prevalence of the disease in special places and at special times, and that due sanitary precautions may be taken to stay the spread of an epidemic.

DR. J. ANDREW TURNER, medical officer of health of Hertfordshire and medical officer of health of the combined districts of East Hertfordshire and Essex, has been appointed executive health officer to Bombay. Dr. Turner, when medical officer of health to the combined Leicester and Rutland districts, made a first-hand investigation in Paris into the antitoxin treatment of diphtheria for his sanitary authority, and his reports, which were published in THE LANCET of Nov. 17th (p. 1173) and Nov. 24th, 1894, (p. 1235), were the first reports on the treatment published in this country.

THE first Baillie Lecture was delivered in the school of St. George's Hospital by Dr. W. Howship Dickinson on Wednesday last, Dec. 5th, and the second will be delivered on Wednesday next, Dec. 12th, at 3 P.M. Dr. Dickinson is taking as his subject, "Considerations touching the Pathology and Relations of Diabetes."

DR. G. SEATON BUCHANAN has been instructed by the Local Government Board to watch the epidemic of neuritis alleged to be due to poisoned beer, and is now engaged in visiting various places which have been principally affected.

THE Right Honourable Sir Ford North, a retired justice of the High Court, is to conduct an inquiry into the management of the National Hospital for the Paralysed and Epileptic.

THE ROENTGEN RAY CASE AT HASTINGS.

THE recent case at Hastings, in which the Roentgen ray methods caused an injury preceding death, raises points of great practical importance to the medical profession as well as to non-medical operators with the rays and to the outside public. The following facts were deposed to before the coroner, Mr. Davenport Jones, at the adjourned inquiry held in the Hastings Town Hall on Nov. 17th. On March 21st last a widow lady, aged 68 years, met with an accident to her left hip while learning to ride the bicycle. She was taken to the local hospital where the opinion was expressed that no fracture existed. She was then removed home and was attended by Mr. Harry R. Mansell, who could not make up his mind at the moment that the hip was fractured. After watching the case for some time he thought that it would be advisable to clear up matters by applying the Roentgen rays. This was done, with the consent of the deceased, by a local photographer, Mr. J. H. Blomfield, on April 14th, when two exposures were made, according to the operator's statement, one of 35 and the other of 45 minutes, each hip being taken separately. The result was not considered altogether satisfactory by the local medical society which suggested that a further photograph to show both hips should be taken from the centre of the body. This was accordingly done with the consent of the deceased on April 27th by the same photographer with an exposure of 45 minutes. On both occasions Mr. Mansell attended and gave directions as to the position of the patient, but afterwards left the house and entrusted further details to the photographer. On the first occasion, according to the last-mentioned, the part of the body exposed was covered with clothing, but on the second it was bare. On May 4th an eruption developed on the left lower abdominal region. This was recognised by Mr. Mansell as an x ray injury and was treated with ointment, but the dermatitis developed into an ulcerated surface of the size of the hand. On July 5th the deceased declined further attendance from Mr. Mansell and called in Dr. J. H. Roberts. The latter brought Mr. A. R. Ticehurst in consultation, and attended the deceased until her death on Nov. 5th. On July 7th Dr. Roberts found her to be suffering from a sloughing wound about seven inches by three and a quarter inches. Death, in his opinion, was caused by exhaustion from the effects of shock which resulted from two injuries, the fracture of the thigh and the action of the Roentgen rays. Mr. Ticehurst, who visited the deceased in consultation and who subsequently performed a post-mortem examination, stated that when he saw the deceased alive on Oct. 5th he found her to be suffering from a dry sloughing wound of the abdomen. At the necropsy the wound had lost its slough, but there was little sign of repair. There was little fat about the body, the heart was flabby, the stomach was empty, the liver showed signs of old mischief, the vessels were degenerated, and he found an impacted intra-capsular fracture of the neck of the femur. Mr. Ticehurst would not say that the condition of the body would be sufficient to cause death apart from the wound. The niece of the deceased stated that her aunt's mind gave way several weeks before her death and she refused food, which had to be forced upon her by the nurses. The photographer, Mr. Blomfield, stated that he had had four or five years' experience with the rays, part of the time at the Hastings Hospital, and had met with no injurious effects from similar prolonged exposures. Dr. Lewis Jones, in charge of the electrical department of St. Bartholomew's Hospital, gave evidence to the effect that he had seen the apparatus used by Mr. Blomfield to take the photograph of deceased. There being no rash between the first and second exposures he would consider a medical man right in assuming that the patient was not sensitive to the rays. The risk of an x ray burn was always present in long exposures. The apparatus used by Mr. Blomfield was a year and a half out of date. In default of a better instrument the one used was a proper one. It gave a 10 inch spark and a similar one was in use at St. Bartholomew's Hospital until a year and a half ago. He himself had given exposures of 40 minutes, but the usual length of time was seven or eight minutes. Short exposures were less likely to cause burns than long. At the time when the photograph was taken Mr. Blomfield's coil was working at five and a half inches. The coroner summed up and the jury returned a unanimous verdict: "That the deceased met her death from shock and exhaustion following the accident and the effects of the Roentgen rays upon a weakened system. No blame attached to either the medical man or the photographer."

With regard to this case it may be remarked that the fact that the friends of the deceased not having been represented by expert evidence detracts somewhat from the value of the inquiry. It was admitted that no note was made of the time of the exposure, the distance of the tube from the plate, and other details that cannot safely be left to the memory. From the evidence it is clear that a burn resulted from prolonged exposure to the focus-tube, probably from the third exposure of 45 minutes on April 27th, as the rash appeared seven days after that date. However, the fact that the first exposures were not followed by dermatitis during the 13 days that elapsed does not absolve those exposures from all blame. It is reasonable to assume that the degenerative changes in the body of the deceased were indirect factors in the causation of the burn just as they were in the fracture of the hip. Unfortunately, for reasons already stated, the full details of the exposures are not available. At the same time we are told of one important differing condition of experiment—namely, that the surface of the body was not protected by clothing on the third exposure, the one from which the damage in all probability resulted. No mention was made of the crucial point of the distance of the focus-tube from the skin. Nor was the fact made clear to the court that a 10-inch coil working at five and a half inches is reduced almost, if not quite, to the lesser value. The bearing of this upon the length of exposure is obvious. With his coil working at 10 inches Mr. Blomfield could have almost halved his exposures, and the focus-tube burn is distinctly related to the length of exposure. The reasons for a coil not working up to its full strength are various, but all are open to remedy. The mention of these facts will show the desirability of having expert evidence on both sides of so highly technical an inquiry. As regards the responsibility of a medical man who engages a non-medical man to take a Roentgen photograph the matter is not advanced by this case. The fact that the patient consents to the photography can hardly absolve the medical attendant. If the latter hands over the operation to a non medical man it is a question how far he is relieved of responsibility. A chemist is responsible for errors in dispensing a prescription, but he is licensed to practise pharmacy, whereas the electrical or photographic worker with the rays has no such recognised and tested legal status. If the non-medical photographer had undertaken the case for the local hospital what would have been the position of the committee of that institution in the matter? On the other hand, the employment of a medical Roentgen ray expert would clearly absolve a medical man of further responsibility. Any medical operator must have hesitated to expose to the rays for 45 minutes an old lady who had been laid up for five or six weeks with a broken hip. It seems undesirable, moreover, that female patients should be submitted to the manipulation of instrument-makers and other non-medical workers with the rays. The moral of the case appears to be that apparatus should be up to date and that medical men will act wisely in sending their cases to medical Roentgen ray experts, of whom there are a fair number available.

HOSPITAL ABUSE IN CONTINENTAL TOWNS.

AT a meeting of the Charity Organisation Society held at the Royal United Service Institution on Dec. 3rd Mr. H. NELSON HARDY, F.R.C.S. Edin., read a paper on the above subject. He stated that at one of the scientific congresses held in Paris during the Exhibition this year Dr. Thiéry, professor in the Paris School of Medicine and surgeon to one of the Paris hospitals, had read a paper on behalf of the Syndicate of Medical Men of the Seine, in which a number of facts and recommendations dealing with hospital abuse were brought forward to which it was desired to give a wider publicity. Discussing first the question as to who should be considered the sick poor, it was pointed out that in Paris the difficulty was greater than in the provinces, since between the very poor and the very rich, about neither of whom can there be any question, there is a middle class consisting of mechanics and clerks on small salaries worse off than the average clerk in England, and of employés, to whom gratuitous assistance might rightly be given in serious cases requiring treatment as in-patients. With regard to workmen suffering from trade accidents, as these are mostly provided for by insurance and in any case the expense falls not on the workman but on the employer of labour, the case ceases to be a necessitous one and should be paid for. Examples were given of hospital abuse. The cases were mentioned of a rich gentleman who drove his daughter to the Charité Hospital in his own carriage to have her treated for hip disease, of a jockey earning 20,000 francs a year applying for advice for a sprain, and of a lady who incurred the expense of travelling from America for advice and who applied at the Pitié for gratuitous treatment. The maternity cases in Paris which are attended gratuitously amount to 18,000, or one-third of the total births. 8000 of these are treated in the lying-in hospitals and 10,000 by midwives. Sunday consultations at the hospitals had been established but had not been well attended by the working-classes, the Paris working-man preferring to lose a day's work rather than a few of his hours of idleness on Sunday. Having given the results of inquiries in provincial towns in France, as well as at Brussels, Berlin, Copenhagen, Vienna, Gothenburg, and Heidelburg, the author considered proposals for reform. The part-payment system was condemned, and the proposed suppression of the out-patient department was thought too drastic. A system of inquiry into the means of applicants was suggested to be carried out by specially appointed officers under the control of one of the medical officers of the hospital.

On the invitation of the Chairman, Mr. T. HOLMES, F.R.C.S. Eng., the discussion which followed was opened by Dr. W. KNOWSLEY SIBLEY, who referred to the bribery which existed with regard to nursing in the Paris hospitals. This did not exist in England, he was glad to say, though in the out-patient department porters were known to receive "tips" for getting a patient seen by the medical officer out of his or her turn. He pointed out that in Paris patients who sought free treatment at the hospitals were obliged to attend a particular hospital in the district in which they lived. Some supervision was therefore possible and abuse could not take place to the same extent as it did in England where a person in the north of London could attend a hospital in the south and *vice versâ*. He advocated as a remedial measure for hospital abuse the formation of a central hospital board.

Dr. H. SELFE BENNETT said that the Charity Organisation Society had taken up the matter because it was sapping the morals of the community generally and also pauperising it. But little good would be done till the hospitals took more interest in the matter. He thought that it was a scandal that a hospital must be in difficulties before the public would subscribe to it.

Mr. HOWARD endorsed Dr. Bennett's views and expressed himself in favour of a central hospital board.

Mr. HOLMES, referring to some remarks from Dr. Sibley to the effect that Mr. Hardy's paper could not refer to the Paris hospitals generally, said that until Dr. Thiéry's facts had received some authoritative denial he must accept them as depicting the actual state of things which existed. He expressed the view that to put a hospital under a municipal body was sure to lead to its deterioration. Perfect efficiency was best secured by perfect freedom. Mr. Hardy's paper was principally directed to the pecuniary part of the question of abuse, but he (Mr. Holmes) believed that very few people would go through the many discomforts that were required to gain admission in a hospital if money were no object to them. A much more important question was that of efficiency. It was a matter of far more importance than whether a man who earned £2 a week got into a hospital or not. The pecuniary test was quite an illusive one. A man who earned 30*s*. per week with two children was much better off than a man who earned £2 10*s*. with 10 children. The worst feature of the out-patient department was that they undertook to do what was physically impossible. Patients were seen at the rate of about 100 seconds each. Mr. HARDY briefly replied, and a vote of thanks to the reader of the paper concluded the proceedings.

"THE INACCURACY OF THE MEDICAL REGISTER."

A LEADING article in THE LANCET of Oct. 27th showed the Medical Register to be an inaccurate compilation, though it made no attempt to show the measure of that inaccuracy. As a result of our remarks the following report has been made to the Executive Committee of the General Medical Council:—

REPORT TO THE EXECUTIVE COMMITTEE BY THE REGISTRAR ON THE MEDICAL REGISTER.

By the direction of the President of the Council I have to report on some alleged inaccuracies in the Medical Register to which attention was drawn by an article in THE LANCET on Oct. 27th. The article dealt with two questions: (1) the appearance on the Register of the names of practitioners who were dead; and (2) the vagueness of some of the addresses. A list was given of 35 practitioners who were dead but whose names still appear. An analysis of this shows that three of these have been removed during this year, and that 14 belong to the Scotch or the Irish Branch. With these latter I have no official right to deal, and the Registrars in Scotland and Ireland respectively are fully alive to their duties in correcting the Register. Deducting these 17 names, there remain 18 respecting which some explanation is required from me. The committee will remember that steps are being taken in this office to send circular letters of inquiry, under Section 14 of the Act, to all persons on the English Register, to ensure its accuracy before the election of Direct Representatives to take place next year. A great part of this work has been done, but a section of some 7000 or 8000 names remains to be dealt with next spring. Within this section 10 of the 18 names referred to occur, and these will all be duly dealt with next year under the operation of Section 14. There remain eight names to be accounted for. Three of these are those of practitioners who died in Australia and of whose deaths it was extremely difficult to obtain any information, as there are no local registrars abroad whose duty it is under the Medical Acts to report deaths. Five names of practitioners which are stated by the writer in THE LANCET to be dead remain to be referred to. I use the word "stated" with no desire to call in question the accuracy of the information possessed by THE LANCET, but to remind the committee that your officials here cannot act except on legal evidence. We make every use we can of obituary lists, carefully looking through them and sending letters of inquiry in the case of every death that we hear of unreported by a local registrar, but we must have either a returned letter or a death certificate before erasing a name, or we must wait for six months after sending the letter. I should be glad to simplify the work of the office by at once striking off the Register the names of all practitioners whose deaths are reported by the medical press in this country or abroad, but without the direction of the Council I should be acting very wrongly in doing so. The committee will perhaps allow me to refer briefly to some of the causes which conduce to the non-erasure *from the Register of the names of deceased* practitioners. The proximate cause is of course that the deaths are not reported by the local registrars, whose duty it is to report them, but there are more remote causes. Why are they unreported? Not always, or mainly, I think, because the local registrars are negligent in performing their duty in this respect, for the discharge of which they, moreover, receive a fee; but because often they are not aware that the deceased person was a medical man whose death ought to be reported. When a practitioner, either on account of advanced age or some other cause, has ceased to practise, and retired, possibly into a new neighbourhood, he ceases to be known as a medical practitioner, and when his death occurs he is regarded as a private individual, and no certificate from the local registrar is therefore forwarded to this office. In other cases young men—and unfortunately the percentage of deaths among newly-registered practitioners is very high—travel into distant parts in search of health, and some dying, chiefly among strangers, are unknown to have been medical practitioners. There is yet another class of men who change their profession. I have myself known several medical men who have become clergymen, and others doubtless enter other professions in the same way, and naturally when their deaths occur they are returned to the local registrar as of that profession to which they last belonged.

Thus there must always be a certain number of deaths unreported by local registrars, and it is only by continuing the plan lately *adopted in the office of systematically* sending out letters to all persons on the Register under Section 14, that the names can be removed.

The second subject referred to in THE LANCET was that of the vagueness of some addresses, and the names of eight practitioners were given whose only address was "Australia." On this point I would remark that great care is taken to obtain from a person registering for the first time a sufficiently full address, and I do not know of any case in which such a vague address has been accepted, though *in* the unlikely event of the practitioner insisting upon its acceptance, I do not quite see how it could be refused. The vague addresses, however, come about afterwards, and I will explain how. A practitioner decides to go abroad, and just before he leaves his old home, or perhaps afterwards when travelling—for we have sometimes had letters written on board ship—he bethinks himself to tell us that the old address is no longer his, and that he is going abroad, say, to Australia. Well, on receipt of this intimation the old address manifestly cannot be retained, *we have been plainly told* that it is incorrect, and for the time being "Australia" is put against the name in lieu of anything better, and we await the subsequent arrival of more detailed information. In many cases this information comes when the practitioner has fixed upon his domicile, but sometimes, either because he forgets to write or does not think it worth his while, no further advice comes, and the address of Australia, used temporarily, has to become permanent.

With the committee's permission *I should like to refer very* briefly to another letter that was a sort of addendum to the previous article. It appeared in the issue of THE LANCET of Nov. 17th, and was from a Mr. Taaffe of Londonderry who, under the heading of "The Inaccuracy of the Medical Register," gave a list of five names of persons known by him to have died in that neighbourhood, though the names still appeared. Now investigation showed that these practitioners certainly were dead, but investigation also showed that they were all living at the time that the Medical Register left the office for press and that they died subsequently during the present year and were all duly taken off. I was advised of the death of one of them in February, of that of another in March, of a third in May, of a fourth in July, while the fifth practitioner died on Nov. 8th, just nine days before the letter of complaint appeared. It is difficult to conceive of a more groundless letter of complaint, but unfortunately it was unwittingly assumed by THE LANCET that the letter contained a just charge, and an editorial note was subjoined pointing out that the letter "*added force*" *to the view* that the Medical Register was "dangerously inaccurate," and courteously reminding the Medical Council that it would be well if it discharged its duties better.

The Medical Register may, of course, have its blemishes, but it ought to be remembered that it contains over 35,000 names of practitioners scattered over the whole world, in regard to some of whom it is extremely difficult to obtain official information, so that while, for the reasons *I have pointed out, it is* scarcely possible to avoid the appearance of the names of a few practitioners who are dead, the general accuracy of the Register is, considering this difficulty, well maintained, and the value of the work is, I would humbly submit, greater than is supposed by many.

Nov. 26th, 1900. HENRY E. ALLEN, Registrar.

We cannot altogether congratulate the General Medical Council or the Registrar upon this report. We showed that the Register contained the names of at least 35 dead persons (we have reason to know that the list could have been very much extended), several of whom had been dead for some years. Mr. Allen's report deals with these 35 in the following way. Three of the names, he says, have been removed this year. Possibly; but why were they not removed before? Which three are they and how long have their late owners been dead? With 17 names he says he has no official right to deal, the matter being in the hands of the Registrars of Scotland and Ireland. Possibly again, though in another part of his report he does deal with Irish names; but we presume the Executive Committee of the General Medical Council desired the whole matter to be gone into when they gave Mr. Allen his instructions. Either the Executive Committee gave the wrong instructions, or they intended Mr. Allen to furnish them with full information, or they do not desire to have a full answer published. Of the 18 names remaining Mr. Allen says that 10 are going to be dealt with next year. So we have done some good in ventilating the inaccuracy of the Medical Register. The other eight names give Mr. Allen more trouble than they need. Surely the sending of eight registered letters in accordance with the Act will settle the question whether they should remain on the Register or not.

Mr. Allen then refers generally to the causes which conduce to the inaccuracy of the official roll of the medical profession. Here he makes out a good case for the difficulty of his office. We are perfectly aware that the General Medical Council must have legal proof of a man's death before erasing his name, and have never even faintly suggested that an obituary notice in our columns should be taken as a proof of death. But the announcement of a man's death in the papers has more than a casual relation to his death. Such announcements are more often true than not—such, at least, is our journalistic experience. We think that when a man's death is announced in the press, and when, after the lapse of some reasonable time, no legal notice of the death reaches the Registrar, he might despatch a registered letter to the last address in the Register in accordance with the Act. However, the machinery of the Registrar's office is not our business. Mr. Allen says that the names of dead men remain on the Register because the local registrars of deaths do not send the necessary information to the Registrar, and he suggests that their omission is due to the fact that the deceased medical men have retired from or changed their profession. The number of medical men who change their profession is so small as not to be worth considering out of 35,000 persons, and the number who retire from practice so completely that their past calling is unknown is probably smaller.

We are glad to have obtained an explanation of how so vague an address as "Australia" comes to find a place as a registered address. We do not quite understand how it is that the *addresses of "India" or "Canada"* or "America" have not also been accepted as sufficient in analogous cases; but perhaps they have and have escaped unnoticed. The remedy is so obvious that we are sure that Mr. Allen and the Executive Committee of the General Medical Council have already given the necessary directions. If the practitioner *does not send his address his name must* be taken off the Register. Such entries as "Mr. J. Smith, America," "Mr. T. Jones, South Africa," invite personation and are a source of danger to the public.

Mr. Allen says that Mr. Taaffe's letter was an addendum to our article. It was not. But we own that we mistook Mr. Taaffe's meaning. We are glad that the names of the dead men which Mr. Taaffe mentioned have been removed from the Register, but if Mr. Allen can produce this information why cannot he produce information concerning other dead Irishmen who still live in the official roll of their profession?

We courteously repeat that it would be well if the General Medical Council gave the profession a more accurate Register. We do this without being in the least blind to the energy of the Registrar or to the arduous nature of his task. But the Register is dangerously incorrect, and it is our duty to point this out until improvement under some systematic method of emendation has taken place. We shall watch next year's issue with interest.

ASYLUM REPORTS.

London County Asylum, Banstead (Annual Report for 1899).—The average number of patients resident during the year was 2436, and comprised 1069 males and 1367 females. During the year 441 patients were admitted, 261 being males and 180 females. Of these 83—viz., 36 males and 47 females—were not first admissions. Dr. T. C. Shaw, the medical superintendent, states in his report that in many of the cases there were few symptoms of insanity present on admission; these were mostly alcoholic cases "which would have been better detained at the workhouse a short time longer and then discharged. The form of disease was not of a very excited type." Many cases of general paralysis among the admissions were of the demented type. Among the causes of insanity in the admissions drink was an etiological factor in 18 per cent. of cases, hereditary taint was acknowledged in 15 per cent., while the existence of previous attacks was shown in 23 per cent. All these numbers were probably below the truth. During the year 170 patients (94 males and 76 females) were discharged as recovered, or 6·9 per cent. of the average number resident. The deaths during the year amounted to 196—viz., 129 males and 67 females, or 8·0 per cent., as calculated on the same basis. During the year 112 post-mortem examinations were made. It is believed that improvement in the system of heating the building during the night has caused a material improvement in the hygiene of the asylum community. Among the deaths during the year 2 were due to Bright's disease, 6 to senile decay, 12 to cerebral apoplexy, 13 to cardiac and valvular disease, 18 to epilepsy and chronic cerebral disease, 21 to bronchitis and pneumonia, 24 to phthisis, 38 to general paralysis of the insane, and 51 to chronic brain wasting. In one case of death due to fracture of the sternum an inquest was held and an inquiry into the circumstances was made by the Commissioners in Lunacy, but no light could be thrown as to the manner in which this casualty was sustained. Dr. Shaw refers to the question of the separate treatment of phthisical patients and to a special report made by him to the Asylums Committee. A nurse and a male attendant died from phthisis. Five patients escaped from the asylum and four of these were brought back shortly after. With the exception of influenza there has been no outbreak of disease during the year. The Lunacy Commissioners in their report advert to the fact that no seclusion has been resorted to during the year preceding their visit and in only one case has mechanical restraint been adopted. The case-books and the medical records generally are adequately kept. "The record of service is very satisfactory. However, nine attendants were, since the last visit, dismissed for misconduct, and three of each sex were allowed to resign to escape dismissal." The wards were generally found very clean and bright. The Commissioners urge the provision of a laundry for foul linen which has long been needed and which constitutes a want that should certainly be supplied. The asylum sub-committee state in their report that the profit realised on the farm during the year amounted to £464 6*s.* A water-softening plant has been put down and is in operation. 24 employés of the asylum were serving with the colours in South Africa and allowances not exceeding half pay have been granted in 16 cases. Building, repairs, additions, and alterations have been made during the year at a total cost of about £8932.

Suffolk County Asylum (Annual Report for 1899).—The average number of patients resident during the year was 605 and comprised 266 males and 339 females. During the year the admissions amounted to 196—viz., 93 males and 103 females. Of these 10 males and 9 females were not first admissions. Dr. James R. Whitwell, the medical superintendent, points out in his report that there were 15 patients at the end of the year belonging to the county more than at the beginning, that this, as in the case of the annual increase of the previous year, was "in excess of the average usually considered to be normal to this asylum," and would probably necessitate boarding out at an early date. A considerable proportion of the admissions were found to be in a condition of serious physical ill-health "owing to the regrettable tendency to retain patients suffering from acute mental disease at home." A considerable number of the admissions were of the aged, chronic, and harmless class to whom asylum treatment could be of no service, and whose removal from workhouse to asylum meant a very considerable increase of maintenance—expense to ratepayers without any corresponding advantage. A certain number of out-patients continued to come from time to time for advice or treatment, chiefly from the union districts nearer to the asylum. Some of these have made good recoveries, while others have required re-admission. During the year 71 patients—viz., 35 males and 36 females—were discharged as recovered, or 11·7 per cent. of the average number resident. The deaths amounted to 70—viz., 36 males and 34 females—or 11·5 per cent., as calculated on the same basis. Of the deaths two were due to epilepsy, two to bronchitis, six to tuberculosis, six to senile decay, eight to general paralysis of the insane, 13 to chronic Bright's disease, and 19 to cardiac and valvular diseases. Post-mortem examination was made in every case with the exception of one. Inquests were held by the coroner in the case of one male and one female patient, who died somewhat suddenly, but from natural causes. The only serious casualty was the case of a male patient who, while out on trial, committed suicide by throwing himself in front of a train in motion. Great efforts have been made to keep as many patients as possible usefully occupied or employed both for their own good and as a source of economy. Thus 73 per cent. of male and 87 per cent. of female patients were employed in farm, garden, needlework, laundry, and otherwise. New farm-buildings are being erected to accommodate a larger number of cows, as the milk-supply has proved insufficient. The water-supply was satisfactory, but the same could not be said of the gas, which, however, will soon be superseded by the electric light. The cost of maintenance has risen somewhat during the year owing to a variety of causes, including increased price of goods, increase of the staff of nurses and attendants, the necessity of keeping vacancies in the asylum, and boarding-out of patients. The Lunacy Commissioners in their report state that all floors are now cleaned by dry rubbing, that the surroundings of the patients have been ameliorated, and that it is proposed to dispose of the sewage in future by Dibdin's system of bacterial tanks. It has been decided to increase the accommodation of the asylum by 280 beds and not to build a second asylum in another part of the county. The case books and post-mortem records are kept carefully and intelligently.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 5947 births and 4017 deaths were registered during the week ending Dec. 1st. The annual rate of mortality in these towns, which had been 16 9, 17·6, and 17·6 per 1000 in the three preceding weeks, further rose to 18·0 last week. In London the death-rate was equal to 17·9 per 1000, while it averaged 18·2 in the 32 large provincial towns. The lowest death-rates in these towns were 9·1 in Croydon, 12·3 in Cardiff and in Norwich, 13 8 in West Ham, and 14·5 in Blackburn; the highest rates were 21·5 in Wolverhampton, 22·8 in Halifax, 22·9 in Liverpool, and 26·9 in Sunderland. The 4017 deaths in these towns included 356 which were referred to the principal zymotic diseases, against numbers decreasing from 485 to 351 in the five preceding weeks; of these, 89 resulted from diphtheria, 71 from measles, 71 from whooping-cough, 55 from "fever" (principally enteric), 42 from diarrhœa, 27 from scarlet fever, and one from small-pox. No death from any of these diseases occurred last week in Norwich; in the other towns they caused the lowest death-rates in Croydon, Plymouth, Birkenhead, and Gateshead, and the highest rates in Swansea, Wolverhampton, Derby, Blackburn, and Sunderland. The greatest proportional mortality from measles occurred in Wolverhampton and Swansea; from scarlet fever in Blackburn, and Sunderland; from whooping-cough in Huddersfield, Blackburn, Sunderland, Hull, and Derby; and from diarrhœa in Wolverhampton and Blackburn. The mortality from "fever" showed no marked excess in any of the large towns. The 89 deaths from diphtheria included 29 in London, eight in Sheffield, seven in Leeds, and six in Leicester. One fatal case of small-pox was registered last week in London, but not one in any other of the 33 large towns; two small-pox patients remained under treatment in the Metropolitan Asylums hospitals on Saturday last, Dec. 1st, but no new case was admitted during the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2727, against 2728 and 2725 in the two preceding weeks; 279 new cases were admitted during the week, against 289, 261, and 246 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 352 and 322 in the two preceding weeks, rose again last week to 436, and were seven above the corrected average. The causes of 46, or 1·1 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Manchester, Bradford, and 10 other smaller towns. The largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Sheffield, and Newcastle.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·2, 19·9, and 20·3 per 1000 in the three preceding weeks, further rose to 21·7 during the week ending Dec. 1st, and showed an excess of 3·7 per 1000 over the mean death-rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 11·8 in Perth and 17·2 in Leith to 25·2 in Paisley and 26·6 in Greenock. The 672 deaths in these towns included 42 which were referred to whooping-cough, 19 to diarrhœa, 12 to measles, six to diphtheria, five to scarlet fever, four to "fever," and one to small-pox. In all, 89 deaths resulted from these principal zymotic diseases, against 75 and 69 in the two preceding weeks. These 89 deaths were equal to an annual rate of 2·9 per 1000, which was 1·3 above the mean death-rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had increased from 13 to 35 in the seven preceding weeks, further rose last week to 42, of which 33 occurred in Glasgow, five in Greenock, and two in Edinburgh. The deaths from diarrhœa, which had been 16 and 20 in the two preceding weeks, declined again to 19 last week, and included six in Glasgow, six in Dundee, and four in Edinburgh. The fatal cases of measles, which had been 13 and eight in the two preceding weeks, rose again last week to 12, of which seven were registered in Aberdeen and four in Edinburgh. The deaths from diphtheria, which had been 11 and four in the two preceding weeks, increased to six last week and included two in Glasgow and two in Aberdeen. The fatal cases of scarlet fever, which had been four and five in the two preceding weeks, were again five last week, of which four occurred in Glasgow. The deaths referred to different forms of "fever," which had declined from 12 to six in the four preceding weeks, further fell to four last week, and included two in Glasgow and two in Paisley. The fatal case of small-pox was registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 163 and 156 in the two preceding weeks, rose again last week to 160, and were 29 above the number in the corresponding period of last year. The causes of 35, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·0 and 26·1 per 1000 in the two preceding weeks, declined again to 24·5 during the week ending Dec. 1st. During the past four weeks the death-rate in the city has averaged 24·8 per 1000, the rate during the same period being 17·3 in London and 18·8 in Edinburgh. The 164 deaths belonging to Dublin registered during the week under notice were 11 less than the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 11 and 19 in the two preceding weeks; of these, six resulted from whooping-cough, three from "fever," one from diphtheria, and one from diarrhœa. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 1·4 in London and 1·9 in Edinburgh. The deaths from whooping-cough, which had increased from one to five in the three preceding weeks, further rose last week to six. The fatal cases of "fever," which had been three and eight in the two preceding weeks, declined again to three last week. The 164 deaths in Dublin last week included 29 of infants under one year of age and 41 of persons aged upwards of 60 years; the deaths of infants showed a slight decline, while those of elderly persons exceeded the number in the preceding week. Four inquest cases and two deaths from violence were registered, and 57, or more than a third, of the deaths occurred in public institutions. The causes of 11, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Staff Surgeon Herbert Parke Shuttleworth has been placed on the retired list of his rank.

Surgeon A. S. G. Bell is appointed to the *Boscawen* for the *Minotaur*.

ROYAL ARMY MEDICAL CORPS.

Captain C. B. Lawson has arrived at Dover for duty and has been posted to the Station Hospital, Western Heights. Major H. J. M'Laughlin has assumed medical charge of troops, Station Hospital, Glencorse, vice Lieutenant-Colonel A. L. Brown, A.M.S. (r.p.). Captain A. W. N. Bowen has been ordered to proceed from Calcutta to Darjeeling to assume temporary medical charge of the Station Hospital, vice Lieutenant-Colonel J. Watson. Captain E. W. Bliss has assumed medical charge of the Small Arms Ammunition Factory and the Departmental Followers' Hospital, Dum Dum, the Foundry and Shell Factory, Cossipur, and the Powder Magazine Dispensary, Dackinsore.

MILITIA MEDICAL STAFF CORPS.

Major Sir James Richardson Andrew Clark, Bart., late Army Medical Staff, to be Surgeon-Lieutenant-Colonel.

VOLUNTEER CORPS.

Artillery: 1st Cheshire and Carnarvonshire: Surgeon-Lieutenant R. B. Wright to be Surgeon-Captain. 5th (Irish) Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Major D. E. Flinn to be Surgeon-Lieutenant-Colonel. *Rifle:* 1st Volunteer Battalion the Worcestershire Regiment: Bertram Addenbrooke to be Surgeon-Lieutenant. 5th (Glasgow Highland) Volunteer Battalion the Highland Light Infantry: Lieutenant H. H. S. Scott resigns his commission; Surgeon-Captain A. Macphee to be Surgeon-Major. 1st Cinque Ports: Henry George Lynwood Allford to be Surgeon-Lieutenant.

MENTIONED IN DESPATCHES.

In the despatches received by the Secretary of State for the Colonies from the Governor of the Gold Coast, Sir F. M. Hodgson, K.C.M.G., the names of Dr. McDowell, Principal Medical Officer to the Field Force, and Assistant Colonial Surgeons P. J. Garland, E. H. Tweedy, and A. J. Chalmers are mentioned for their help, zeal, and energy; Dr. Tichborne, West African Frontier Force; Mr. K. F. T. Buee, Gold Coast Service; Dr. Langstaff, Gold Coast Service; Surgeon-Lieutenant Fletcher, Militia Medical Staff Corps, wounded; Dr. MacFarlane, Lagos Hausas, wounded; and Dr. De Groot, Gold Coast Service, are also referred to and Colonial Surgeon Hay is mentioned as one of the officers selected to guard the Fort at Kumassi. "The mental anxiety which these officers [those in charge of the Fort] had to endure," says the despatch, "must have been very severe, and as each day passed and brought them and the gallant soldiers under their command nearer to the end the strain upon them must have become almost unbearable. For three weeks they truly and unflinchingly upheld the honour of the British flag under circumstances which might have appalled the stoutest heart."

TRANSVAAL WAR NOTES.

In a despatch from Lord Kitchener dated Bloemfontein, Dec. 1st, and dealing with General Paget's engagement, among the list of killed and wounded are the names of Lieutenant Challis, Royal Army Medical Corps, who was severely wounded, being hit in three places while gallantly attending wounded men under a heavy fire, and Surgeon-Captain Godfray, New Zealand Mounted Rifles.

Major T. Archer, R A.M.C., Lieutenant F. S. Walker, R.A.M.C., and Civil Surgeon D. V. M. Adams have arrived in England, invalided, in the P. and O. transport *Assaye*. Lieutenant W. Jagger, R.A.M.C., and Civil Surgeons W. L. Wainwright, L. V. Cargill, and W. C. Allan also arrived in the same vessel, having been in medical charge of the ship.

The Princess of Wales has forwarded from Sandringham 15 brace of pheasants for the patients at the Gables Military Convalescent Hospital, Surbiton, which Mr. Alfred Cooper founded and is maintaining during the war.

Lieutenant-Colonel H. L. Battersby, R.A.M.C., and Civil Surgeons J. A. Barnes, L. Cooper, and J. E. Ker are in medical charge of the *Orotava* which left for England on Nov. 28th.

Civil Surgeon A. E. Elliott died at Middelburg on Dec. 1st and Civil Surgeon C. C. Parsons at Harrismith on Dec. 2nd, both from enteric fever.

VOLUNTEER OFFICERS' DECORATION.

This decoration has been conferred upon Surgeon-Major F. W. Gibbon of the 1st Durham Royal Engineers (Volunteers).

VOLUNTEER MEDICAL STAFF CORPS.

The annual supper and smoking concert of No. 1 Company, composed of students from University College Hospital, King's College Hosiptal, the Middlesex Hospital, and Charing-cross Hospital, took place at the Headquarters, Calthorpe-street, on Nov. 30th. About 70 were present, Surgeon-Captain Whait, commanding No. 1 Company, being in the chair. Among the toasts were "The Queen," "The Guests," and "Those of Our Corps Serving in South Africa." Speeches were made by the commanding officer, the major, and the adjutant. The concert was a great success and an altogether enjoyable evening was spent. The guests included Surgeon-Lieutenant-Colonel Squires, V.D., Major Matthews, Captain Wray, R.A.M.C., Surgeon-Captain Macgregor (19th Middlesex), and other officers of the Volunteer Medical Staff Corps, together with Sergeants Tytheridge and Turtle, of the Imperial Yeomanry Hospital; and two members of the City Imperial Volunteers.

LORD ROBERTS'S FAREWELL ORDER.

There has probably never before been such a farewell order addressed by a general to his army as that which Lord Roberts has addressed to the forces lately acting under his command in South Africa. If the campaign in that country has been in many respects unique in the history of modern warfare so has the order which it has occasioned. It has throughout a true ring and expresses the real mind of a distinguished commander who is unaffectedly proud of his army and profoundly appreciative of the labours which it has undergone, of the courage and cheerfulness by which it has been sustained, and of the qualities of humanity and forbearance which the troops have exhibited throughout one of the most arduous and trying campaigns on record. As we have more than once said the British soldier in South Africa has had to fight physical geography as well as a stubborn, well-armed, and often invisible foe employing a new system of tactics. The military operations have been continuous and incessant, and the marches have probably been unprecedented in number, length, and difficulty—indeed, there is hardly any phase of warfare which our troops have not experienced. Lord Roberts, it must be remembered, has been a warrior from his youth up and consequently knows what war is. It is, therefore, quite refreshing to read the estimate which he has formed of the work which he has seen going on under his eyes as compared with the fault-finding, captious criticisms or light-hearted levity with which such matters have been too often regarded by amateur dabblers in war. We may depend upon it that foreign nations and foreign armies, whatever may have been said to the contrary, in their hearts are very much of the same opinion about the qualities of British troops as that expressed by Lord Roberts in his farewell order to the army in South Africa.

THE COLONIAL TROOPS ENTERTAINMENT.

On behalf of the committee appointed to make arrangements for the public reception and entertainment of the representative colonial contingent of forces serving in the War in South Africa, which is expected to arrive in England early next year (as well as the Canadian contingent now here), the Duke of Abercorn appeals for liberal assistance in a letter to the press. A very heavy expense must be incurred to give these troops a welcome in some degree worthy of the national appreciation of their splendid services. The officers and men of these contingents, numbering over 5000, will be brought to, and maintained in, this country and will be afterwards conveyed to their homes at considerable expense, the necessary funds being provided by Parliament, but such funds will not be chargeable with the cost of functions and entertainments not of a strictly military character, nor with the conveyance of the men to provincial cities or other places of interest. Over 5000 men have to be entertained and while it is hoped that large subscriptions will be tendered by those who can well afford it smaller contributions of any amount will be gladly received. Remittances may be made to the credit of the "Colonial Troops Entertainment Fund" at Messrs. Parr's Bank, Limited, 77, Lombard-street, E.C., or to the secretary or the treasurer, at 71 and 72, King William-street, E.C.

ARMY MEDICAL SCHOOL, NETLEY.

Under orders from the War Office a special examination was held in the Army Military School on Nov. 25th and 26th for the surgeons-on-probation of the Royal Army Medical Corps who were admitted to the school on Oct. 1st by examination and nomination by the Secretary of State for War on the recommendation of the medical schools of the United Kingdom. As a result of the examination the following gentlemen were recommended for commissions as Lieutenants in the Royal Army Medical Corps:—

SURGEONS-ON-PROBATION BY EXAMINATION.

H. J. McGrigor.
W. R. S. Goodwin.
J. H. Brunskill.
A. C. Duffey.
A. W. Gibson.
C. D. Myles.
R. N. Hunt.
H. E. Howley.
R. F. M. Fawcett.

SURGEONS-ON-PROBATION BY NOMINATION.

W. L Steele.
H. A. Davidson.
T. Finucane.
J. W. West.
W. Riach.
H. R. Bateman.
H, G. Pinches.
T. T. White.
J. C. Kennedy.
A. R. C. Parsons.
J. B. Cautley.
W. M. B. Sparkes.
S. B. Smith,
E. W. Powell.
J. L. Jones.

MEDICAL OFFICERS IN ACTION.

Medical officers, whether belonging to the regulars, colonials, or volunteers, have not spared themselves in the present war. They have not been behindhand in gallantry or in risking their lives and limbs on the battle-field. In the report of the late operations of General Paget's force north-east of Bronkhurst Spruit, where there was severe fighting, we read that Lieutenant Oswald Challis, R.A.M.C., was severely wounded, being hit in three places while gallantly attending wounded men under a heavy fire. We sincerely trust that this brave young officer may make favourable progress and soon recover. Surgeon-Captain Godfray of the New Zealand Mounted Rifles was also wounded in the same action. We are proud to say that there has always been the same spirit among medical officers throughout this war.

DEATH FROM INHALATION OF CHLORINE.—An inquest was held at Trowbridge, Wiltshire, on Nov. 30th, relative to the death of Miss Le Lean, aged 30 years, a lecturer under the Wilts County Council. Evidence showed that the deceased on Nov. 27th was attending a class of practical chemistry at the Bradford-on-Avon Technical Schools. During the temporary absence of the other students she took up one of the jars containing chlorine gas and, thinking it was empty, inhaled the fumes. She was taken violently ill and, in spite of medical attendance, she died two days afterwards. The jury returned a verdict that death was due to syncope arising from chlorine gas inhaled by misadventure.

Correspondence.

"Audi alteram partem."

POISON IN BEER.

To the Editors of THE LANCET.

Sirs,—Will you permit me to reply through your columns to the numerous requests which have reached me from all quarters for some indication of the views of myself and friends interested in the Pure Beer Movement upon the lamentable epidemic of poisoning in Manchester and other towns. Without anticipating the result of the scientific investigations now in progress there would appear to be little doubt that the epidemic is a striking illustration of the public danger to which we have for many years directed attention, arising out of the liberty permitted to brewers to use any materials they choose in the brewing of beer. This liberty is enjoyed under what is popularly known as the "free mash tun"—a concession granted by Mr. Gladstone when he repealed the malt tax in 1880. So largely did the brewers avail themselves of this freedom in the choice of ingredients that within a few years a movement was inaugurated with the object of securing a definition of "beer," and for many years subsequent to 1885 a Bill was annually introduced in Parliament for the purpose of obtaining such definition. In 1896 the Bill, which, with the assistance of members on both sides of the House, had been amended and amplified, reached the second reading stage; but on the Chancellor of the Exchequer offering a Departmental Committee to inquire into the matter the Bill was withdrawn. The sittings of this committee extended over two years, the outcome being a majority report against any alteration of the existing law, and a minority report strongly insisting upon the necessity of safeguarding the interests of the public.

We are of opinion that recent events are a complete justification of the minority report, and that had the Government acted upon its recommendations the present epidemic might never have occurred. It was pointed out that the fact of brewers being free to make beer of any materials they pleased so long as the revenue did not suffer rendered necessary much more scrupulous regulations for the protection of the public against the use of deleterious ingredients than at present exist.

Although there is no article of food consumed on anything like the scale of beer in the manufacture of which the indiscriminate use of any chemical or other material is permitted by law, the system of examination followed by the Excise officers in the breweries and by the Inland Revenue officials at Somerset House is designed for the protection of the revenue and not the detection of deleterious ingredients, so that the presence of any dangerous impurity is never likely, under existing circumstances, to be discovered until after the mischief has been done.

Notwithstanding that the Treasury may be "empowered" to prohibit the use of anything noxious or detrimental, the evidence taken by the committee went to show that this power has never been exercised save in the case of saccharin, a preparation believed to be harmless, but which was regarded as "detrimental" to the revenue. Further, the fact remains that the present epidemic has occurred in spite of official precautions, whatever they may be. And so long as the present system is allowed to continue so long will the door remain open to the use of poisonous or deleterious ingredients. It was also demonstrated to the committee by public analysts of high standing that they were powerless in the matter, as the Provisions of the Food and Drugs Act were inoperative as regards beer. Surely the time has now come when a period should be put to this subordination of public health to the interests of the revenue.

Sir Henry Primrose, the chairman of the Board of Inland Revenue, was congratulating the Country Brewers' Society the other day on the excellent relations which subsisted between his department and the great brewing interest, and he thought the attacks on the "free mash tun" might be regarded as at an end. As he is further reported to have said that he entered upon the "Beer Materials" Inquiry with the "blank impartiality which is born of blank ignorance," one is tempted to imagine, having regard to the strange way in which the conclusions of himself and the majority of the committee have been falsified by recent events, that he must have emerged from the investigation in much the same state of "ignorance," minus the "impartiality." I only refer to these utterances of Sir Henry Primrose because they are typical of the attitude which has been habitually adopted by the department over which he presides on this important question.

Every brewer knows perfectly well that the employment of invert sugar, glucose, &c., in the preparation of which dangerous chemicals are used is not necessary to the successful manufacture of beer. They enable beer to be matured more quickly and therefore larger quantities can be turned out with the same capital, plant, and storage room, and there is this further advantage, that by keeping down the demand for barley its price is correspondingly depressed and brewers are able to purchase such quantities as they are *obliged* to use at a cheaper rate. It is in the light of these facts that Mr. Read in his report asks that the complaints about British barley and the statement as to the *necessity* of getting "sun into the mash tun" should be regarded. Abroad the use of substitutes has in some States been for centuries absolutely forbidden; in Bavaria, it is a criminal offence, and not only the public, but the brewers themselves, are most active in seeing that the law is strictly enforced. It is difficult to see why that which is found not only desirable, but practicable, there should be regarded as impossible here. At any rate, the wholesale poisoning which has unfortunately occurred only goes to prove the necessity for still greater exertions in prosecuting the movement for better securing the purity of beer, and certainly justifies the opinion of Mr. Read, based upon a careful consideration of all the evidence placed before the Beer Materials Committee, that legislation or other provision is necessary to prevent the use of deleterious substances in brewing.

We propose to bring the matter again before Parliament at the first opportunity, feeling as we do that the time has surely come when the same protection as is afforded to the purchaser of other articles of diet, such as butter, milk, coffee, &c, should be extended to the immense number of our fellow-countrymen whose regular and favourite beverage is beer.

I am, Sirs, yours faithfully,

CUTHBERT QUILTER.

House of Commons, Dec 4th, 1900

To the Editors of THE LANCET.

Sirs,—It will be found that cases of arsenical poisoning are not confined to the Manchester district but are very widespread. The medical profession in Ilkley-in-Wharfedale have been greatly exercised during the last four months at the unusual number of severe cases of peripheral neuritis and acute skin affections that have come under their notice, for the most part occurring in beer-drinkers. The beer has been suspected for some months past as being the cause. But as no chemicals or preservatives were used in the local brewery that largely supplies the district the situation was perplexing. At one time I thought formalin might be the cause as in some breweries it is used to cleanse vats, bottles, casks, and also as a preservative in cheap beers. The brewery authorities were keenly active in endeavouring to fathom the mystery and ordered an analysis a month since, but unfortunately the analyst only looked for what ought to be in beer. Arsenic has now been found in the "invert" sugar used in the brewing and also in the beer. There are also an unusual number of cases of peripheral neuritis under treatment, of influenzal and rheumatic origin, occurring in non-beer-drinkers. Some of these are possibly of mixed origin. Aerated waters are not above suspicion where sulphuric acid is used to produce the gas.

I am, Sirs, yours faithfully,

A. H. BAMPTON.

Ilkley in Wharfedale, Nov. 30th, 1900.

"TREATMENT OF BRITISH PRISONERS OF WAR AT PRETORIA."

To the Editors of THE LANCET.

Sirs,—As a reply to your remarks in your issue of Sept. 22nd, 1900, it seems to me that I cannot do better than enclose a copy of a *letter* I have sent to the Field Marshal Lord Roberts—an answer to which I have not yet received. I saw the report for the first time quite accidentally and my astonishment can be imagined when it is known I had no idea there was anything of the sort. I do not think the method of a court of inquiry is understood. There was no clerk to make a record of the proceedings, the evidence was not on oath, there was no confrontation of witnesses or cross-examination. I was ignorant that there was any allegation against me, did not know of the witnesses or who they were, had no opportunity of cross-examining or in any way meeting the evidence which was not disclosed to me. I have had, therefore, no opportunity of defending myself. It is remarkable that the very obvious desire of some of the witnesses to exculpate themselves or gain *kudos* at my expense did not create some suspicion in the mind of the court.

I am, Sirs, yours faithfully,
H. PRIOR VEALE.

Hout Bay, Cape Division, Cape Colony, Nov. 12th, 1900.

Hout Bay, Cape Division, November, 1900.

To the Field Marshal Lord Roberts of Kandahar and Waterford,
K.P., G.C.B., G.C.S.I., G.C.I.E., V.C., Commander-in-Chief
of the British Forces in South Africa.

MY LORD,—I am persuaded that your lordship would regret any act of injustice which upon mistaken information you might possibly commit, and I approach you with a confident hope that you will cause further and more complete inquiry to be made and will not hesitate if and when satisfied that you have drawn in error a conclusion most injurious to myself to remove from my good name the shadow of your heavy adverse reflection. In a letter from your lordship to the Secretary of State for War, covering the report of the proceedings of a Court of Enquiry held with regard to the treatment of British prisoners of war in Pretoria, the following passage occurs:—"On the other hand it would be difficult to condemn too strongly the conduct of Dr. H. P. Veale, M.B. (Cambridge), whose heartlessness in ignoring the disgraceful treatment of the sick prisoners and the remonstrances addressed to him by the medical officers in immediate charge of them calls for the severest reprobation."

From the passage above quoted, read with the letter from Colonel Hunt, I must infer that your lordship supposes me to have occupied some official or recognised position in which I could have remedied the condition of affairs regarding prisoners of war. The statement to this effect made by Colonel Hunt in his report naturally and probably weighed greatly with you. I beg, therefore, plainly to point out to your lordship that though a member I never was head of the Red Cross Society nor at any time occupied any official position giving me any authority or control with regard to the prisoners of war. Such services as I rendered in connexion with the prisoners of war at the Racecourse and elsewhere were rendered gratuitously on humane consideration only. I may mention incidentally that the Transvaal Red Cross Society depending on public voluntary subscription none of its members or servants to my knowledge received any remuneration. The administration of matters affecting prisoners of war was placed by the State as a distinct department under a specially appointed committee to which the charge of the sick and wounded was allotted. This appears from the separate resolution of the Executive Council appointing the "Medical Commission" and conferring on it jurisdiction over all medical matters and men in the State *except the prisoners of war*. I was associated with the Medical Commission, but was at no time engaged in the distinct department mentioned or by the Prisoners' Committee, and it may be questioned whether, according to the Executive Council resolution, I could have been so engaged. Be that as it may, I had no function or appointment in that connexion. But it may be felt that though I had no official position to redress evils of administration, yet as a graduate of a great British University something more might be expected of me than of other medical practitioners. On this head I beg to point out that I used such opportunities as I had not merely for ameliorating the condition of things of Waterval, but with a view to preventing that spot being used as it was. I would point out that I dreaded what might happen there and most cheerfully seized the opportunity given me of inspecting Waterval on the 27th December, 1899.

On the 28th December, 1899, I sent a report totally condemning Waterval as a site for a camp. I had the water analysed and I forwarded to the Prisoners' Committee the report condemning it as unfit for use. In order that they should not be overlooked or forgotten I repeated these reports on the 12th January, 1900, to emphasise the danger the Prisoners' Committee was running. Copies of these letters were given by me to the Court of Enquiry. To prevent mischief to health at Waterval I on the same date further pressed by letter upon the Prisoners' Committee that the sick should be immediately removed to the Racecourse, feeling certain that this step would reduce the risks entailed by the distance of Waterval from Pretoria (copies given to the Court of Enquiry). In addition to these written efforts, and quite beyond any official function entrusted to me, I urged verbally on officials highly placed under the Government and on members of the Prisoners' Committee the above or other means for preventing or ameliorating the unsatisfactory state of affairs. I was more than once told that the Prisoners' Committee did bring the matter before the Executive Council who, however, refused to alter matters. On the 16th January, 1900, I urged (copy handed to Court of Enquiry) the Prisoners' Committee to appoint Dr. Haylett as resident "responsible" medical officer of the committee at Waterval, in the hope that if the committee went so far it would also enable the officer to do his work under proper conditions. His first appointment to Waterval, dated 27th December, 1899, did not speak of responsibility and my suggestion was to make Dr. Haylett, the officer at Waterval, responsible for the sick and wounded to the committee who should support him. Dr. Haylett, in full knowledge of the condition of affairs, accepted the 16th January, 1900, appointment, but I cannot say to what extent also he used his position to influence the members of the Prisoners' Committee and to press on steps desirable. He may have done so ineffectually. What I wish to emphasise is that he was in a position independent of myself. When holding the temporary position of commissariat officer to the "Medical Commission" I again tried to help the prisoners and wrote to the Prisoners' Committee (24th Feb., 1900, copy given to Court of Enquiry) urging it to arrange for placing the sick and wounded prisoners under the "Medical Commission," so that burghers and prisoners could be treated alike, and the reply I got was that the Prisoners' Committee was satisfied with things as they were. I also urged through the State Attorney, who was a member of the "Medical Commission," that those prisoners who came under the release clause of the Geneva Convention should be released. I worked this until Dr. Bierens de Haan and myself were appointed a board to report on the physical condition of certain prisoners. We reported that three officers and some men came under the clause. Their release was ordered and the time of their departure fixed, but at the last moment an order came from the Government, countermanding the order of release because the Commissioner of Police did not think the Convention applied. I urged the State Attorney to advise the State Secretary on the matter, which I believe he did. The men, however, were not released, though the officers were subsequently in some ill-defined way.

That I did urge, and was anxious to give, assistance to the prisoners, the best assistance in my power, is clearly shown from what took place with regard to the officers. When an officer became ill in his quarters I was only able to give medicines, suitable diet, alteration of his sleeping quarters, and other things equally necessary I was not allowed to interfere with; but when I could get the necessary permission and remove the sick to the Bourke Hospital (of which I was in charge for the Red Cross Society) there was nothing procurable and suitable that such sick did not receive. This shows that when I was able to act free from the Prisoners' Committee I was successful in securing proper treatment of the sick. I would here remark incidentally that the Government or its subordinates gave no help whatever to the sick and wounded officers in Pretoria and that everything they received was obtained by me in the first instance from the Red Cross Society and later from private sources.

I venture to hope that if your lordship will kindly give attention to the above true representations as to my position and what I did, you will conclude that not having been appointed by the Government to look after the prisoners not only was I not officially responsible for what was left undone, but further as an ordinary medical practitioner I did not ignore any lack of proper treatment brought to my notice, but did what I could to improve the circumstances and alleviate the sufferings of men as well as officers. Upon representations which have been erroneously made your lordship, it appears, has judged me adversely as having ignored remonstrances addressed to me by other medical officers. This can only apply to one medical officer—viz., Dr. Haylett. This gentleman's appointment was specially urged by me because I thought that with his knowledge of the Dutch language and acquaintance with the officials he might perhaps achieve much improvement at Waterval, when, prior to his appointment of the 16th January, 1900, which made him responsible, he wrote to me on the condition of affairs at Waterval on the 27th December, 1899, this matter was being dealt with by the appointment of the inspecting commission previously mentioned in this letter. I had his letter translated into the official language and forwarded it the same day with a covering letter to the Prisoners' Committee (copies handed to Court of Enquiry). Then Dr. Haylett wrote again re-stating the condition of affairs and also stating that he had interviewed the Prisoners' Committee. I told him that I was not the proper person to write to and advised him to continue to address the Prisoners' Committee and the Executive Council, but said that if he would write his letters in Dutch (the official language) I would forward and support them. He had, in fact, caused me unnecessary trouble in getting his previous letter forwarded as I had to get someone to translate it—not being able to do so myself and I had no secretary, as has been stated. The other notes I received from him being requests for medicines were at once handed to local chemists for execution and he received these consignments without delay. I had, indeed, also informed him that it was, strictly speaking, the duty of the Prisoners' Committee to supply him with medicines, but I was willing to see to these supplies and did so, as he held, not without reason, that it was vain to expect the requisite prompt attention from the Prisoners' Committee. It is not easy to understand how Dr. Haylett could seemingly have believed that I was the chief medical officer, and it is noteworthy that when he approached the Prisoners' Committee on the 7th January, 1900, he does not appear to have made complaint as to his unanswered letters. In this connexion I may refer incidentally to his letter dated the 7th January, 1900, which was handed to the Court of Enquiry. His action throughout scarcely supports his assumed attitude as my subordinate. Dr. Haylett did not, as must be inferred from the statement recorded, tender his resignation by way of protest against his unsatisfactory position, but it will be found that he resigned rather because the Pietersburg Railway Company would otherwise be unable to continue his appointment as their medical officer. In fairness to myself I must call your lordship's sttention to the fact that it was not possible for me at the Court of Enquiry to meet allegations against me which were not disclosed or known to me, and when at a later date the apprehension that I was regarded unfavourably caused me to write to your lordship the interview which I had with Colonel Cowan removed it. At this distance in Cape Town I am somewhat handicapped in presenting my exoneration, as, of course, I have not with me all the materials which would be available at Pretoria.

There is a special point of fact in Colonel Hunt's report which may, perhaps, have contributed to place blame which cannot justly attach to me. I refer to his remarks with regard to the sick in the gaol and their non-removal. No other medical man being mentioned by name it may be supposed that I am referred to, whereas the gaol was and is under the district surgeon. Colonel Hunt in the same letter attributes to me unworthy motives for action or inaction for which he believes me responsible or culpable and yet cannot have formed his conclusions from any personal observations nor can he have been aware of the fact that my position and practice were entirely independent of remuneration or reward from the Government of the State. It may be that your lordship will, amidst much more important work, find time and occasion to investigate my appeal and ascertain the facts which I have here loosely strung together, and I most earnestly trust that such reconsideration of my case may remove the stigma under which your censure leaves me before the world.

"THE QUESTION OF THE COMMUNION CUP."

To the Editors of THE LANCET.

SIRS,—Theologians and students of ritual will, I think, welcome the discussion in THE LANCET of the question of possible infection conveyed by the touch of the communion cup. Obviously there are two separate questions—one of medical fact, the other of ritual observance. The question whether infection may possibly or probably be conveyed by any given mode of administering holy communion is one for medical experts only; it is foolish for anyone else to give an opinion. It has, indeed, been suggested that communicants, obeying a Divine command, may commit themselves to the Divine protection against possible harm. I cannot put that suggestion summarily aside, because I believe in what is commonly called "miracle" as possible and not unfrequent; but I should meet it by a reminder of the theological commonplace that miracle must not be unnecessarily presumed either as an explanation of fact or as a guide to action; such presumption, therefore, is no excuse for doing a dangerous thing which is avoidable. It is technically presumptuous to hope for miraculous protection without taking all natural precautions. It is for medical experts alone to say whether any given precaution be adequate.

Is the peril, then, avoidable? If our actual practice be dangerous it is for ritual authorities to consider what may be substituted. There seems to be a tendency in some quarters to assume that no change can be made. I cannot understand this. Theologically speaking, it is to me inconceivable that God, Who reveals to scientific research the hidden perils of nature, has tied the administration of His Sacrament to a mode which that revelation shows to be harmful. Practically speaking, there are several modes of administration known in the Church. Careful consideration of the question will certainly be demanded. The *Church Times* was lately urging the English bishops to appoint a commission of inquiry. Even at the present stage of discussion it may be useful to recall the methods used.

In the greater part of the Eastern Church the method of *intinction* prevails, to which you have already referred. A kind of sop is made in the chalice, which is administered by a spoon. I believe the spoon is rinsed after each using, with what effect the proper experts may say. This method is not perhaps very likely to find favour with us.

In the West, before the withdrawal of the cup from the laity in the twelfth and following centuries, the sacred species was often administered by suction through a *fistula* or metal tube. This would probably be even more open to objection than our practice, in which the lower lip only comes into bare contact with the outside of the cup.

Early in the eighth century the Pope, St. Gregory II., forbad the use of many chalices on the altar for symbolical reasons, requiring all to communicate from one cup. This brought in the use of very large vessels, from which the sacred species was poured into smaller cups, called *scyphi*, for the communion of the people. This may show that no theological or ritual exception can be taken to the use of a separate cup for each person, advocated by your American correspondent, but there is an overwhelming practical objection where any large number is concerned. The rule of the English Church requires the total consumption of the consecrated species by the priest, alone or with the help of some communicants. This cannot be effected save by the usual practice of pouring into the cup some wine or water, or both, and drinking this. The treatment of several hundred cups passes imagination.

There is a practice, not formally adopted, so far as I know, anywhere in the Church, but sometimes followed by individual priests in difficult cases of clinical communion, which may be worth mentioning. A particle of the species of bread is slightly tinged in the chalice and then laid on the tongue of the communicant. This method of giving communion presents little practical difficulty and might conceivably be adopted by authority for general use.

Some of your readers may be glad to have this material to work upon in their character of medical experts.

I am, Sirs, yours faithfully,

Madingley Vicarage, Cambridge, Nov. 28th. T. A. LACEY.

BERI-BERI AND CHRONIC ARSENICAL POISONING.

To the Editors of THE LANCET.

SIRS,—I trust that you will allow me to call attention in your columns to a point of some interest in connexion with tropical medicine raised by the present epidemic of peripheral neuritis in Chester and Manchester. The extraordinary similarity of some of the cases to certain phases of beri-beri seems to me to suggest the question whether many instances attributed to the latter disease may not really be due to chronic arsenical poisoning. Owing to the kindness of several medical gentlemen I had the opportunity of examining pretty carefully 10 of the Chester cases, and also of seeing several of those which had occurred at Manchester. I certainly thought that Dr. W. A. Newall and Dr. J. R. Prytherch of Chester were abundantly justified in noting an extreme resemblance between their cases and cases of beri-beri. The local anæsthesias, especially of the feet, of the tibial skin, and of the finger-tips, the dropsy over the tibiæ, the tenderness of the calf muscles, the loss of the deep reflexes, the ataxia combined with paresis, even the peculiar spacing of the heart-sounds in some instances, were all so suggestive that had the cases occurred in a beri-beri region I believe few medical men would not have returned them under that heading.

Assuming the cases to be due to chronic arsenical poisoning, we may well ask whether similar epidemics occurring in the East or on board ships may not often have been wrongly attributed to beri beri. The possibilities of arsenical poisoning on vessels are too obvious to need reference in detail. Natives of India and Burma are very fond of lemonade which is manufactured from European chemicals—probably of the cheapest sort. They also often delight in tinned and bottled fruits The occupants of jails, hospitals, and asylums may suffer from arsenical poisoning through half a dozen routes. The sudden disappearance of beri beri from the Japanese navy after a general change of diet is certainly suggestive. It has long been thought on epidemiological grounds that beri-beri may be due to some form of food-poisoning; it now seems just possible that the poison may be, at least in some cases, nothing but arsenic. The sudden improvement occurring in most cases after removal from the house where they contracted the malady is certainly more suggestive of intoxication than of infection. In short, regarding such epidemics of beri-beri as I have had the opportunity of witnessing, I should be sorry to be called upon to give a definite statement to the effect that they were not due to chronic arsenical poisoning.

Of course there may be, and very probably so, a true beri-beri, but the points of distinction do not seem to be very clearly established at present. I think I remember bullæ and even pigmentation in India. Certainly cases approximating to the "wet" form of beri-beri do not seem to have been noted in Chester; but this is, I think, a later stage of the disease, and may perhaps have been overlooked in chronic arsenical poisoning. Lastly, our knowledge of the epidemiology of beri-beri cannot be said to be so complete as to enable us to exclude all possibility of arsenic being concerned in the causation at least of many cases attributed to the disease.

In conclusion, I hope that it will be understood that I am only suggesting a possibility and that I do not presume to erect a theory. The next ship which arrives infected with beri-beri at an English port will afford an opportunity for an examination of the question.

I am, Sirs, yours faithfully,

Liverpool, Nov. 30th, 1900. RONALD ROSS, D.P.H.

"THE TREATMENT OF SPRAINS AND OF SOME FRACTURES."

To the Editors of THE LANCET.

SIRS,—For the last 20 years I have been treating sprains by the application of adhesive plaster and, like Mr. Christopher Heath, I have found this plan far more satisfactory than the older methods Since I first became aware of its value I have never omitted to use this plaster in some stage or other of the treatment of these injuries, even in sprains accompanying fractures I was first led to realise the advantages likely to result from so firm and steady a support as that effected by adhesive plaster when studying œdematous tissues microscopically for the purpose of the "Atlas of Histology." The plasma which in œdema is infiltrated into the connective tissue, separating almost every individual bundle from the others, seemed likely not only to prevent repair by its pressure, but also (from lack of complete absorption) to produce permanent thickening of the tissues by becoming organised.[1] This condition pointed to the desirability of preventing, if possible, this infiltration from taking place, and if it had already taken place of promoting its absorption, and the firm support without undue pressure given by adhesive plaster seemed just what was required.

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[1] Atlas of Histology, Plate VIII, Fig 14.

In using adhesive plaster for this purpose certain precautions are necessary. No attempt must be made to produce pressure; the plaster must be laid on very evenly, being held only just sufficiently firmly to allow it to adhere without creases. It is necessary to use a plaster which does not require heating, and there are several so-called rubber plasters now made which are suitable. Strips from one to two inches wide are best, and they should just overlap each other. After a few days, or sooner, the plaster should be removed and fresh strips applied. If the deep tissues are not very severely injured it is well to precede the application by about five minutes or more of gentle massage (towards the heart). Massage is also very useful in the subsequent treatment whenever the plaster is removed. In addition to massage passive movement is generally beneficial. I have applied strapping in a case in which I feared gangrene of the tissues round an ankle, the joint not only having been sprained but the soft parts also severely crushed. The patient made a good recovery. I have also applied strapping in the case of a Pott's fracture which necessarily involved a severe sprain. The effect was to prevent swelling and thus greatly to hasten the cure; and as there was consequently very little infiltration of plasma subsequent stiffness of the ankle was prevented. If a sprained joint is already swollen when seen by the surgeon it is well to raise the affected part above the level of the body for a few minutes to allow gravitation of the blood and during this process the massage may be carried out and will help in reducing the œdema.

Although it is best to use the plaster from the first, yet the beneficial effect of this treatment of sprains is very noticeable when applied to patients who have undergone some days of treatment by the old plan—i.e., rest of the affected limb and the application of evaporating lotions. The swollen joint will be rapidly reduced in size by absorption of the infiltrating fluid after application of the plaster. In these circumstances we should remove and re-apply the plaster as soon as the œdema has visibly lessened, and this may be necessary every day, until very soon the joint will have assumed its natural size, in perhaps as many days as it would otherwise have taken weeks. The advantages of the adhesive plaster treatment are immense. Often the patient may begin to walk about directly the plaster is applied, and there can be no doubt that early use of the part as well as passive movement and massage assist the cure.

Dislocations.—The difference between a sprain and a dislocation is chiefly a matter of degree as regards the injury to parts surrounding a joint, and therefore the same considerations in respect to treatment should prevail. Without entering into details with which many of your readers must already be familiar I would sum up the treatment of dislocations as follows: 1. Reduction under an anæsthetic, in order to avoid unnecessary and detrimental disturbance of the injured tissues. 2. Support by means of adhesive plaster and light bandaging. 3. Early *passive* movement, commencing 24 hours after reduction and repeated daily. 4. Massage. 5. Early *active* movement.

Undoubtedly, there may exist complications which will necessitate a modification of this line of treatment, but in the majority of cases the above rules may be followed with advantage; the period of treatment will then be considerably shortened from that pertaining to the older methods, and stiff joints will almost certainly be avoided or much reduced in degree.

I am, Sirs, yours faithfully,

Queen Anne-street, W., Nov. 24th, 1900. NOBLE SMITH.

OLIVE OIL IN TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—In view of the enormous mortality from enteric fever amongst the British troops in South Africa may I again bring before your readers a method of treatment advocated by myself in your paper about two years ago?[1] It consists in slowly administering every 12 or 24 hours an injection of olive oil per rectum. The quantity used for adults should be about a pint at a time, and should be retained in the bowel from 12 to 24 hours if possible. If not returned in this time it may be brought away with an ordinary soap-and-water injection, a fresh dose of olive oil being administered two or three hours later. After a week or 10 days the daily use of the injections can be discontinued, and they are given only when the temperature rises or the bowels are confined. With diarrhœa it is imperative to give olive oil, and those who try it will find it more efficient than opium or any other drug in bringing about a natural discharge of fæces. Occasional small doses of calomel from one-tenth of a grain to half a grain are useful if the oil is not sufficiently stimulating to make the bowels act. I use it now instead of giving olive oil by the mouth, which was found to be too nauseating for better-class patients. My only medicine for typhoid fever, in addition to olive oil and the above-mentioned occasional doses of calomel, consists of carbonate of ammonia, glycerine, and decoction of cinchona given every three or four hours. Whether this preparation has any beneficial effect or not I am unable to say; it has the virtue of being probably harmless, and without the glycerine was a favoured preparation of Percival Pott. With oil injections the bismuth preparations are quite unnecessary. Patients treated in the above manner in my opinion cannot die; for careful observation has led me to believe that typhoid *per se* is a harmless fever, it is the accompanying sapræmia or ptomaine poisoning which produces the ill-effects. Under this line of treatment there are no sequelæ, tympanites, perforations, or heart failure. No cold baths are necessary. The most unskilled nursing is sufficient. Its only drawback occurs in private practice, where patients get well so easily that no credit accrues to the physician. Medical friends in Australia and Canada endorse my opinion as to its value.

I have heard that olive oil given per rectum has been found post mortem in the stomach less than 24 hours after administration; if this is true it is of extreme interest as showing that the beneficial effects of the oil extend above the ileo-cæcal valve. During a visit home last year a bacteriologist hinted that my patients were not suffering from true typhoid fever, but from some fever due to a closely allied bacillus. I can only state that my friend Dr. W. T. Dermer examined a large series of cases here and obtained Widal's reaction in nearly all of them. Large bodies of men, as armies or gold-prospectors, who invade an undeveloped country, are invariably attacked with typhoid fever—witness West Australia, Klondyke, the Cuban campaign, and South Africa. My own hypothesis is that the bacillus present in virgin soil acquires virulence by passage through a series of hosts. An old prospector informed me that he knew of numbers of typhoid-stricken places in Australia which had completely cleared themselves in a few years without any attempt at sanitation. Do the inhabitants and their children acquire immunity or does the bacillus lose its virulence? People alone in the bush, living on apparently virgin soil, can develop typhoid fever. In the case of my own child, aged two and a half years, who nearly died from enteritis (not typhoidal) accompanied by a recrudescence of malaria, and who on recovering from the acute stage daily passed casts of the intestine, the condition was completely cured in from two to three weeks by injections of olive oil, protargol and other remedies having been used in vain.

I am, Sirs, yours faithfully,

OWEN F. PAGET, M.B., B.C. Cantab.

Fremantle, Western Australia, July 21st, 1900.

"PROFESSOR LUSTIG'S PLAGUE SERUM."

To the Editors of THE LANCET.

SIRS,—I am much indebted to your special Indian correspondent for excusing my "personal attacks"—so he is pleased to call the repudiation of his erroneous assertions—on the plea that "such attacks may be common in debate on the continent of Europe," and in return I cordially sympathise with him on "an extraordinary thing" which happened to him in his reply in THE LANCET of Sept. 22nd, page 903—viz., to pose as a martyr correspondent "who cannot criticise without ignorance or wilful misleading being put forward to explain his opposition," and at the same time to substantiate in a most creditable manner the first of the two alternatives he is complaining of. The present controversy arose from your special correspondent's insinuation in THE LANCET of June 2nd, page 1608, that in the second series of the experiments with Professor Lustig's plague serum *selection or exclusion* of patients was practised. Although from my letter in THE LANCET of

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[1] THE LANCET, August 13th, 1898, p. 409.

August 11th, page 461, that fact might have been known to him, who emphasises his English extraction, he still professes in his reply that we are at issue upon the "construction and reading of the statistics," and innocently repeats twice more "that moribund and convalescent cases were excluded." These assertions—I beg his pardon for betraying again my continental training—are *not correct.* Neither in my paper and letter on the subject, nor in Lieutenant-Colonel Wilkins's letter in THE LANCET of August 11th, page 462, is any mention made of *moribund and convalescent* cases. There is only the plain, intelligible, and correct statement, that in the *second series* of the experiments the cases were not selected but treated *alternately as they were admitted* to the hospital. Tested in this way, which was agreed upon with the municipal commissioner of Bombay in order to obtain results above suspicion and discussion, the serum treatment has given 12 per cent. more recoveries than the ordinary treatment. I can therefore show, as your special correspondent challenges me to do, "a series of cases in which every admission has been included and in which the serum cases show better results than the others." This might satisfy your conscientious special correspondent as to the *conditions of the experiments and permit him "to be glad* to accept my conclusions," and it ought to end a controversy where the advantage is entirely with me, who can put facts controlled by the responsible authorities on the spot against assertions of a distant and, it seems, an irresponsible special correspondent.

I may be allowed to add that 484 patients had alternately been treated on either side when the experiments were concluded in July last by order of the municipal commissioner, who having satisfied himself that the results are real decided to have the serum manufactured on a still larger scale for the coming epidemic. The staff and stock of the municipal laboratory were *therefore increased accordingly*, so that at present 25 horses are under immunisation. Finally, I beg to correct a misprint in my letter in THE LANCET of August 11th (page 462), where the recovery rate of the *selected cases* is put down as 33·2 per cent. instead of *38·2* per cent., an error your special correspondent might have found out from my paper which gives the correct figures.

I am, Sirs, yours faithfully,

A. MAYR, M.D.

Municipal Laboratory, Parel, Bombay, November, 1900.

THE ASSOCIATION OF PHYSICIANS AND SURGEONS (SOCIETY OF APOTHECARIES).

To the Editors of THE LANCET.

SIRS,—Referring to an announcement in THE LANCET of Nov. 17th, p. 1461, with regard to the abbreviated titles which may now be used, we wish to remind holders of the licence of the Apothecaries' Society of London that they are still required to sign *death* certificates with the letters L S.A. as formerly.

I am, Sirs, yours faithfully,

GERALD DALTON,

Honorary Secretary to the Association of Physicians and Surgeons (Society of Apothecaries).

Nov. 29th, 1900

THE OPEN-AIR TREATMENT OF PHTHISIS.

To the Editors of THE LANCET.

SIRS,—It will no doubt be thought somewhat in the nature of heresy at the present time to question the advantage to be derived from the outdoor treatment of phthisis, but I cannot help thinking that the new idea is likely to undergo considerable modifications, like most other previously proposed suggestions. When a student at St. Thomas's Hospital, now nearly 40 years ago, I noticed that but few of the patients left the wards without having had a cold of some kind—bronchitis or pneumonia—during their time of residence, and there, of course, the windows were kept open night and day. Years ago the climate recommended as likely to benefit phthisis was a sunny, warm, and damp one, such as prevails at Ventnor, Torquay, Cannes, Nice, &c., and no doubt in certain cases this may prove of service; then came a change of view, and cases were advised to go to dry, cold, elevated positions, such as the Engadine, Colorado Springs, &c. The result of this treatment in many cases *has been proved to be decidedly* beneficial; but now we have come back apparently to the idea that dryness of the air and elevated positions are of little consequence provided the patients have pure air and plenty of it, a view in my opinion decidedly retrograde. Hitherto we have been led to believe that warmth and moisture rather tend to promote germ life, and a particularly rare and cold air tends to increase the bodily vigour and natural powers of resistance. Under any circumstances I should say that in the present experiments two things should be considered—the direction of the wind and the amount of moisture in the atmosphere. The bedstead should always be so placed as to avoid the direct current of any air but from the south or west, and when the air is moist it should be dried by means of wire-framed antiseptic cotton-wool screens and not allowed to come direct into the patient's room. Everybody is well aware that many persons in sound health cannot stand a cold and damp atmosphere, especially at night A certain number of patients recover under each of the different methods of treatment, but what we want to know are the actual comparative results of the various suggested methods.

I am Sirs, yours faithfully,

Dec. 3rd, 1900 F. P. ATKINSON, M.D. Aberd.

ECONOMY IN THE EMPLOYMENT OF COCAINE.

To the Editors of THE LANCET.

SIRS,—The prevailing high price, with the occasional personal intolerance of cocaine and its *salts*, suggested experiments with the view of reducing the quantity employed and increasing its efficiency when used in ear, nose, and throat work. In the first place it was found that a 2 per cent. solution of the *alkaloid* in equal parts of almond and petroleum oil proved an efficient local anæsthetic for the *examination of, and slight operations upon, the nose and* throat—e.g., passing Eustachian catheter, laryngoscopy, exploration and removal of foreign bodies, &c. Applied either by means of an atomiser or a cotton-wool "swab," although apparently taking a little longer to act, its anæsthesia is more prolonged than that produced by a *watery solution: probably owing to the fact* that oil is less readily removed by the flow of secretion. With regard to the *salt*, a watery solution containing cocaine hydrochlorate 5 per cent. and sodium sulphate 2 per cent. was eventually selected. This addition of the neutral sodium salt decidedly increases the effectiveness of the cocaine, partly by reason of *its penetrating power* and *partly* owing to its solvent action upon the globulins and other proteids which occur in the secretions The former quality is well illustrated in the influence of Muller's fluid on tissues, the chromic salt penetrating readily under the influence of Glauber's salt. The action of the combined solution proved to be distinctly *more* rapid, and the anæsthesia was as complete with a proportion of 5 per cent as with cocaine in much stronger solutions by itself. Economy is effected and the risk of constitutional symptoms is minimised. When either submucous or subcutaneous injection is required, eucain hydrochlorate (5 per cent.) may be combined with 2 per cent. *sodium sulphate* with equal advantage, but when used as a surface application to mucous membranes, eucaine should be followed or combined with a solution of suprarenal extract, if local ischæmia be desired.

I am, Sirs, yours faithfully,

WYATT WINGRAVE, M.D.,

Physician Central London Throat and Ear Hospital.

Dec. 4th, 1900.

THE LEAGUE OF MERCY.

To the Editors of THE LANCET.

SIRS,—*The recent appeal of* the Prince of Wales's Hospital Fund to the public for subscriptions raises the question of the wants of the London hospitals. This Fund has been productive of enormous benefit to the hospitals, not only in the direction of financial assistance, but by causing improvements and reforms to be carried into effect. The Prince of *Wales's Hospital Fund* has mainly been supported by generous donors and subscribers of large amounts.

It is known that there are vast numbers of persons who, willing and in many cases anxious to contribute, are unable to give largely, and to meet these cases the Prince of Wales established the League of Mercy, now founded by a Royal Charter. The constitution of the League is so arranged that contributions of 1*s.* or upwards may be made through members of the League, who, working under presidents and vice-presidents in all parts of London and the home counties, are in a position to obtain help for the hospitals which would not otherwise be received.

If everyone who does not in any other way subscribe would contribute 1*s.* to the League of Mercy through a member the needs of the hospitals would be supplied. In this way the special appeals from hospitals which from time to time are made would not be required. It would be a distinct advantage if these special appeals could be avoided. They have many objectionable features, one being that they dislocate the sources of charity, as the war and famine funds have done during the past year. It may be stated that every farthing of every shilling given to the League goes direct, without any deduction for expenses, for the benefit of the London hospitals.

The League of Mercy was organised to secure some measure of personal service on the part of a large number of persons who are sufficiently conscious of the value of our London hospitals, and are willing to devote a little time and trouble to bring their needs and the services which they render to the public to the notice of those who have hitherto, from want of opportunity or knowledge, taken no interest in this work. The organisation of the League has now permeated throughout London and the home counties, and we would be very glad to have offers of personal service or to give information as to how good work can be done by anyone who is prepared to give a little time each year on behalf of the hospitals.—We are, Sirs, yours faithfully,

WOLVERTON,
W. J. COLLINS, } Honorary Secretaries.
J. HARRISON,
Nov. 30th, 1900. HENRY C. BURDETT, Treasurer.

"THE MICRO-ORGANISMS OF VACCINE MATERIALS."

To the Editors of THE LANCET.

SIRS,—I have just seen Mr. Arthur W. Hare's letter in THE LANCET of Nov. 24th (p. 1532) dissociating himself from the conclusions in my paper on "The Micro-organisms of Vaccine Materials." This is not surprising, as I willingly admit that Mr. Hare was a monomorphist of the most severe type from the bacteriological point of view. I must, however, demur to being denounced as a polymorphist of a dangerous type. Mr. Hare says that "a spore is not to be looked upon as a definite cause of disease." May I venture to point out that intestinal anthrax is produced by spores only? The rods appear to lose their active power of producing the disease in the stomach, but the spores pass through the stomach unaltered and germinate in the intestine. The paper appears to be self-explanatory as to my views upon the life-history of a pathogenic micro-organism. Then Mr. Hare pleads for respect to the dictum that "like produces like." Cohn, Brefeld, and Koch do not put it that way. Cohn started from the assumption that each species was characterised by a definite form, but he was not sure whether his form species coincided with natural species. Brefeld, Koch, and others have shown that some species are monomorphous, others show pleomorphism in various degrees, as when spores give rise to bacilli and the bacilli in turn produce spores. The decision arrived at was that there are distinct species of bacteria which may be distinguished by following their development. I claim to be a pleomorphist in that sense, as where this cannot be done form species may not coincide with natural species. My work was chiefly devoted to the definition of the composition of natural vaccine and variolous material and to ascertaining the cause of opacity in lymph, and I am quite prepared to leave it to the tender mercies of the specialists whose aid Mr. Hare has invoked. I am, Sirs, yours faithfully,

Edinburgh, Dec. 3rd, 1900. JOHN B. BUIST.

"THE USE OF TOBACCO ON ACTIVE SERVICE."

To the Editors of THE LANCET.

SIRS,—In his criticism in THE LANCET of Dec. 1st (p. 1612) of your annotation under the above heading Dr. R. Martin accuses its writer of basing his opinion "on the flimsy ground of mere hearsay," but is his own eye free from motes? Dr. Martin asserts "that where healthy men have undergone severe fatigue in the open air they will speedily sink into profound repose, when the fitting time arrives and opportunity serves, however scanty the diet may have been." Now, according to my experience—and I have been through several campaigns—many men on service are afflicted with insomnia, especially, though by no means exclusively, when new to the conditions. There is such a thing as being over-tired, and when excitement is added sleep of any kind, let alone "profound repose," is often wooed in vain. Then it is that the value of a pipe becomes priceless, as it induces refreshing sleep. I believe also that tobacco is a great aid to digestion in men who have to live and to work hard on unusual food, such as biltong or "bully beef," and so far from drying and irritating the fauces "the fumes" are well known among soldiers as a thirst-quencher in the absence of water. In order to pose consistently as one who has not "meddlesomely tampered with nature's kindly process" a man should, amongst other things, go naked, eschew cooking, and leave his chin unshaven. We live artificial lives, and to base an argument on the kindness of nature is a slap in the face to civilisation.

In conclusion, I should like to know Dr. Martin's authority, beyond hearsay, for his assertion that "the best shots at Bisley are almost invariably non-smokers." My recollection does not tally with this positive statement.

I am, Sirs, yours faithfully,

Dec. 3rd, 1900. PYRAMID.

REPORT OF PLAGUE IN CALCUTTA.

(FROM A CORRESPONDENT.)

A REPORT nominally by the Chairman of the Board of Calcutta has recently been issued. As the officer in whom all power is vested the report comes from him, but it is based on the work of the plague department. This department has been successively presided over by Mr. J. Nield Cook, Major Green, I.M.S., and Major Deane, R.A.M.C., all of whom contribute their several quota to the volume. The chairman's portion is a compilation from, and summary of, the other reports. The striking feature of this record consists in the abandonment of every plague measure except that of disinfection. At no time during the epidemic has anything else been enforced. Patients have not been compulsorily removed, contacts have not been segregated, evacuation has been untried, and inoculation has only been sought by a few. Until the present year Calcutta has not had a serious outbreak, so that the absence of strict measures can hardly be said to have facilitated the progress of the disease. The total estimated mortality from plague since its first official announcement in 1898 is only 13,000. The people have sickened and died in their own homes, and as there has not been any compulsory disturbance of the privacy of the home it is not surprising to find that less than 20 per cent. of the returned cases of plague were seen during life. The system of investigation seems as complete as it can possibly be. Every death reported to the registrar is submitted to the district medical officers who, with their assistants, institute inquiries from the relatives, friends, and neighbours into the course of the illness. By this systematic examination a certain number of deaths are returned by the district medical officer as due to plague, others are returned as suspicious, and the remainder as not suspicious. So thorough has this method been that the excess mortality of any period can be accounted for by the plague and suspicious deaths. Where so large a proportion of the population die without any medical attendance whatever it is impossible to adopt any more accurate method. All the work of the epidemic has fallen on the plague department, as very little assistance has been given by householders, medical practitioners, or influential natives. Less than 5 per cent. of the cases went voluntarily to the two general hospitals.

Inoculation can hardly be said to have had a fair trial in Calcutta. Little or no encouragement has been given to it and less than 500 operations have been done during the past two years. It may truly be said that disinfection of the houses has been the only policy pursued. This has been carried out for every suspicious death and latterly on a wholesale scale for nearly every street in the city.

An innovation of great importance consists in allowing and indeed persuading the people to return to their rooms immediately after disinfection. This practice is adopted on faith in the value of disinfection and with the object of reducing inconveniences for householders to a minimum. The other striking plan adopted in Calcutta has been the wholesale disinfection of streets and large collections of houses. This is known as "extra disinfections." The idea appears to be to *anticipate a further outbreak by destroying any poison* which may be lying latent. It is a great experiment, and the value of disinfection for an Indian city, in the case of plague at any rate, must stand or fall by the results in the near future. The amount of perchloride of mercury which is being daily used must be enormous. It must be understood that this wholesale disinfection has not been done while the outbreak was raging, but since.

The report contains many interesting tables of mortality and maps showing the localisation of the disease to certain parts of the city. I note an almost complete absence of the clinical aspects of plague. This is due to the absence of facilities for observation, practically no hospital being kept up by the plague authorities Neither is there any record of bacteriological work—probably for the same reason. In Major Deane's report I note an undertone of doubt upon the value of all bacteriological work with regard to plague. This is exceptional, but I trust that its influence will not be injurious. The volume before me is purely a record of plague administration and consists very largely of the work done in the way of disinfection. It is, perhaps, too early to gather the value of the scheme so recently adopted, but while a cleansing of the city must do good I do not feel so sanguine of the results as the main authors of this report. In fact, I find the chairman himself writing: "I am much afraid that all our efforts will not prevent the occurrence of a more serious epidemic than any yet experienced." There are many other points in the report to which it is hardly necessary to refer, as certain sections of all plague reports are more or less like each other. The influence of rats in the spread of plague is discursively dealt with at the end of the volume. I do not gather that any new facts have been observed but a general doubt is expressed as to their power of diffusing the disease. They are looked upon by the authors more as companions in trouble than as affecting the spread of infection to man. With the evidence obtained in other parts of the world I cannot subscribe to this view.

Taking the report as a whole it must be admitted that the subject matters taken up have been adequately treated. There are many points omitted, however, which might have been included.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Variations in the Incidence of Disease in Different Parts of India.—Objections to Some Statements on Plague Symptoms.—Military Rank or the Title of "Doctor."—Further Increase of Plague in India.

A RETURN of the various operations performed in the different provinces of India, and published by one of your Indian contemporaries, brings out the curious frequency of certain diseases in some parts and the rarity of the same diseases in others. Cataract, for example, so common in the North-West Provinces, and to a lesser degree in the Punjab, is comparatively rare in Madras. Stone, which is so frequent in the Punjab, is also rare in Madras. Hydrocele is a wide-spread disease in India and is said to be a common complaint—much more so than in Europe—but the returns show a peculiar infrequency in the Punjab. Obstetric operations are as frequently performed in Madras as in the other provinces, but cases of ovariotomy are exceptionally few. They are much more numerous in the North-West Provinces and the Punjab. Taking India generally I may add other differences to the incidence of disease as compared with the British Isles. Appendicitis seems to be extremely rare in India. On the other hand, hæmorrhoids are particularly common. Boils and carbuncles are much more frequently met with than at home. One writer in the *Indian Medical Gazette* says that they may be epidemic in character, that they are contagious from one person to another, that they are locally contagious from one part of the body to another, and that there is an infection of the house as shown by successive inhabitants being attacked. Acute rheumatism is very uncommon in India and cancer is not so frequent as in Europe. A recent investigation into the large amount of cases of fever following the famine shows that typhoid fever and Malta fever do occur amongst the natives of India. The occurrence of typhoid fever has been recognised for some years by the younger generation of practitioners, but is still accepted *with hesitation by the older school.*

Exception would probably be made by those in India who have had most experience of plague to some of the statements made by recent writers at home. It is stated, for example, that the most potent agent in the spread of the disease is undoubtedly contact with infected persons. This is not borne out in India, for the low contagious properties are recognised everywhere. Cases in one family or household are nearly always simultaneous or nearly so—not successive at intervals as if caught one from another. The percentage of cases among "contacts" is extremely small—less than 4 per cent.—and the occurrence of cases amongst friends and relatives visiting the sick in hospital is uncommon. Amongst native attendants it may almost be said to be rare. Then it is said that boils and carbuncles in plague are rare. While it is true that these complications vary at different places and in successive outbreaks their occurrence was by no means uncommon both in Bombay and Poona in the first two years of the epidemic. Again, it has been stated that suppuration takes place in and around the glands at an early date. This is quite incorrect. Breaking down and sloughing occur, but true suppuration is certainly delayed for a week, generally longer.

A recent article by Dr. Balfour Stewart of Liverpool treats among other matters upon the value of Lustig's serum in the treatment of plague. My previously expressed opinions and criticisms upon which you have permitted a long discussion in your columns are fully confirmed. Dr. Stewart had exceptional opportunities of judging while on duty in Bombay. The classification of plague into eight types is, to say the least, confusing. For all practical purposes the division into bubonic, septic, and pneumonic, is ample, and will include every case, so that to add nervous, toxic (or fulminant), puerperal, and two mild types is unnecessary.

A curious custom has gradually been adopted by the officers of the Indian Medical Service holding civil appointments and carrying on private practice in Calcutta in giving themselves the title of "Doctor" rather than that of their military rank. In most other places the surgeon has his rank stated on his name board, but in Calcutta Dr. —— without any other title is used. Possibly the gradual development of competition with purely civilian practitioners explains this custom.

There has been a considerable increase in the mortality from plague throughout India during the past week. The number of deaths given is 2943, an increase of 795 over that of the previous seven days. The disease is worse in the Bombay Presidency, 2663 deaths being recorded. Bengal returns 242 deaths, of which 11 occurred in the Sarun district.

Nov. 16th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Health of the County Palatine.

THE annual report of the medical officer of health of the county palatine (Mr. E. Sergeant) contains a regret that the gross death-rate (17 6 per 1000) does not compare favourably with the previous year, although it is below the county average *for the ten years* ending 1898. The increase in the death-rate is due to an increase in the number of cases of influenza and affections of the respiratory organs. The birth-rate shows a slight diminution as compared with 1898. Increased attention has been paid to the carrying out of sanitary work in the county, with the result that 37,866 nuisances have been abated in the districts. House-to-house inspection has been carried out systematically and 200 houses have been condemned as unfit for human habitation. Under the Sale of Food and Drugs Act, 1557 samples have been analysed, of which 195, or 12·52 per cent, were found to constitute offences against the Act. The report states that the Vaccination Act, 1898, has worked on the whole in a satisfactory manner, and there is no reason to fear a falling-off in the percentage of vaccinated children in consequence of the new provisions. With regard to slaughter-houses it is stated that on the whole they have been carefully inspected, but complaints are made by the medical officers of health as to the difficulty of supervising in a satisfactory manner private slaughter-houses. Mr G. H. Patterson, medical officer of health of Ulverston, says that "it is a great pity that vested interests should continue to stand in the way of the provision of public abattoirs which in every respect would be a decided improvement upon the plans which at present obtain." In a very interesting appendix Mr. Sergeant has dealt at some length with the question of the prevalence and prevention of tuberculosis with especial reference to the establishment of sanatoria. In order to understand the magnitude of the question as affecting Lancashire it may be stated that during the year 1899 the deaths from phthisis numbered 2305, and assuming that an average period of three years elapses from the reception of infection and death there is reason to believe that the persons affected with phthisis living in that year within the administrative county would be equal to three times the number of deaths, or from 6000 to 7000.

The Assize Dinner.

Among the guests at the recent annual assize dinner given by the Lord Mayor to the judges of assize was Sir William Mac Cormac, Bart., who defended in a vigorous speech, which was highly applauded, the administration of the Army Medical Department in South Africa.

A Memorial to Principal Oliver Lodge.

The plaster study for a bust in marble of Dr. Oliver Lodge, until lately professor of physics at University College, has just been completed. The bust, which has been commissioned by a number of Dr. Lodge's friends and admirers, will be placed in the hall or library of University College as a memorial of his association with the institution. Mr. C. J. Allen, a local sculptor, to whom the work has been entrusted has managed to effect a striking likeness of Dr. Lodge.

Poisoned Beer in Liverpool.

In common with Manchester and other places a scare has been caused in Liverpool with reference to cases of peripheral neuritis treated in the hospitals and supposed to have been caused by drinking poisoned beer. On Sunday, Dec. 2nd, the death occurred of a woman in the Mill-road Infirmary from alcoholic neuritis associated with symptoms of arsenical poisoning. The deceased, who had been a patient in the hospital for about a fortnight, had been a heavy beer-drinker. The deceased's urine was examined by Dr. Nathan Raw, the medical superintendent, and traces of arsenic were discovered. Two or three additional cases have occurred at the same institution, bringing up the total to a little over 60 cases treated at Mill-road. The result of the analyses of beer conducted by Dr. Campbell Brown at the instance of the health committee has led to the discovery that the arsenic present in the beer is traceable to the glucose sugar used at certain breweries. The Liverpool brewers are doing everything in their power to facilitate the work of the authorities in fathoming what seems to be a mystery. Some brewers, to their credit, rather than run any risk, have emptied large quantities of suspected beer down the sewers. In the cases of the samples of beer brewed by two or three brewers which have been analysed at their own request, Dr. E. W. Hope, the medical officer of health, has informed the brewers of the results of the analyses. Dr. Hope intends to embody all the results of his analyses in a comprehensive report which will be presented to the health committee at the earliest opportunity.

Dec. 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Mr. H. E. Clark on the South African Hospitals.

MR. H E. CLARK, professor of clinical surgery at St. Mungo's College, Glasgow, who has recently returned from South Africa, delivered his presidential address at the last meeting of the Glasgow Medico Chirurgical Society and not unnaturally selected as his subject some of his recent experiences at the seat of war. He remarked at the outset upon the prominent part played by volunteers in rendering aid to the various departments of the army and more especially to the Army Medical Service. Among such volunteer efforts he claimed a prominent position for the Scottish Red Cross Hospital, of which he had had the honour to be senior surgeon. After a rapid sketch of his experience at Bloemfontein, which he reached immediately after the town came into the possession of the British, Mr. Clark proceeded to refer to the so-called hospitals scandal. Upon this subject he complimented the Director-General and his subordinates that in spite of the well-known fact that the Royal Army Medical Corps had been under-staffed with medical officers for years, and in spite also of the serious miscalculation which had been made at the commencement of the war as to the number of troops which would be required, the medical authorities had never failed to send out with each division of the army the recognised equipment of field, stationary, and base hospitals with a full complement of surgeons, nurses, and orderlies. The medical authorities it must be admitted, had not anticipated the terrible outbreak of enteric fever, which converted Bloemfontein in April last into a gigantic hospital camp. Even if they had expected this outbreak he doubted if much could have been done in the way of preparation. Obviously, it was impossible to set up hospitals in Bloemfontein before the town was in the hands of the British and it was equally impossible that general hospitals with their enormous equipment could accompany General French in his lightning march to Kimberley or in the subsequent advance on Bloemfontein. Hence the army entered the latter town with a large and constantly increasing number of cases of enteric fever having none but field hospitals for their treatment. It must be remembered that enteric fever was always present in towns in South Africa and it had been spread among the troops to a terrible extent by the men drinking the water of the Modder river which was so polluted that it was little better than liquid sewage. When the town was occupied the only communication with the main base at Cape Town was by a single line of narrow-gauge railway which was frequently destroyed in places by the enemy, who held possession of the country to the immediate south of Bloemfontein for fully a fortnight after the occupation of the town. It was amidst such transport difficulties that the medical staff had to work, their claims for material being necessarily second to the primary demand of the army for food and ammunition. Just as the conditions seemed to be improving came the crowning disaster of Sanna's Post which cut them off from the Waterworks and compelled them to fall back upon the wells in and around Bloemfontein at all times suspect but at that time more polluted than ever. Mr. Clark claimed that great credit was due to Surgeon General W. D. Wilson and his subordinates for what they accomplished under these trying conditions. Everyone admitted that many things were not as could have been wished, but if any fault existed this did not lie with the medical staff, the War Office, or the Government. It depended on the fact that war is war and could not be carried on without distress and suffering on the part of the whole army, in which the sick and wounded must needs participate. The state of matters which some critics would appear to demand would only be attained by sending general hospitals in advance of the army into those towns which were subsequently to be occupied—an obvious *reductio ad absurdum.* Many of the charges brought against the medical arrangements related to the base hospitals in the neighbourhood of Cape Town, where the difficulties of which he had spoken did not exist. But these charges had notoriously broken down, and it would be found when the report of the Hospitals Commission was issued that the hospitals at Wynberg, Rondebosch, and Woodstock had been cleared of the aspersions which had been cast upon them and that the work which they had accomplished had been great in amount and excellent in quality. Mr. Clark's address attracted a large audience who gave him a very cordial welcome on his return to Glasgow.

Dispensary Abuse in Glasgow.

The abuse of public dispensaries is an old grievance in this and other cities; lately, however, feeling in Glasgow has become so acute that the Southern Medical Society have considered it necessary to appoint a committee of their members to investigate the matter and, if possible, to suggest a remedy. There can be no doubt of the existence of this abuse of our infirmaries by those who are well able to pay a fee, particularly in the outdoor departments of the general hospitals and the special hospitals. It is understood that as it is the Southern Medical Society which has taken the question up, the Victoria Infirmary is the institution specially aimed at, and it is certain that in the south-western districts, supplied by that infirmary's dispensary, discontent and grumbling are very general among the younger practitioners. The question is one of great difficulty and it will be interesting to see whether the Southern Medical Society will be able to suggest a practically workable remedy. The suppression of the abuse complained of would not only benefit the practitioner, but would prevent the diversion of hospital funds into channels for which they were never intended by testators and subscribers, would lessen the pressure of the chronic poverty of our infirmaries, and would enable such institutions to accomplish more work among the deserving poor.

Dec. 4th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Joseph Radford Cardiff, M.D. Glasg., L.R.C.S. Irel., Coroner for South Wexford.

THE death of this well-known and highly esteemed country physician took place on Nov. 19th at his residence Carrigbyrne, near the town of Wexford. Dr. Cardiff was an M.D. of Glasgow and a Licentiate of the Royal College of Surgeons in Ireland. He filled the office of coroner for the Southern Division of County Wexford for many years, and was widely known as an active practitioner until four months ago, when a severe attack of gout, from which disease he had suffered periodically for many years, confined him to his house. His death will be much felt over the wide country district to which his practice extended.

The Coronership of South Wexford.

The vacancy in the coronership of South Wexford caused by the death of Dr. J. R. Cardiff, is about to be filled, one of the candidates being the Nationalist Member of Parliament for the division. If Mr. Ffrench be elected it is understood that he will resign his seat in the House of Commons in favour of Mr. T. D. Sullivan, a well-known Nationalist recognised as the Poet Laureate of political Ireland.

Health Lectures at Queen's College, Belfast.

In accordance with the requirements of the founder of the chair of Physiology in Queen's College, Belfast, Professor W. H Thompson is giving a series of popular lectures on the Nervous System: its Functions and their Relation to Health. They commenced on Nov. 28th and are fully illustrated.

Annual Dinner of the Ulster Medical Society.

The annual dinner of this society was held in the Prince's Restaurant, Belfast, on Nov. 24th. The President (Professor W. H. Thompson) occupied the chair and there were between 50 and 60 members present. The guests were: the President of Queen's College, Belfast, the President of the North of Ireland Branch of the British Medical Association (Professor J. W. Byers), the Right Hon. the Lord Mayor of Belfast (Sir R. J. McConnell, Bart.), Professor Rubert W. Boyce (University College, Liverpool), and Lieutenant-Colonel R. G. Thomsett, R.A.M.C. After an excellent dinner had been served, the President proposed, in very happy terms, the toast of "The Queen," which was received with great loyalty. Dr. J. Walton Browne gave the "Navy, Army, and Reserve Forces," to which Lieutenant-Colonel Thomsett, principal medical officer of the Belfast district, replied. Professor J. Symington proposed the toast of "The City and Trade of Belfast," which was responded to by the Right Hon. the Lord Mayor. "The Queen's College and Belfast Medical School" was proposed by Professor Rubert Boyce of University College, Liverpool. The President of Queen's College and Professor T. Sinclair replied. Dr. W. A. McKeown proposed "The British Medical Association," to which Professor Byers, President of the North of Ireland Branch, responded. "The Health of the President of the Ulster Medical Society," which was a toast received with the utmost enthusiasm, was proposed by Dr. W. Calwell. Professor Thompson having replied, Dr. James Colville gave "The Health of the Honorary Secretary," to which Mr. Robert Campbell, responded. During the evening excellent recitations were given by Dr Andrew Fullerton and Dr. J. S Morrow, and, through the kind introduction of Dr. J. St. C. Boyd, one of the prominent supporters in Belfast of the Feis Ceoil, a well-known Irish piper, Mr. R. L. Mealy, gave two excellent musical contributions. Altogether the banquet passed off most successfully.

Death of Reuben Bolton, M.D. R.U.I., J.P.

I regret to announce the death of Dr. Reuben Bolton, J.P., of Bangor, Co. Down, which took place suddenly on Nov. 20th. Shortly after 1 P.M. on that day he was discovered in an unconscious condition in the hall of the dispensary in Bangor, where he had gone to prepare medicines which some of the dispensary patients were to call for. During the morning he had attended to his duties as usual, having visited three patients, including a maternity case, before proceeding to the dispensary. He had for some time been suffering from heart disease and some four months ago he had a serious seizure from which he seemed never to have recovered thoroughly. Born in Dungannon Dr. Bolton entered Queen's College, Belfast, where he was a most distinguished student and scholar. He graduated M.D. of the old Queen's University in 1865. For a time he practised in Belfast, but going to Bangor 25 years ago he was in 1878 appointed medical officer of the Bangor district of the Newtownards Union. He was also medical officer to the Royal Irish Constabulary and surgeon to the Bangor Cottage Hospital. He took a great interest in Masonic affairs. He was a magistrate for Co. Down. Genial in his manner, kind to his patients, and of a most sociable disposition, Dr. Bolton was greatly liked. He leaves a widow and four children, three girls and a boy. He was buried on N[illegible] 22nd.

Dublin Medical Students.

The anatomical returns of students who have entered for dissection have been made up to Nov. 25th, 1900. The total shows a falling off of one as compared with the returns of last year—viz., 422 as against 423.

Cork Hospital Saturday Fund.

The Cork Hospital Saturday collection was a distinct success this year A new feature was the inauguration of local collections in two of the county towns—viz., Bandon and Midleton—where the amounts received were very satisfactory. Last year no street collections were made, but this year, owing to the energy displayed by all concerned, the amount realised was nearly double that collected in the year 1898 At a meeting of the committee held last Friday the honorary treasurer's statement showed that the total amount available for distribution was £976. It was allocated as follows:—North Infirmary, £195; South Infirmary, £195; Mercy Hospital, £141; Women and Children's Hospital, £78: Cork Fever Hospital, £78; Eye, Ear, and Throat Hospital, £74; St. Vincent's Hospital for Women and Children, £58; St. Patrick's Incurable Hospital, £57; Lying-in Hospital, £50; Cork Maternity, £50. Votes of thanks were passed to the ladies who had made the street collections, to the several officials of the committee, and also to the Lord Mayor and Lady Mayoress. There is no doubt that his lordship and the Lady Mayoress by their whole-hearted zeal contributed largely to the very gratifying success of this year's collection.

Dec. 4th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Drinking-water Question.

THE question of the Paris supply of drinking-water has entered on a new phase. In reply to the cogent arguments of the Academy of Medicine, of the Committee of Hygiene, and of the learned societies, the authorities of the municipal water-supply have hitherto put forward nothing but promises and announcements of great works to be carried out at some future date, which, however, would without doubt satisfy in every particular the medical men. The only thing was that these magnificent projects either never came off or else were carried out in a very different style from that which had been agreed upon. To put the matter shortly, the engineers acted exactly as they thought fit while hiding their rebellion under a pretence of fine words. They have now given up even a show of agreement with the medical authorities and have declared open war. The Prefect of the Seine, in replying to the resolutions passed by the Academy of Medicine, has met them with a flat denial and the engineers proclaim for the future their pretence of insuring the water-supply of the city without paying the slightest attention to the views of the Academy of Medicine or to those of the professional hygienic authorities. This is how the matter came to a head. The "water lords" (*administration des eaux*), instead of finding new springs, found it much simpler to construct, near Paris, filtering beds into which water from the Seine should be led. This water after passing through beds of sand and gravel passes into reservoirs from which it is distributed to people as drinking-water at times such as when the spring water-supply fails. This, of course, is during very dry weather and it is precisely then that the Seine is lowest and consequently most befouled and its water most difficult to render fit for drinking by any filtration process. In my letter published in THE LANCET of Nov. 24th, p. 1538, I gave your readers an account of how this custom was criticised by the Council of Hygiene and of the confession which the chief engineer had to make how during a period of three weeks during this summer Seine water was mixed with spring water and that the period of admixture coincided with a recrudescence of typhoid fever. The Academy of Medicine in its turn has sent a resolution to the Prefect of the Seine setting forth that the necessary measures ought to be undertaken without delay for insuring a complete separation between spring water and filtered river water, and moreover that the water of the Seine should be supplied at such a pressure that it could be used by the inhabitants of Paris for such purposes as lifts, washing, and watering. Owing to the low pressure at which the river water is supplied spring water has to be used for these purposes. The Prefect's reply is simply amazing. According to him spring water and filtered river water have been for a long time delivered by quite separate services. He refuses to use the filtered Seine water as the Academy demands for industrial purposes and this for a most remarkable reason—namely, because the filtration necessitates a series of delicate and difficult operations which would, if the water were used for industrial purposes, simply result in a loss. He might just as well argue that the "water lords," having already made a grave mistake in adopting this gross method of filtration in face of the protests of the Academy and the Council of Hygiene, suggest that the water should be used so that the expense to which they have been put for purification should not be wasted. The defence of the water from an alimentary point of view is undertaken as follows. The filtered water, says the Prefect, has been certified as being perfectly wholesome in numerous analyses made by the chemists of the official laboratories, and contains, as a matter of fact, fewer bacteria and less organic matter than does spring water. The whole of suburban Paris and many large cities, notably London and Berlin, are supplied with filtered river water for drinking and the public health does not thereby suffer. In fact, adds the Prefect, the mortality in cities so supplied is no higher than in cities supplied with spring water. As for supplying river water at high pressure the Prefect ignores this question entirely on the ground that it is concerned with technical and administrative details with which the Academy of Medicine has nothing to do. The Academy naturally protests vehemently against this high-handed way of treating its resolutions, and M Henriot has again lifted up his voice against the assumption of the engineers that Seine water is fit for drinking. In the present state of bacteriology a bacteriological examination is not enough to affirm the purity of a water, and nothing is more dangerous than to rely on laboratory researches, however numerous they may be. Typhoid fever possesses an organism which reacts much more delicately to it than any organism known in the laboratory—namely, the human body—and the people of Paris would have been spared the sad experience of the last two years if the prefectoral administration had seen fit to forbid absolutely the admixture of river water and spring water. M. Henriot concluded by deploring the pig-headedness of the engineers, by sticking to their system, in compromising the interests of public health and rendering of no effect the enormous sacrifices which the city of Paris has made to keep itself free from typhoid fever. M. Brouardel agreed with him. The debate concluded by the appointment of a committee charged to lay before the Prefect of the Seine the resolutions of the Academy in a yet more urgent form.

Penetrating Gunshot Wounds of the Cranium.

The Society of Surgery has again had this subject under consideration. Opinions were much divided. With reference to the use of the x rays for diagnostic purposes M Tuffier considered that these rays should not be used directly after the infliction of the injury. M. Reynier, on the other hand, thought that they could be used with safety without delay, and that by the use of M. Contremoulin's arrangement the position of projectiles could be easily located. As for treatment there were two main currents of opinion—one in the direction of simply enlarging the wound of entry, removing fragments and making the trail of the bullet aseptic, but not searching for it unless there were grave cerebral symptoms; the other view looked upon the bullet itself as a septic body and that it should be removed, if possible, as long as it lay within easy reach.

Dec. 4th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Question of Priority in the Mosquito-Malaria Theory.

THE *Policlinico* of Nov. 1st, in publishing a letter from Major R. Ross, I.M.S., on this subject, says by way of preface that "scientific discoveries do not usually gush forth ready-made from the mind of genius, but are the fruits of the activity of many energies which unite the elements more or less directly serviceable to attain the desired end. Whether the greatest credit is due to him who initiates the work, or to him who prosecutes it most successfully, or to him who synthesises and presents it in the best form, is always a subject of discussion in regard to everything new. No wonder, then, that such a dispute should arise around a doctrine so important both in its scientific bearings and its immediate practical application as that which aims directly at the reclamation from malaria and utilisation of immense tracts of territory hitherto waste. The *Policlinico* is glad to open its columns to such questions and to men of such worth. No preconceived scientific opinions, neither personal considerations, nor a blind patriotism, nor servility towards foreigners will hinder it from keeping the controversy to the region of facts." It is indeed no more than fair that the Italian scientific world, which has hitherto heard only one side of this question, should now get the opportunity of hearing the other and so be in a better position to apportion merit to those who deserve it. Major Ross has many complaints against Professor Grassi, who, he says, in his recent work, "Studi di un Zoologo sulla Malaria," seeks to discredit the former's researches on malaria in order to gain unmerited credit for himself. Major Ross thinks that many persons in Italy who are not acquainted with the true facts may be misled by these plausible statements of Professor Grassi which he characterises as a tissue of disingenuous fallacies and a contortion of the facts with omissions of dates and attacks upon his (Major Ross's) veracity. He then recalls the different steps in his work dating from May, 1895, his first unsuccessful attempts to cultivate the parasite in culex, followed in August and September, 1897, by his success with semilunar-bodies in anopheles; the interruption of his experiments at this point and their resumption a year later when he successfully demonstrated the extra-corporeal life-cycle of hæmosporidia of birds in mosquitoes and infected healthy birds experimentally by means of the bites of these insects; and finally, after a second interruption of his labours, the publication of his results by Manson and himself on June 18th, 1898—a date a month in advance of the time at which Professor Grassi, by his own account, commenced his work on the relation between malaria and mosquitoes, and fully four months before he and his colleagues could show any result. And this success they only obtained by following Major Ross's methods and profiting by his observations, previously to which Professor Grassi and his friends had been lost in a maze of error. Even Professor Grassi's pretence that Major Ross had not indicated the anopheles as the definitive host of the parasite falls to the ground, for he himself had evidently recognised it from Major Ross's description of his "dapple-winged mosquito," as appears from several circumstances, but more especially from a letter dated Nov. 25th, 1898, written to Major Ross by Dr. Charles of Rome, in which the latter states that he had found Professor Grassi in his laboratory intently reading Major Ross's letter to the

British Medical Journal of Dec. 18th, 1897, and that Grassi appeared to be convinced that the description of the mosquito therein given referred to the anopheles claviger. Indeed, a few hours afterwards, according to Dr. Charles' Professor Grassi found some of the zygotes derived from semilunar bodies in the anopheles claviger. It is absurd, then, Major Ross contends, for Professor Grassi to arrogate to himself the merit of the original discovery simply because he had confirmed it. In conclusion, Major Ross appeals to the recognition accorded to him in the matter of priority by such authorities as Laveran and Blanchard in France, by Koch in Germany, by Manson and Nutall in England, by Celli in Italy, and by the *Indian Medical Gazette* in India.

Medullary Anæsthesia.

At the second sitting of the Italian Surgical Society a discussion was opened by Dr Fummi on Bier's method of cocainising the spinal cord, by a reference to 40 cases operated on under Professor Montenovesi's direction at the Santo Spirito Hospital. The point he wished to dwell upon was the attempts to extend the anæsthesia to the higher parts of the trunk and to the upper extremities. By experiments on dogs and on the cadaver it was sought to determine why a liquid of the specific gravity of 1014 (which is nearly that of the ordinary 1 per cent. solution of cocaine) cannot ascend to the upper portion of the spinal cord even when the body is placed in a strongly inclined attitude head downwards. It appeared that the reason lies in the difference of specific gravity between the cocaine solution and the cerebro-spinal fluid. By using a solution of cocaine in glycerine the alkaloid was found to reach the highest point of the cerebro-spinal canal, being detected by the very delicate method of Grefel even in the cerebral ventricles. This was still better seen with solutions of methyl blue in glycerine. The first application of this glycerine solution of cocaine to the human subject was followed by distinct anæsthesia of the thorax, neck, and upper limbs. Immediately after the injection the patient was placed in the inclined position and he soon began to experience a sensation of formication and heat advancing from the abdomen to the thorax and thence to the neck and arms. Further observations will be reported later; meanwhile, the trials are being continued in Professor Montenovesi's wards. Bastianelli and Fioretti related their experience of this method of anæsthesia, the former from a total of 35 cases, the latter from 25 cases. Bastianelli gave as cases suitable for its employment operations on the lower extremities, laparotomies, and uncomplicated hernias; and as contra-indications, the need for full muscular relaxation, nervousness, the age of infancy, extensive abdominal operations (on account of the sensitiveness retained by the peritoneum), states of collapse, &c. On the whole, the discussion showed that the method is taking up a recognised place here, and that the variety of surgical procedures in which it may be employed is rapidly increasing.

Dec. 1st.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Politics and the Profession.

A GOOD many members of the medical profession have been returned to Parliament in the recent general elections held on Nov. 7th, and some notable ones have fallen in the fight Amongst these is the venerable and virile leader of the Conservative party, Sir Charles Tupper, who has since announced his retirement from public life. At the age of 34 years, Sir Charles, then Dr., Tupper forsook a lucrative and growing practice in his native province of Nova Scotia for politics, and rapidly attained a commanding position in the councils of his country. At Confederation in 1867 he took a prominent part in the formation of the Canadian Medical Association and was unanimously elected its first president, which office he successfully filled for the two succeeding years. At the age of 80 years he has exhibited in the recent campaign a wonderful vitality, and his loss will be a keen one to the Conservative party as well as to the country. In many public works, this Canadian practitioner has left his lasting mark. The profession throughout the Dominion is congratulating itself that Dr. T. G. Roddick, the promoter of the Dominion Medical Council Bill, has been able to retain his seat in Parliament by a narrow majority. Speaking recently at a banquet tendered in his honour Lord Strathcona paid a high and deserving tribute to Dr. Roddick for the good he was seeking to accomplish in bringing about this Dominion registration, stating that the public were beginning to take an interest in the measure, as it would be another means of knitting the provinces together in closer bonds of union. The medical profession can now look forward confidently to important progress being made in this direction at the next meeting of the Dominion Parliament.

Vital Statistics in Ontario.

By the returns last year from the Registrar-General's office for the province of Ontario the birth rate was shown to have decreased considerably as compared with the previous year. At that time it was thought that the apparent decrease might be due to defective returns, so an extra effort was put forward to remedy this laxity on the part of parents, but the returns for 1899 exhibit a still further decrease. The births in Ontario last year (1899) numbered 44,705 as compared with 46,599 in 1898, a decrease of 1894. On the other hand, the marriages exceeded those of the previous year by 1139, the figures being 16,514 as compared with 15,375 in 1898. The deaths for 1899 number 28,607, as against 26,370 in the preceding 12 months, or an increase for the former period of 2237. The birth-rate was 19·4 per 1000 in 1899, as compared with 20·4 in 1898; the death-rate was 12·4 per 1000, as against 11·5; and the marriage-rate was 7·1 per 1000, compared with 6·70.

Toronto General Hospital Training School for Nurses.

The annual graduating exercises of this institution were held on Nov. 9th, when 13 graduates received their diplomas. This institution was established in 1881 with 16 pupil nurses, and since that time 317 have graduated, 223 of whom are still actively engaged in the practice of their profession, many of these being employed in the neighbouring Republic, as Canadian nurses are much sought after by the hospitals of the United States. A new and handsome residence has just been completed for the nurses, of whom there are now eight probationers and 59 pupil nurses, at a cost of £4000 ($20,000) which is the finest of its kind in the Dominion. The lady superintendent stated that during the past year she had received 650 applications, of which only 25 were granted. The course of training in the school lasts for three years and during that time a pupil nurse receives $4, $5, and $6 per month respectively, board and washing being also supplied.

Home for Incurable Children, Toronto.

This deserving institution was started in September, 1899, when Senator Cox presented the lady philanthropists who were undertaking the work with a fine house in a residential quarter of the city for a home. In December last this was formally opened with the reception of two little patients. At the first annual meeting held a few weeks ago the secretary's report showed that during the past year 13 children had been admitted, and of this number 10 now remain, two having died and one having been transferred to the Orillia Asylum for Idiots.

The Consumption Sanitarium for Toronto.

Toronto is making an earnest effort to establish a sanitarium for her consumptives. The medical health officer, Dr. Sheard, has just reported on the subject to the effect that as soon as the Anti-Consumptive League of Ontario or the National Sanitarium Association, which controls the Muskoka Cottage Sanitarium, provides a fund of $50,000, the city should submit a by-law to the ratepayers for authority to contribute a like sum. Dr. Sheard further stipulates for the city that the institution must be located within 30 miles of the city and that the grounds surrounding the same must not be less than 50 acres in extent. Mr. Gage, the treasurer of the national organisation, who was instrumental in founding the Muskoka Sanitarium, has now come forward with an offer to construct and to equip the hospital at the expense of the National Sanitarium Association without any civic assistance. The offer of Mr. Gage is for a hospital of 50 beds, and it is altogether likely, now that conditions are in such good shape, that the city of Toronto will soon have its consumptives properly looked after.

The Victorian Order of Nurses

A meeting of the board of management of the Victorian Order of Nurses was recently held in Montreal and amongst others present were Lord Strathcona, who has given considerable monetary assistance to the Order, and Dr. Craik, Dr.

Stewart, and Dr. Adami, who have ever taken a deep interest in the welfare of this charity. The report of the secretary showed that during the past summer, although the staff for nursing was small, in the city of Montreal over 2000 visits had been made. Professor Bovie read the report of the work throughout the Dominion, which showed that 25 branches had been established in Canada with a staff of 30 nurses, who had attended to over 700 cases during the past year.

Medical Banquets.

Bishop's College, Montreal, and Trinity Medical College, Toronto, have recently held their annual banquets. At Bishop's College Dr. Wolfred Nelson of New York, who was the first student to register on the books of the College, was present and replied to the toast of "Alma Mater." At the Trinity banquet the venerable Dean, Dr. W. B. Geikie, replied to the toast of "Trinity Medical College," speaking of the good work which Trinity had performed in the medical world. 1300 students had left her doors during the 30 years of her existence, some of whom were located in all parts of the globe and many of whom were now occupying positions of prominence in the United States and in Canada. Of her present faculty all but three of the 27 were her graduates. The Dean also exhibited a copy of the first Register—a slip of paper which looked somewhat the worse for wear—and the first set of examination papers, as well as the first annual announcement of the college, which, at that time a mere card, has now attained to the respectable proportions of a handsome calendar of more than a hundred pages. Referring to the war in South Africa he said that Trinity had done nobly for Canada in that respect, as the following list attests: Dr George Stirling Ryerson, Canadian Red Cross Commissioner; Dr. Barrie, representative of the Young Men's Christian Association; Dr. Leonard Vaux (son of the President of the Provincial Board of Health of Ontario); Dr. Lea, Dr. Worthington, Dr. Brennan (who had been Mr. Kruger's physician until hostilities broke out and who immediately joined the British army), Dr. Farrell, and Dr. Irving, and Mr. Archie Anderson, Mr. W. J. Macdonald, and Mr. W. T. Robertson (students), as well as Lieutenant Temple, son of Dr. Temple, professor of obstetrics and gynæcology in Trinity Medical College. In addition there was Dr. H. Roberts of Sheffield, England, a graduate of 1896. Trinity, the Dean thought, could well afford to be proud of her contribution to the war.

National Sanitarium Association.

The annual meeting of this association was held in Toronto on Nov. 3rd, and in the absence of the President, Lord Strathcona, Sir William R. Meredith, Chief Justice of Ontario and Vice-President of the association, presided. The third annual report was presented, which showed the work done at the Muskoka Cottage Sanitarium for the past year. It is now three years since this institution was opened and the yearly results have been of the most gratifying character. During the three years 371 patients have been received, 47 of whom are still under treatment. The number discharged, apparently cured, has been 57; with marked improvement, 78. The average stay of each patient has increased each year, and this year has increased to 129 days. At the beginning of the past hospital year, on Oct. 1st, 1899, there were 48 patients remaining, and during the year 141 more have been admitted, making a total on the books of 189.

Toronto Clinical Society.

At the monthly meeting of this society, held on Nov. 14th, Dr. Graham Chambers showed an interesting case of Alopecia Universalis in a young woman, aged 20 years, exhibiting total absence of any hairs whatever, except two on the anterior portion of the scalp. The same condition had occurred when she was five years of age, but she recovered at that time. Two years ago she had suffered from interstitial keratitis.—Dr. George A. Peters exhibited interesting specimens from a Hydatid Cyst of the Pancreas which he had removed from a young man from the Argentine Republic. A tumour could be felt below the left ribs midway between the nipple and sternal lines. It was diagnosed as being connected with the pancreas, as resonance was easily determined between the tumour and other organs. such as the left lobe of the liver, the kidney, and the spleen. Dr. Peters said that there was no doubt of its being connected with the tail of the pancreas. The patient had had indefinite pains in the region of the stomach for two or three years with subsequent removal of the appendix vermiformis. Hooklets obtained from the fluid were shown under the microscope. A few weeks before the operation was performed the cyst had been tapped and 20 ounces of fluid had been extracted of a specific gravity of 1013. The operation was performed from behind through an incision three inches in length along the erector spinæ. A search of the literature so far by Dr. Peters reveals no other reported case of hydatid cyst of the pancreas.

Toronto, Nov. 20th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Work of the Life Savers.

THE general superintendent of the Life Saving Service in the United States reports that at the close of the fiscal year the establishment embraced 269 stations, 194 being on the Atlantic, 58 on the lakes, 16 on the Pacific, and one at the Falls of the Ohio. The number of disasters to documented vessels within the field of operations of the service during the year was 364. There were on board these vessels 2650 persons, of whom 2602 were saved and 48 were lost. 673 persons shipwrecked received succour at the stations, to whom 1447 days' relief in the aggregate were afforded. In addition to the foregoing there were during the year 329 casualties to small craft, such as small yachts, sailboats, rowboats, &c., on board of which were 781 persons, of whom five were lost. Besides the number of persons saved from vessels of all kinds there were 595 others rescued, who had fallen from wharves, piers, and other positions of extreme peril, many of whom would have perished without the aid of life-saving crews. 514 of these were rescued from dwelling-houses, outbuildings, and other elevated places, submerged wholly or in part by the terrible flood of the Brazos river in Texas, July 6th to 12th, 1899. The investigation made into the details of every shipwreck involving loss of life and into the conduct of the life-saving crews shows that no life was lost through lack of prompt and faithful efforts on the part of life-saving men. More than half of those who perished were lost by reason of their unwise attempts to reach the shore in their own boats instead of remaining on the wrecks. The general superintendent calls attention to the justice and necessity of an increase in the compensation of district superintendents, who, he believes, are the most poorly paid servants of the Government, considering the nature and extent of their duties and their heavy financial responsibilities, and he makes a strong plea in their behalf.

Gunshot Wounds in 1898–1899.

The Surgeon-General of the United States Army in his annual report reviews the results of gunshot wounds during the war with Spain. Of the 4919 men injured by gunshot during the years 1896 and 1899, 586 were killed and 4333 were wounded and received into the field and other hospitals. The killed constituted 11·9 per cent. of those struck and the wounded 88·1 per cent. In other words, one man was killed for every 7·4 wounded. The Mauser bullet must therefore be regarded as less deadly than the larger missile used during the Civil War. In percentages the casualties were: killed, 17·97; wounded, 83 03; or one man killed to every 4·56 wounded. The relative proportion of killed was therefore considerably larger during the Civil War than during our recent experiences. It is to be noted also that many of the wounds of the past two years were made by missiles of larger calibre. Of those reported in 1899, 471 were especially stated as having been caused by the Remington bullet of calibre 0·45. It is safe to say that had the whole number of wounds received been inflicted by the smaller Mauser or Krag-Jorgensen bullet the percentage of immediately fatal wounds would have been materially lessened. The character of the injuries inflicted by the modern bullet is manifested also when we exclude the killed and regard only those wounds which came under the care of the surgeons. Of these during the two years there were 4333, and 259 of the patients, or 6 per cent. of the whole number, died. The corresponding percentage from the records of the Civil War was 14·3. The marked reduction of the ratio of killed to wounded may be placed to the credit of the small-calibre bullet, but due credit must be given to the improved surgical methods of the present day. Wounds of any region of the body may be taken in comparison and the result will always be found to show a decided lessening in the percentage of cases ending fatally among those of the past two years as compared with those of the Civil War. Take, for instance, gunshot wounds of the femur. Of 6576 fractures of the femur during that war, 2923 cases were treated by primary amputation, 186 by resection, and the remaining 3467 by conservative or expectant measures. The limb was promptly amputated in 44 4 per cent. of the gunshot fractures. On the other hand, during the past two years 82 cases of gunshot fracture of the femur were reported, six of which were treated by primary amputation and two by resection, the remaining 74 cases being treated by conservative methods, not because the conditions were not favourable for the performance of primary operations, but because of the conviction that under present methods of treatment the limb could be preserved without adding materially to the danger of life. The limb was lost through surgical intervention in only 7·3 per cent. of the cases. Not only limbs but lives were saved by the surgical practice of the past two years. The mortality varied from 4 3 per cent. of cases in which the lower third was fractured to 15·6 per cent. of the cases in which the upper third was the site of the injury, whereas the corresponding percentages of fatal cases during the Civil War were respectively 42·8 and 49 7. The whole of the lessened mortality in these serious fractures may be credited to the protection given to the wound by the first-aid dressing and to the care exercised in the subsequent aseptic treatment of the fractured limb. In penetrating wounds of the thorax the rate of mortality fell from 62 6 per cent. during the Civil War to 27 8 per cent. during the years 1898 and 1899. During the Civil War there were 3475 penetrating wounds of the abdomen in which the ultimate results were determined; 3031 of these, or 87 2 per cent. of the total, proved fatal. During the years 1898 and 1899 116 cases, 81 of which were fatal, were recorded, the fatal cases constituting 70 per cent. of the total. Of 10 cases in which laparotomy was performed 9 were fatal. The alteration in the percentages of mortality in fractures of the cranium is less marked than in wounds of other parts of the body Of 4243 cases of cranial fracture during the Civil War 2514, or 59·2 per cent., were fatal. In 1898 and 1899 68 cases were recorded with 37 deaths, the latter forming 54 4 per cent. of the whole number.

The Insane of Cuba.

The population of Cuba is 1 500,000, and the number of insane in custody is 424, making the proportion of insane to population three to every 10,000 inhabitants The Secretary of State is the chief supervising officer, but there is a board of management consisting of six members. A medical director is the chief executive officer of the asylum. He states that the equipment is in every way defective and will have to be changed. Everything accomplished in the United States and Europe by modern science in the hospitals and institutions for the insane is quite unknown in Cuba. Every rule of hygiene is defective or completely lacking and this constitutes a source of danger which should be overcome at once, and in addition to this most of the buildings are on the point of tumbling down. There seems to have been no effort made thus far to classify the insane and no separation has been possible between the quiet and violent, and the several social classes are all mixed together. But an effort is now being made to better the existing conditions and the United States is asked for an appropriation for the improvement of the hospital.

The Cost of Crime.

It appears from the studies of the Secretary of the Prison Association that in New York City during 1899 items wholly due to crime cost the Public Treasury nearly $13,000 000 and items partly due to crime $8 000,000, a rate of about $6 per capita of the population. The per capita cost in San Francisco was about $5; in other cities it was from $3 to $3 50. In rural districts a conservative estimate would be about $1 per capita. The total cost of crime in the United States is estimated at $150,000,000 for cities and counties and $50 000,000 for States and the nation. These figures, uncertain as they may be, prove that crime is by far the largest factor with which political economy has to deal The only other item of expense which comes near it is the maintenance of public schools, which for the same year aggregated about $139,000 000 But the enormous expenditure mentioned above is only for the prevention of crime; no possible statistics can be compiled to give an estimate of the cost of property stolen and the suffering caused by crime. $1600 per year is a conservative estimate of the amount of money stolen by the average habitual criminal. There are at present 100,000 prisoners in confinement, of whom from 40 to 50 per cent. are habituals, but this does not represent the cost of drunkenness or the cost of crime which is never detected. The total of all items of expense chargeable to crime amounts to $600,000,000 per year, which exceeds the value of the wheat or cotton crop.

A New Emergency Ration.

Official tests are being made of the value of three different emergency rations; these tests are made by a board of army officers appointed for the purpose. Two of these rations are proposed by manufacturers and the board has offered one of its own. The latter consists of three cakes of meat and cereal compound and two cakes of sweetened chocolate. The total weight of these concomitants is 16 ounces, besides three-fourths of an ounce of salt and one gramme of red pepper; of the other ingredients the chocolate weighs four ounces and the meat and cereal in combination respectively four and eight ounces. A flask-shaped can contains the ration and this is hermetically sealed; its edges are rounded, and it is six and a quarter inches long. A key accompanies the can by which it may be opened. The plan is that this ration shall be part of the regular outfit of the soldier in field service, and the important point to be settled is whether it contains sufficient quality and quantity and will not sicken when it is the sole dependence A trial has been made in a long march and at the end of this test it was found that no soldier had lost flesh. The march was across the Indian reservations of several of the western tribes, and though it seemed rather hard for the men to get accustomed to it at first they grew to enjoy the ration.

Nov. 18th.

Obituary.

THOMAS FREDERICK HALE, M.R.C.S. ENG., L.S.A.

MR. THOMAS HALE of Barrow Hill, Chesterfield, Derbyshire, died at his residence there on Nov. 4th, in his seventy-fourth year, after a long illness. On Feb. 17th, 1898, he was seized with symptoms of cerebral hæmorrhage followed by right hemiplegia. His speech was slightly impaired, but his faculties were as clear as usual. During the whole of his illness he never left his bed. Mr. Hale was the son of the late Mr. Thomas Hampton Hale, a surgeon at Petworth, Sussex. He received his medical education at Guy's Hospital and took the diplomas of M R.C S. Eng. and L S.A in 1853. He at first practised in South Wales, but in 1859, through the late Mr. Richard Barrow, at that time owner of what is now the Staveley Coal and Iron Company, he moved to Barrow Hill and became surgeon to that company, an appointment which he held until his death. He was also surgeon to the Midland Railway Company and to various societies. Below the medium height, somewhat portly, with a strikingly handsome face, a pleasing smile, an urbane manner, hospitable and courteous, he was much sought after socially. He was exceedingly fond of music and possessed a rich clear tenor voice. Warm-hearted and generous, a loving husband and father, and a kind friend to the poor, he has left in the hearts of those who knew him a memory that time will not easily efface Mr. Hale is survived by his widow, four sons, and four daughters.

THE LATE PROFESSOR A W. HUGHES.—At a largely attended meeting of members of the medical profession held in Cardiff on Nov. 24th it was decided to raise a fund for the endowment of an anatomical museum in the medical school of University College, Cardiff, and also that a medal should be awarded annually in the medical school as a memorial to the late Professor A. W. Hughes. About £360 were promised for the purpose. At a meeting of townspeople held in Cardiff on Nov. 30th it was decided to support the fund being raised to perpetuate the memory of the late Professor Hughes It was stated that a sum of £1500 would be required for the purpose and several donations were promised, including £50 from Lord Tredegar.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

The Council resumed its sittings on Thursday, Nov. 29th.

The most important business (in some ways) of the Session occurred on that day, when Dr. Henry Ward Irvine, consulting physician to the Birmingham Consultative Medical and Surgical Institution, was summoned, at the instance of the medical staffs of the General Hospital and Queen's Hospital in Birmingham, to answer a charge of professional misconduct in allowing his name to appear in sundry advertisements. Dr. A. G. Bateman, for the Medical Defence Union, formulated the charge against Dr. Irvine. The charge was proved to the satisfaction of the Council, who gave Dr. Irvine until the session of next May to reconsider his position.

The Council, on Friday, Nov. 30th, received from the Pharmacopœia Committee the completed draft of the Indian and Colonial Addendum to the British Pharmacopœia. For this work the Pharmacopœia Committee is largely indebted to the late Professor D. J. Leech, Dr. Tirard, Mr. W. Kirkby, Mr. E. Morrell Holmes, and especially to Professor John Attfield, who has given 14 years of loving servitude to the completion of the British Pharmacopœia. The whole profession will endorse the special vote of thanks awarded by the Council to Professor Attfield. The text of the Addendum which has been sent to us will be reviewed next week.

On Tuesday, Dec. 4th, there was resumed the debate, adjourned from May 31st, 1900, on the position of the Royal College of Physicians of London and the Royal College of Surgeons of England in the face of the report of the Education Committee of the General Medical Council upon preliminary scientific education. The contest between the Colleges will not, we hope, go much further. The Council has shown an unmistakeable intention to stand by its position and, in spite of the able pleas of Sir Dyce Duckworth and Mr. Bryant on behalf of their respective corporations, we think the Council is right to expect deference. But what will the Council do if it does not get deference? If it proceeds to law who will pay the bill? Every possible chance of peaceful solution of the difficulty must be tried.

On Wednesday, Dec. 5th, the Council was sitting *in camerâ* for some time. The public proceedings commenced with a debate upon the examination of the Apothecaries' Hall of Ireland. Mr. Tichborne pleaded for certain omissions in the report on the inspection of the October examinations, but Sir Dyce Duckworth, speaking as chairman of the Examination Committee, argued, and carried the Council with him, that the report should be printed in its entirety. In the course of the debate Dr. McVail raised an interesting point of law. Mr. Tichborne was claiming for the Society of Apothecaries of Ireland certain privileges under an ancient Act of Parliament when Dr. McVail asked, on a point of order, whether the Council had anything whatever to do with statutes enacted previously to 1858. Mr. Muir Mackenzie will advise the Council before next session upon this matter, which may at any moment become one of considerable importance.

On Wednesday, also, there were presented the report of the proceedings of the whole Council in committee on the regulations for diplomas in Public Health; reports by the Education Committee on the steps taken for raising the standard of preliminary education and on certain applications from America for the recognition of an Arts course; a report by the Medical Aid Association Committee; and a report by the Special Finance Committee. The gist of these reports will be published in The Lancet next week.

A quiet and business-like session was brought to a close on Wednesday evening with a cordial vote of thanks to the President.

Thursday, Nov. 29th.

The Council met to-day with a full attendance of its members, Sir **William Turner**, the President, being in the chair.

Birmingham Consultative Medical and Surgical Institution: The Case of Dr. Henry Ward Irvine.

The entire sitting was occupied with the consideration of the case of Dr. Henry Ward Irvine, registered as M.B., Bac. Surg. 1895, M.D. 1897, Univ. Dubl. Dr. Irvine had been summoned to answer the following charge as formulated by the Council's solicitor, namely:—

> That he accepted the office of consulting physician to the Consultative Medical and Surgical Institution, Birmingham, at a salary, and approved or acquiesced in the extensive advertisements issued by that institution by posters exhibited in the various manufactories, trading establishments, and mercantile offices of the city, by advertisements in the daily press, and by lithographed letters and printed pamphlets, widely circulated, setting forth conspicuously his name and medical qualifications, and referring to his special ability as a general consulting practitioner, and soliciting and inviting the public to consult him at a reduced fee. The complainant is Robert Saundby, of 140B, Great Charles-street, Birmingham, registered as Lic R Coll. Phys. Edin, 1874, M B, Mast Surg. 1874, Univ. Edin., Mem. R. Coll Surg. Eng. 1874 The Medical Defence Union have intimated that they are instructed to take up and conduct the case on behalf of the complainant.

Dr. **Irvine** attended with Mr. **Freeman**, Q.C., to conduct his case and Dr. Bateman represented the Medical Defence Union.

Mr. **Winterbotham**, the new solicitor to the Council, read the notice which had been given to Dr. Irvine.

Dr. **Bateman** said that the case was a most important one, as upon the decision would depend the question whether systematic advertising and touting for patients in the case of so-called charitable institutions would or would not be authorised by the highest authority of the medical profession. On the one side they had Dr. Irvine and certain leading business men in Birmingham and on the other Dr. Saundby representing the staffs of the Queen's and General Hospitals and the medical profession generally in the city of Birmingham. In the medical profession there was objection to advertising as there was in the legal profession and on the Stock Exchange, and in May, 1899, the General Medical Council passed unanimously this resolution, viz.:—

> That the Council strongly disapproves of medical practitioners associating themselves with medical aid associations which systematically practise canvassing and advertising for the purpose of procuring patients.

He admitted that this resolution was directed against a particular class of medical aid associations, but he would submit that the Consultative Medical and Surgical Institution of Birmingham came under the description of a medical aid association, although the fees charged were higher than those of the ordinary grade of medical aid associations. In 1898 Mr. Arthur Chamberlain intimated to the Hospital Saturday Fund Committee of Birmingham that he had devised a scheme for the establishment of this new institution and he invited the opinion of the committee upon it. His proposals were that an institution should be established with a small governing body, that suitable rooms should be taken in the centre of the city, that a properly qualified consulting physician and a properly qualified consulting surgeon should be employed with a salary each commencing at £500 a year, and that there should be a uniform fee of half a guinea, the fee going to the institution. This scheme was adopted. Dr. Irvine had been employed as consulting physician and the institution had been set in operation. The subject was discussed at a meeting of consultants in Birmingham and a conference took place between representatives of the medical profession and the Lord Mayor and others. The consultants offered to accept a fee of half a guinea in all cases where the patient was unable to pay the usual fee. In this way they were prepared to meet the alleged want in the city, but this offer was not accepted and the negotiations came to nothing. In the month of November advertisements were published in the lay papers which he frankly admitted did not contain the name of Dr. Irvine. A pamphlet was circulated in the manufactories, trading establishments, and mercantile offices in the city. Of this pamphlet and other advertisements he presented copies to the Council. He also presented a copy of a card on which the following was printed: "The Consultative Medical and Surgical Institution, Birmingham. Objects: To lessen the strain upon hospital charity by providing on terms within and under conditions suitable to their pecuniary means and position medical and surgical aid to those who would otherwise seek it gratuitously or be unduly taxed by paying the usual consultative fees." He further presented two depositions to the effect that this card was exhibited in the dining-room and bar of a restaurant and in a hairdresser's shop. It would probably be argued that this institution was carried on on the same lines as a hospital, but such was far from being the case. There was no hospital consulting physician or surgeon who received a salary or for whose services a fee was charged. This institution was in course of being registered under the Companies' Act as a company carried on not for profit. It was regarded by its originators not as a charity but as a place where a man could claim medical aid as of right and it was conducted on purely business principles. Had Dr. Irvine, apart from this institution, allowed his name, address, qualifications, hours of consultation, and fees to be advertised by these bills, posters, pamphlets, and newspaper paragraphs there could have been no question about his conduct being "infamous conduct in a professional respect," and the fact that this advertising was done under the ægis of this institution managed by laymen did not, in his opinion, alter the gravity of the professional offence and could not be held to excuse or to palliate such conduct.

Mr. FREEMAN, opening the case for Dr. Irvine, took exception to the two depositions handed in by Dr. Bateman on the ground that his client had received no notice of them and therefore had had no opportunity of bringing rebutting evidence.

Mr. MUIR MACKENZIE, legal adviser of the Council, said there was practically nothing new in them.

Mr. FREEMAN pointed out that the depositions said that the cards were seen in particular premises, indicating that there had been systematic advertising, which he entirely denied. Unless the documents were withdrawn he would apply for an adjournment of the case.

After conferring in private for a time the Council decided not to receive the depositions.

Mr. FREEMAN, continuing his speech, said that this institution had been set on foot by public-spirited citizens with no view whatever to their own profit. It was a philanthropic institution between which and a medical aid association there was the widest possible distinction. It was a development of the work of the Hospital Saturday Fund just as the convalescent homes at Llandudno were a development of that work. The feeling had grown up that there was a gap in Birmingham between the hospitals and the consulting physicians and this institution was designed to fill the gap. There had been many people who went to the hospitals and obtained free medical aid who ought not to have done so, being able to pay. That was the state of things on the one hand, while on the other the fees charged by the ordinary consultants were too high for many of these people. The founder of the institution, Mr. Arthur Chamberlain, would be called and would say that was purely and absolutely a philanthropic institution and that there was no thought of its putting money into the pockets of anybody connected with it. The funds for it, indeed, had had to be provided by private charity. Unfortunately, the committee had not been able to carry with them the bulk of the medical profession. It might be that the institution was considered an invasion of the domain of the medical profession. The thing certainly was a novelty and they knew that there were professions which did not always like novelties. But the charge which the Council had to consider was a charge not against the institution but against Dr. Irvine. When the scheme had been matured the committee advertised for a consulting physician. They received applications from medical men in all parts of the United Kingdom and after due consideration Dr. Irvine was engaged at a salary of £500 a year. As for the so-called advertising, all that was done was to announce to the customers of the Hospital Saturday Fund, the working men who subscribed to that fund, that the institution was ready to commence operations. The committee sent out these cards and pamphlets to the various firms by whom the workmen were employed who had previously subscribed to the fund. This was not advertising, and indeed it was only what was done when an ordinary hospital was opened: people received notice that the boon was at their command. It was quite conceivable that these documents found their way into places where it was not intended they should be, but no blame for that could attach either to Dr. Irvine or the committee. If what had been done here were regarded as advertising the Council would be opening a very wide door indeed. Every hydropathic in the country would be an offender, for every hydropathic announced that it had a resident physician and gave his name, and many hospitals advertised the names of their staff So far from this institution being a source of profit he might say that for every half-guinea earned 30*s.* had been expended.

Mr. WILLIAM COOK, alderman of the city of Birmingham and chairman of the committee of the Hospital Saturday Fund, was then examined by Mr. Freeman and in the course of his evidence he gave an account of the work of the fund. Mr. Chamberlain's scheme, he said, was unanimously adopted by the large meeting to which it was submitted, and when the scheme had been worked out, notices with regard to it were sent out to the subscribers to the fund in the usual way. Owners of factories and workshops were, as usual, requested to post the notices in their premises. Dr. Irvine was not consulted as to the issue of the notices. There was no thought of any one being pecuniarily benefited by the institution and up to the present time the committee had lost money by it.

In cross-examinaton by Dr. BATEMAN witness said that he did not, and could not, regard the notices as advertisements, they were simply announcements. No doubt the more patients they had the less money would require to be subscribed. If Dr. Irvine was found to be worth more than £500 a year and they had the funds to pay it he supposed the committee would like to see him properly paid. His hope was that in time the institution would become self-supporting.

By Sir WILLIAM THOMSON: As the institution developed, and he believed it would develop, they might appoint not only a consulting surgeon but also another consulting physician.

By Sir JOHN BATTY TUKE: Their idea was that when they could afford it they would have other specialists at the institution.

By Mr. HORSLEY: Part of the money for the institution was being obtained from the Hospital Saturday Fund. If the institution became self-supporting it would still be part of a philanthropic institution—namely, the Hospital Saturday Fund.

Mr. W. S. ASTON, honorary secretary of the Hospital Saturday Fund and of the institution, was next examined. He characterised the notices sent out as announcements pure and simple

By the PRESIDENT: Persons of the class contemplated in the scheme of the institution were admitted to its benefits though they might not be subscribers to the Hospital Saturday Fund, but these benefits were designed primarily for subscribers.

Cross examined by Dr. BATEMAN witness said that it was quite well known in Birmingham what class of people were intended to make use of the institution. The practice was for Dr. Irvine to take the individual fees and account for them collectively to him.

By Sir CHRISTOPHER NIXON: The committee had seen the register kept by Dr. Irvine and they were convinced that there had been no abuse of the institution.

By Dr. WINDLE: Over 2000 cards were sent out to the firms whose workpeople subscribed to the Hospital Saturday Fund. There were hairdressers and restaurant keepers who subscribed, and they, like the rest, would receive cards. Though there had been no withdrawing of the notices they had not felt that there was any need to repeat the issue of them; the notices, indeed, had served their purpose.

Mr. ARTHUR CHAMBERLAIN, Justice of the Peace, Birmingham, was next examined. In answer to Mr. FREEMAN he said that the question had been asked, Was this Consultative Medical and Surgical Institution of Birmingham a charity? He wished to say that it was a philanthropic institution which at the present moment was not self-supporting but which the managers of it hoped to see become self-supporting. He certainly should not like it called a charity because one of the objects the management had in view was the preservation of the self-respect of persons who ought not to seek aid from a hospital, but were yet in need of some higher advice than they could get from their street doctor. It was ridiculous to suggest that the gentlemen who had founded the institution were in any way pecuniarily interested in it or had any thought of making money out of it. He himself had subscribed £200 to the fund. They wished to have a medical man who could be consulted in preference to the ordinary or general practitioner who had to attend workmen, school teachers, and others, and the managers had found that the class of people who came to consult Dr. Irvine were of the class for whom the institution was originated. Everyone of them belonged to the class of persons who would have sought gratuitous advice or ought to have sought gratuitous advice, they being unable to pay the usual fee of consulting physicians. Birmingham people were not mean and they would not go to an institution like this in question to save something on the fee if they were really able to pay, and the tendency that the institution would create would be that of causing patients to go to the men who charged the higher fee, because they believed that after all they would get from these men the best value for their money. The managers of the institution believed they were creating a class of persons who would follow Dr. Irvine into private practice or go to some other consulting physician if it was inconvenient to consult Dr. Irvine in private practice. There was no hostility whatever to the medical profession of Birmingham, and he thought that the profession would agree with the managers that something of the kind of this institution was needed for the people of the town. It had been suggested that the objects of the institution were non-medical. That suggestion simply represented the state of prejudice into which certain objectors had worked themselves. Any profits obtained would be applied to the development of the institution. Any notices which had been sent out were only of the kind sent out by similar institutions. What had been put into the newspapers was a notice which he should call an advertisement. From that, however, the name of the doctor had been omitted, and he was quite sure that if a general hospital was established in Birmingham the directors would publish an advertisement in much the same terms as the notice sent out by the managers of this institution. Asked if it was not intended to send out notices the witness replied that it was not intended to advertise.

Replying to the PRESIDENT, Mr. CHAMBERLAIN said that the institution had no printed regulations beyond those which were already before the Council and which set forth the rules, aims, and objects of the institution.

In cross-examination by Dr. BATEMAN the witness declared that he did not think the managers would send out notices in the event of a consulting surgeon being appointed for the institution.

Then it would be harder on him than on the consulting physician?—You are making fun now.

What difference do you make between Dr. Irvine and a "street doctor?"—I would say that it consisted in his being an M.D. Having that degree he is properly a doctor.

He is not a member of any college of physicians?—I think he holds the right to that title, but you had better ask him.

In view of endeavours being made to prejudice the public against Dr. Irvine witness thought the managers were right in telling the public what qualifications their doctor possessed.

By Mr. HORSLEY: The women's hospital in Birmingham was not a business concern but a charity. Dr. Irvine had not had surgical cases brought before him.

Then the institution is only for medical cases?—The work of the institution is restricted.

In examination by Dr. GLOVER witness said he was quite satisfied that they were not misleading the public by their announcements in respect to the institution. The patients, whether men or women, could take care of themselves. They might come once to Dr. Irvine, but witness thought they would not come twice The whole reason for the existence of the institution was the preservation of the self-respect of the patients. If the Council told him that in anything which had been done the managers of the institution had gone against the principles of the profession they could reconsider their position. But they did not consider that they had done that. Representing the managers, he came before the Council to say what they thought right and what they thought wrong.

Dr. HENRY WARD IRVINE, the practitioner complained of, was thereupon called. In answer to Mr. Freeman he said that he had satisfied himself that the Birmingham Consultative Medical and Surgical Institution was a philanthropic institution, the promoters of which received from it no gain whatever. He had taken special pains to make sure that that was so. He was not consulted in any way about the advertisements, but he believed that in one of the advertisements his name did not appear at all. He had never seen the posters anywhere.

Was there anything in the nature of general or systematic advertising?—Certainly not. Nothing was done more than was usual at the opening of such institutions. In Dublin they had a similar procedure to that followed in Birmingham and there there were placards issued which contained the names of the doctors and staff.

So far as you are aware have you lent yourself to systematic advertising?—Certainly not.

Until you received notice from the Council had you any idea that you were doing anything wrong?—Certainly not.

In answer to further questions witness mentioned that after receiving the notice from the Registrar of the Council he had consulted with practitioners in Birmingham who had told him they thought he would hear nothing more about the matter. There was no rule about dealing with any special class of people, but so far as he was aware those who came to him were of the class of people to whom Mr. Chamberlain referred. All cases he had to do with were entered by him in the "Case-book." He was referred to as "consulting physician," but the phrase was not his. However, it denoted nothing.

Dr. BATEMAN asked to see the agreement which Dr. Irvine had with the managers of the institution.

Mr. FREEMAN showed him a copy of it.

Dr. BATEMAN wanted to know if Dr. Irvine had read the annual report of the institution.

The WITNESS replied that he did not know that he had.

Dr. BATEMAN reminded Dr. Irvine that it was said that a large number of advertisements had appeared. Had it never struck witness to inquire whether his name was connected with these advertisements, or might the Council take it that Dr. Irvine, as he had said, had never seen one of the objectionable placards?

The WITNESS: I never saw one.

Dr. BATEMAN: Is there not one in the institute?

The WITNESS: Oh, yes.

You consider that there is nothing in the title of consulting physician?—Nothing.

Do you deal with both surgical and medical cases?—With medical. I have refused surgical cases. I have no record of the number I have refused. Perhaps they would amount to a dozen.

Mr. FREEMAN, at this stage of the inquiry, informed the Council that the agreement with Dr. Irvine showed that it was made on Feb. 28th, 1900. It employed Dr. Irvine for one year certain and he was not to carry on any separate practice.

Dr. BATEMAN: And he is bound over not to practise in the neighbourhood.

Mr. FREEMAN: He is to devote the whole of his time and attention to the duties of his office.

Dr. BATEMAN: Did you see people at their own homes?

The WITNESS: Yes, some.

Dr. BATEMAN: You give your services entirely to the institute and you are not permitted to practise outside; do you think that that is consistent with the etiquette of the profession?

The WITNESS: I do think so.

Replying to Mr. HORSLEY, who asked if the persons who came before him were what they represented themselves to be, the WITNESS said: Well, of course, my answer is that I ask their names and occupations.

Then the institution is precisely in the same position as many of our charities?—It is much the same as the hospitals in Birmingham.

By Sir DYCE DUCKWORTH: Sometimes the persons had a letter—a hospital letter. He wrote prescriptions which those who came to consult took away. Persons who came to consult him in some cases visited two or three times. Each visit paid to him was a consultative visit.

How does that practice differ from the practice of an ordinary medical man?—I think all medical men have to see patients alone.

Dr. GLOVER: Do you get half a guinea for each time the people come?

The WITNESS: Unless the people are destitute.

By the PRESIDENT: A patient pays half a guinea whether he is seen at his own home or at the hospital.

Dr. WINDLE: Have you suggested to the secretary at any time that the cards with your name on them should be withdrawn?

The WITNESS: No, I have not.

Mr. MUIR MACKENZIE said that he saw that in the report the consulting fees given amounted to £116. That worked out to 222 persons at half a guinea each. Did that mean that Dr. Irvine saw 222 persons?

The WITNESS: No; some names are repeated—some names appear several times. There are not 222 different names.

Then it ought to be 222 consultations?—That would be more accurate.

The PRESIDENT: You can now retire, Dr. Irvine. Do you think it necessary, Dr. Bateman, to make any reply?

Dr. BATEMAN: Certainly not.

The PRESIDENT: Then the case is closed and parties will withdraw.

The Council deliberated in private. On parties being recalled,

The PRESIDENT, addressing Dr. Irvine, said: The Council have given consideration to your case and I have to tell you that they consider the charge you were required to answer has been proved, but that the further consideration of your case has been adjourned until the session in May next. You will then get notice to appear; due notice will be given to you. But the Council regard the conduct complained of as being of a serious character and in adjourning your case they give you an opportunity to reconsider your position. That is the deliverance of the Council.

Dr. IRVINE: Thank you, sir.

The Council adjourned.

FRIDAY, NOV. 30TH.

The Council resumed its session to-day, Sir WILLIAM TURNER being in the chair.

The Case of Dr. William Allen.

The Council at once proceeded to the consideration of the case of William Allen, of Shotley Bridge, co. Durham, registered as M.D., Mast. Surg. 1877, Q. Univ. Irel., who had been summoned to appear before the Council to answer the following charge, as formulated by the Council's solicitor:—

> That, being a registered medical practitioner, he on two occasions gave and signed certificates of death of persons on whom he had not only not attended professionally, but who had been to his knowledge attended and medically treated by an unqualified person named Burke, who was, to his knowledge, attending and treating patients and otherwise acting as though he had been a duly qualified medical practitioner.
>
> The names of the persons whose deaths were so certified are Emma Jane McCue and Hannah Margaret Longstaff.

Mr. Atherley Jones, Q.C., M.P., appeared on behalf of Dr. Allen.

Mr. WINTERBOTHAM, solicitor of the Council, explained that in this case there was no complainant before the Council and it therefore became his duty to state shortly the facts of the case and to call the attention of the Council to the documents which were in evidence. The attention of the Council was called to the matter by the fact that there was an inquiry held by a Local Government Board inspector on June 4th last into certain charges which had been made against Dr. Allen as medical officer of health. This inquiry was very fully reported and the charges then made against Dr. Allen were stated in the documents before the Council. At the inquiry evidence was given with regard to the certificates of death mentioned in the charge and the attention of the Council had been called to this evidence. The first and important question was whether Mr. Burke, who was undoubtedly and admittedly an unqualified man, was really covered or employed by Dr. Allen. At the inquiry Dr. Allen stated that Mr. Burke was in effect Dr. Renton's assistant and that therefore he (Dr. Allen) was in no way responsible for him. There was an agreement between Dr Renton and Dr. Allen that the latter was to have the entire management and to pay all the expenses of the practice and that after making certain allowances he was to receive three-fourths of the net profits of the practice. In such circumstances he hardly saw how Dr. Allen could put upon Dr. Renton *the responsibility for the* employment of Mr. Burke. With regard to the case of Emma Jane McCue there was the evidence of the husband to the effect that his wife had been attended by Mr. Burke and that Dr. Allen filled up the cause of death. In the case of Hannah Margaret Longstaff there was the evidence of the husband that Dr. Allen had never been in his house and had never seen his wife.

Mr. ATHERLEY JONES, opening the case for Dr. Allen, said that while the newspaper report from which the *précis* before the Council had been made was fairly accurate on the whole, yet it was not complete and therefore he felt under the necessity to give some account of the history of Dr. Allen's connexion with this practice. Dr. Allen was educated at the Royal University of Ireland and graduated there with first-class honours. He obtained the gold medal in 1877 and shortly after that he was appointed senior demonstrator by Professor Clelland of Glasgow, an appointment which he held for about six years and resigned owing to ill health. Thereafter Dr. Allen went as assistant to Dr. Renton at Leadgate. At that time (1884) Dr. Renton had five assistants—one each at Leadgate, Consett, Shotley Bridge, Blackhill, and Allandale; and from 1884 down to the year 1893 Dr. Allen's duties were confined to Leadgate. In the latter year a fresh arrangement was entered into whereby Dr. Allen was to reside at Shotley Bridge and take over the practice there, and was not to act elsewhere unless when specially called upon by Dr. Renton. In 1896 Dr. Renton required an assistant at Allandale. Mr. Burke was at that time studying medicine in America. Mr. Burke was married to one of Dr. Allen's sisters and at the instance of Dr. Allen's sister Dr. Renton agreed to appoint Mr. Burke to Allandale as an unqualified assistant. From 1896 until November, 1898, Mr. Burke was the unqualified assistant of Dr Renton and subject to dismissal by him. In November, 1898, a change took place because Dr. Renton, who had been in ill health for a time, determined to retire from practice. He then invited Dr. Allen to take the control of the practice with a view of purchasing it. He accepted this invitation and went to reside at Dr. Renton's house at Blackhill. The other places being all filled now by qualified men there was no need for Mr. Burke, and Dr. Allen took him to act as his dispenser at Blackhill. This state of things continued from November, 1898, until March, 1899. On behalf of Dr. Allen he submitted that he was in no way responsible for Mr. Burke at the time when these certificates were given. Indeed, Dr. Allen had nothing whatever to do with Allandale, where the deaths occurred. He was sent for in these cases merely because he was the nearest medical man, and he received no payment whatever for his services. In the Longstaff case Dr. Allen had seen the patient three months before her death, and from what he saw then and the information conveyed to him by Mr. Burke he was satisfied as to the cause of death. There was no obligation upon Dr. Allen to give a certificate. He, however, went to the registrar and told him about the time which had elapsed since he saw the patient alive, and it was after doing this that he gave the certificate. In the McCue case Dr. Allen went to the case because he was called upon, and when he saw the patient he found her alive, and accordingly he gave a certificate. He was in no way responsible for Mr. Burke attending the case. In conclusion, counsel assured the Council that his client had no thought of, or wish to, defy their regulations or to do anything inconsistent with the honourable conduct of his profession. If, perhaps, he had been a little indulgent towards Mr. Burke it was in order to provide him with the means of living.

Dr. ALLEN gave evidence in his own behalf. He bore out his counsel's statement and supplemented it. He said that once or twice he had given money to Mr. Burke for Dr. Renton and receipts for the same had been sent to Dr. Renton by post. When Dr. Renton went to Africa for his health witness took possession of his residence. That was at the beginning of November, 1898, and it was in contemplation at the time that the witness should acquire the whole of Dr. Renton's practice by purchase. There was no truth in the allegation that he took possession of Dr. Renton's residence in order to secure the several public or semi-public appointments as medical officer which Dr. Renton had held. He admitted that he had taken Mr. Burke to live with him, but he denied that he looked upon Mr. Burke as an assistant of his till March, 1899. While residing at Blackhill there had been three qualified assistants in his employment. Mr. Burke had remained with him until

December, 1899. With regard to the case of Mrs. Longstaff witness stated that he had seen her professionally about three months before her death. She had heart disease at that time, but the disease was not very bad. When he visited her on being sent for on the night she died he was informed that she had been confined ten days previously and that she had gone on all right until immediately before she died when she was taken ill. When he saw her witness came to the conclusion that there had been wasting of the heart and that her death was due to that cause. He had gone to the district registrar to ask what he should do in regard to the filling-up of a certificate. The district registrar had thereupon advised him that he required a certificate which stated the cause of death, the name of the deceased, and the time of death, adding that he was bound to accept a certificate containing these particulars. Witness asked the district registrar for a certificate form and on getting one he at once filled it up, omitting, however, any mention of the time of his last visit to the deceased. It was no unusual thing for a patient to be seen long before death and for a medical man to certify the cause of the death of that patient. Witness remembered the case of a man who had died 15 months after he last saw him. That patient was suffering from heart disease, and when he died suddenly witness had written to the coroner intimating his knowledge of the man's disease, and the coroner did not hold an inquest. With regard to Mrs. McCue witness said that he had attended her on the day of her death, but only then. He was called for. The man who came for him t[illegible] him that his wife was seriously ill and asked him to see her at once. He got to McCue's place in 20 minutes, a clergyman who was visiting at witness's place having driven him there in his trap. On entering McCue's house witness had seen an oldish woman standing in the kitchen. This person pointed witness to the room in which the patient was. The patient lay on a bed and she was pale and motionless. On going up to her witness could not find any wrist pulsation, but on putting his ear to her chest he found that there were pulsations of the heart. She, however, was *in extremis*—was in such an extreme condition that witness could do nothing in the way of treatment. She was lying with her head very low and she had not been delivered at the time. She died about ten minutes after he entered the room. Her death was brought on by hæmorrhage which had set in before his arrival. Witness had satisfied himself that the woman died during his presence in the room. After her decease witness had gone to the surgery at Allandale and there partly filled in a certificate. He did not know the deceased's name or age and he had asked his sister to get information as to these and have the certificate completed. It was false to say that he kept a book of "signed certificates."

In answer to the PRESIDENT witness stated that the Local Government Board had withheld ratification of his appointment as medical officer pending the investigation of his conduct by the General Medical Council.

Mr. HORSLEY said that he wished to ask the witness three questions.

The PRESIDENT pointed out that if the case was to go further the Standing Orders that evening must be suspended so that the Council might sit beyond six o'clock.

Dr. MACALISTER moved the suspension of the Standing Orders in order to secure the completion of the examination of Dr. Allen, and also consideration of a report by the Pharmacopœia Committee.

Sir DYCE DUCKWORTH, though not opposing this motion, entered his protest against the frequency in recent sessions of the suspension of Standing Orders with the object of prolonging sittings beyond the ordinary time of rising for the day—namely, six o'clock

Standing Orders were then suspended, but only so far as to enable the Council to deal with the Pharmacopœia Committee's report, the case of Dr. Allen being adjourned till Saturday afternoon.

Addendum to the British Pharmacopœia.

The Council thereupon proceeded to receive the completed draft of the Indian and Colonial Addendum to the British Pharmacopœia, 1898, regarding which the Pharmacopœia Committee submitted the following report:—

> The Pharmacopœia Committee, having been intrusted with the duty of preparing the Indian and Colonial Addendum to the British Pharmacopœia, 1893, have now the honour to submit for the approval of the Council copies of the completed draft of the work. The scope of the work was indicated in the preface to the Pharmacopœia of 1898, when it was stated that in the contemplated Addendum "medicinal plants and other substances suggested for inclusion by Indian and Colonial authorities" would be dealt with more fully than was possible at the time. The principles which have been observed in its construction are the same as those which have already been adopted by the Council in the British Pharmacopœia, 1898. A brief statement of the object and plan of the Addendum is included in the preface which the committee have drawn up.
>
> The preparation of the work has involved a large amount of correspondence with administrative, medical, and pharmaceutical authorities in many parts of the empire; and the committee desire to record their acknowledgments of the interest shown and the assistance rendered by those who have thus coöperated with them.
>
> The committee have within the last few months held a number of special meetings for the revision and completion of successive drafts. They believe that the final proof, subject to the correction of such typographical errors, if any, as may be detected, may now be fitly adopted by the Council and approved for publication in the manner prescribed by statute. The volume is about double the size of the Additions of 1890, which was published at the price of 1*s*. The committee suggest that, in view of the expense incurred in its preparation, 3*s*. would be a suitable price for the Addendum. The power of actually fixing the price rests with the Commissioners of Her Majesty's Treasury.
>
> To the labours of the late chairman of the committee, Dr. Leech, who continued to devote time and thought to the work up to the end of his life, and of the secretary, Dr. Tirard, the committee have been much indebted. Acknowledgments are also due to Mr. W. Kirkby of Manchester, and to Mr. E. Morell Holmes, for valuable advice and assistance in reference to questions of pharmaceutical botany. Dr. Attfield, editor of the British Pharmacopœia, 1898, has also edited the Addendum which is its supplement. He has for many years applied himself to the work of adapting the Pharmacopœia to the requirements of the empire at large and his task is now successfully completed. The committee accordingly suggest that a special vote of thanks for his long-continued services should be passed by the Council.
>
> In order that the Addendum may be issued to the public before the end of the present year the committee recommend: (1) that the completed draft (subject to the correction of typographical errors, if any) be adopted by the Council as the Indian and Colonial Addendum (1900) to the British Pharmacopœia, 1893; (2) that the President and chairman of the committee be authorised to communicate with the Commissioners of the Treasury on the question of the price to be fixed for the Addendum, to arrange for its publication, and to make the proper statutory announcement thereof by notice in the *London*, *Edinburgh*, and *Dublin Gazettes* (Medical Act, 1862); (3) that pending formal publication the committee be empowered to distribute "advance copies" to the medical and pharmaceutical journals and to arrange that copies may be placed for the inspection of the public in the Council's offices in London, Edinburgh, and Dublin.
>
> The committee further recommend: (4) That the thanks of the Council be conveyed to Dr. John Attfield, F.R S , for his long-continued and valuable services as editor of the British Pharmacopœia, 1898, and of the Indian and Colonial Addendum, 1900.

Dr. MACALISTER, in submitting the foregoing report, remarked that the urgency in respect to it arose mainly from the fact that this (Friday) night was the night on which the mails went out. The addendum referred to was a supplement up to date to the new edition of the Pharmacopœia, but it had been a long time in preparation. As a matter of fact, it had been suggested so far back as 1857, and since that year the facts embodied in it had gradually been collected. A large number of experts in all divisions of the empire had given assistance in its preparation, which had been most careful. The Pharmacopœia Committee had gone over the whole work line by line, word by word, no less than three times. He (Dr. MacAlister) himself had gone over it ten times and it was impossible to say how often Dr. Attfield, the editor, had revised it, as the times he had gone over it were innumerable. The work was now one that the committee thought would be accepted by the General Medical Council. It marked a new departure as it formed the completion of the plan for a Pharmacopœia for the whole of the empire referred to in the preface of the British Pharmacopœia of 1857. It was impossible for the members of the Council to go through it and discuss it, and he hoped it would be accepted by the Council. If now accepted it was intended at once to approach the Treasury to fix the price per copy. The committee considered that that price should be 3*s*., and it was in contemplation to print as many as 10,000 copies. As to the copyright, that unfortunately extended to the United Kingdom only. He believed that it was impossible to get copyright for it in the United States of America.

Sir WILLIAM THOMSON asked if the copyright could not be extended.

Dr. MACALISTER replied that he was afraid that it could not be extended.

Mr. BROWN pointed out that if advance copies were now issued some people might prepare a synopsis of the contents.

The PRESIDENT said that the General Medical Council had got the copyright for the United Kingdom. They meant to adhere to it and they had made it known that they meant to defend it.

The first three recommendations of the committee, moved by Dr. MACALISTER and seconded by Dr. MCVAIL, were then adopted. The fourth recommendation was also adopted, Dr. MACALISTER moving and Sir DYCE DUCKWORTH seconding.

The Council adjourned.

SATURDAY, DEC. 1ST.

The Council met again to-day, Sir WILLIAM TURNER occupying the chair.

The Case of Dr. William Allen.

Consideration of this case was resumed by the Council.

In answer to Mr. HORSLEY Dr. ALLEN stated that the distance from Allandale to Shotley Bridge was about two miles. Both Mrs. McCue and Mrs. Longstaff died from heart disease. He had employed Mr. Burke since March, 1899, as an assistant in the ordinary sense of the word. There, however, was no agreement. Mr. Burke had simply come to him when witness separated from Dr. Renton. For a while Mr. Burke was under witness's close supervision, but the arrangement before March, 1899, was a temporary one. Mr. Burke had simply stopped on to fill a gap. He acted as dispenser but he might have seen patients.

Replying to Sir CHRISTOPHER NIXON Dr. ALLEN said that he had no unqualified assistants and that he strictly conformed to the regulations of the General Medical Council respecting the employment of assistants. It was his sister who had suggested the employment of Mr. Burke.

By Sir WILLIAM GAIRDNER: Mr. Burke was a medical student in New York for two years. After he began to reside at Allandale he went to the Newcastle School of Medicine.

By Dr. LITTLE: Mr. Burke told witness that his instruction had included midwifery.

By Sir DYCE DUCKWORTH: Mr. Burke was entitled to earn money for Dr. Renton's firm. If he received money from patients he would pay it over. Witness did not benefit by the money that went into the firm's account.

By Dr. GLOVER: Mr. Burke had not made any report to witness about Mrs. Longstaff during the ten days between her confinement and her death. Mr. Burke had told him that everything was known. From the history of the case witness concluded that Mrs. Longstaff's case was a very tedious one, but Mr. Burke said that on the first appearance of hæmorrhage he sent for witness. As regards the case of Mrs. McCue he thought that having been called in he was entitled to give a certificate.

By Mr. MUIR MACKENZIE: He certainly was aware of the General Medical Council's regulations about "covering," but when he got the notice from the Council in respect to unqualified assistants that notice did not affect him because he had no unqualified assistants. Any money that he received from Mr. Burke previously to witness's practising on his own account was Dr. Renton's money, and he had rendered accounts to Dr. Renton in respect of it.

By the PRESIDENT: He certainly did not derive any personal gain from Mr. Burke's attendance on cases in Dr. Renton's district. He wished to state that emphatically.

Did you participate in any way in the receipts derived from those divisions of Dr. Renton's districts over which you had no supervision?—None whatever. I received nothing except for my own district.

Do you admit that you were the junior member of Dr. Renton's firm?—Certainly not. I looked upon myself as senior assistant to Dr. Renton and any moneys I received from patients were received in Dr. Renton's name.

Mr. ATHERLEY JONES, Q.C., offered to call Dr. Allen's father-in-law who, he said, was a justice of the peace and a gentleman well known in Dr. Allen's district.

The PRESIDENT, however, intimated that there was no desire to hear him.

The case was then closed and the Council deliberated upon it in private. On the re-admission of the public

The PRESIDENT announced the decision. Addressing Dr. Allen he said: The Council has considered your case with great care and these are the conclusions which the Council has come to: that the charge that you were required to meet has been proved to the satisfaction of the Council; that the further consideration of the charge proved against you has been adjourned till the session of next May; you will receive due notice when the May session is to take place and then you will have to appear; and that the Council feels it to be its duty to express its sense of the gravity of the charge and gives you this opportunity to consider fully your position as regards the direct or indirect shelter of unqualified practitioners.

The Case of James Alexander Graydon.

The Council then resumed the consideration, adjourned from May 24th, 1900, of the conviction, proved to the satisfaction of the Council, of James Alexander Graydon, of 21, South-grove, Bow-road, London, E., registered as Lic. Fac. Phys. Surg. Glasg. 1870, who had been summoned to appear before the Council in consequence of his conviction, as shown by the following copy of the certificate:—

In the County of London and }
In the Metropolitan Police District. }

Before the Court of Summary Jurisdiction sitting at the Thames Police Court in the said County and District.

The Fifth day of March, One thousand nine hundred, James Alexander Graydon (hereinafter called the Defendant) is this day convicted for that he on the Fourth day of March, One thousand nine hundred, at South-grove, Mile End Old Town, in the County and District aforesaid, did unlawfully assault Henrietta Graydon, the Complainant in this behalf.

And it is adjudged that the defendant for his said offence do forfeit and pay to the clerk of this court the sum of 21*s*.

And in default of payment it is adjudged that the defendant be imprisoned in Her Majesty's prison at Wandsworth, and there kept to hard labour for the space of seven days, unless the said sum be sooner paid.

FREDK. MEAD,
One of the Magistrates of the Police-courts of the metropolis.

I hereby certify that the above is a true copy of a conviction kept amongst the records of the county of London.

RICHD. NICHOLSON,
May 3rd, 1900. Clerk of the Peace for the said county.

The PRESIDENT, addressing Mr. Graydon, said that in May [illegible] had been admonished as to his conduct during the interval of adjournment and told the kind of evidence as to his conduct which he would have to produce at this session.

Mr. GRAYDON presented three certificates of character and conduct—one from a medical practitioner, another from a clergyman, and the third from a gentleman connected with the Church Army. In reply to the PRESIDENT he said that he was no longer in practice but was associated with a branch of the Church Army.

After the Council had deliberated in private for a time the PRESIDENT announced to Mr. Graydon that the Council did not see fit to erase his name from the Register.

The Case of Andrew Alexander.

The Council resumed the consideration, adjourned from May 26th, 1900, of the charge proved against Andrew Alexander of Blaydon-on-Tyne, registered as Lic., R. Coll. Phys. Edin. 1885, Lic. R Coll. Surg. Edin. 1885, Lic. Fac. Phys. Surg. Glasg. 1885, who had been summoned to appear before the Council on the following charge:—

That, being a registered medical practitioner, he covered an unqualified person named Tait, whom he employed or purported to employ as an unqualified assistant and whom he permitted and enabled to attend on and administer medical relief to patients and carry on medical practice as if he were a duly qualified practitioner.

Mr. APPLEBY, solicitor, Newcastle-upon-Tyne, appeared as the legal representative of Mr. Alexander.

The PRESIDENT said that Mr. Alexander had sent to the Council letters and other documents as to his conduct since the May session.

Mr. APPLEBY said that after the proceedings in May his client at once dismissed the assistant and since then had endeavoured to carry out the requirements of the Council to the fullest extent.

Mr. ALEXANDER, in reply to questions addressed to him by members of the Council, said that he now carried on the practice without assistance and found that he was quite able to do so, the work having diminished somewhat.

The PRESIDENT, after the usual deliberation *in camerâ*, said, addressing Mr. Alexander: The Council, having considered the further evidence which you have submitted, has decided to take no further steps in your case and that the Registrar is not directed to remove your name from the Register.

Removal from the Dentists Register.

The Council next dealt with the case of William Vansittart, of 4, Westbourne-grove, Bayswater, London, W., in regard to whom the Dental Committee presented the following report:—

REPORT ON THE CASE OF WILLIAM VANSITTART.

The complaint against William Vansittart having been referred to the Dental Committee to ascertain the facts the Dental Committee beg to report as follows:—

The committee find that the following facts were established by the evidence:—

1. That William Vansittart was registered in the Dentists Register on Jan. 11th, 1892, as having been in practice before July 22nd, 1878, and that his address in the Dentists Register is 4, Westbourne-grove, Bayswater, London, W.

2. That William Vansittart was on June 12th, 1900, convicted of the following misdemeanour—namely, that being a person over the age of 16 years and having the custody, charge, or care of a child under the age of 16 years, to wit, William Vansittart, a boy of the age of 10 years, he did unlawfully and wilfully neglect the said child in a manner likely to cause him unnecessary suffering or injury to health contrary to the statute, and was thereupon ordered to be imprisoned in Her Majesty's prison at Pentonville, and there kept at hard labour for the space of three months.

The evidence before the committee consisted of a certified copy of such conviction. WM TURNER, Chairman.

The PRESIDENT informed the Council that Mr. Vansittart was summoned before the Dental Committee but did not appear.

The decision of the Council in the case was that Mr. Vansittart having been proved to have been convicted of a misdemeanour the Registrar be directed to erase his name from the Dentists Register.

The Council then adjourned.

MONDAY, DEC. 3RD.

The Council resumed this afternoon, Sir WILLIAM TURNER being in the chair.

The Case of John Martin Thomson.

Consideration was given to the case of John Martin Thomson of Clarkston, Airdrie, registered as M.B., Mast. Surg. 1891, Univ. Edin., who had been summoned to answer the following charge, as formulated by the Council's solicitor:—

> That he, being a registered medical practitioner, habitually employs as assistants for the sale of drugs and poisons persons who are not qualified to act as chemists or pharmaceutical assistants, and thereby causes such persons to commit breaches of the Pharmacy Acts.

Dr. Martin Thomson appeared together with his legal representative, Mr. T. Ernest Saunt, M.R C S.Eng., barrister-at-law, instructed by Messrs. Blyth, Dutton, Hartley, and Blyth, solicitors, Gresham House, London, E.C. Mr. Peter Morison, jun., of Messrs. P. Morison and Son, S S.C., Edinburgh, appeared to represent the complainers in the case—the Pharmaceutical Society of Great Britain.

Mr. BROWN expressed the opinion that before the case was proceeded with the Council should discuss the question as to whether they had *locus standi* under the Pharmacy Acts.

Mr. MUIR MACKENZIE, legal adviser, explained that this matter had been considered and he was perfectly clear that the case came within the jurisdiction of the General Medical Council.

Mr. MORISON thereupon opened the case on its merits. He said that this complaint had been submitted on behalf of the Pharmaceutical Society because that society had felt that while they were charged with the duty of enforcing the Pharmacy Acts in Scotland a practice had arisen in that country which really nullified the statutes. Dr. Martin Thomson's case was a typical one. In it there were presented three different cases in which Dr. Martin Thomson's chemist shop had been the locus of offence—one of his assistants, named McIlwraith, having been convicted for the illegal sale of poison in 1897, and another, a man named John Thomson, who was no relation of Dr. Martin Thomson, having been convicted twice since that year for a similar offence. In the second of the three cases, one of John Thomson's, the poison—laudanum—which had been sold to a little girl named Waddell had been used by the girl's mother to commit suicide with. Looking to these convictions it could not be said that Dr. Martin Thomson was at all in ignorance of the law. His case seemed rather to be one of a person defying the law. Practice of the kind Dr. Martin Thomson was charged with had been rife in Scotland for a considerable time. There had been as many as 46 prosecutions of unqualified chemist and druggists' assistants, and the Pharmaceutical Society now took it to be their duty to bring the matter to the notice of the General Medical Council so that something might be done in order to stop the practice complained of. The present case was fully stated in private print before the Council, and he and the Pharmaceutical Society's assistant secretary, who was in attendance, would prefer that the Council should judge of the matter from the opinions reproduced in the print which had been expressed from the bench by the judges before whom the prosecutions he had referred to were proceeded with.

At the suggestion of the PRESIDENT Mr. MORISON proceeded to read an affidavit made by Mr. John Rutherford Hill, Edinburgh, assistant secretary of the Pharmaceutical Society, who attends to the business of the society in Scotland. This affidavit bore out Mr. Morison's opening statement. It declared that Mr. Hill knew of the practice complained of in this case being carried on in the large towns of Scotland. It referred to the custom prevailing in Scotland of medical practitioners owning chemist and druggist shops, with surgery attached, and pointed out that it was the custom for the medical practitioner to attend a shop for two hours or so and leave the place for the rest of the day in the entire charge of an assistant who was not qualified under the Pharmacy Acts of 1852 and 1868. The Pharmaceutical Society regarded this custom of thus employing unqualified assistants as not only constituting a serious danger to the public but as really the "covering" of unqualified persons so as to enable them to practise. The affidavit further declared that Mr. Hill had produced the evidence for the prosecution in the 46 cases referred to and stated that Mr. Hill was present and heard all that took place in regard to them. Mention was specially made of the cases of Dr. Martin Thomson's assistants and the explanation was given that the law was that the actual seller was the person who made the sale and a conviction for illegal selling could take place only in the case of an assistant who sold and not in that of his employer. In concluding Mr. Morison mentioned that the unqualified assistant, John Thomson, was still in charge of Dr. Martin Thomson's chemist shop.

Mr. HILL was called to prove the truth of his affidavit and, in answer to Sir HECTOR CAMERON, he explained that an assistant qualified under the Pharmacy Acts could sell to children without offence.

Mr. MORISON wished to go into the witness-box in order to corroborate Mr. Hill's evidence in regard to what took place in the Sheriff's Court at Airdrie, Lanarkshire, at John Thomson's two convictions, but as Mr. SAUNT stated that the defence did not dispute these two convictions the PRESIDENT pointed out that what Mr. Morison offered to do need not be done. The case in support of the summons was thereupon closed.

Dr. MARTIN THOMSON was then called in his own behalf. He stated that he was now employing a fully-qualified man in his shop at 141, Grange-road, Airdrie. Neither McIlwraith nor John Thomson had ever acted as a medical assistant to him. Both had sold poisons, but not with his consent. They were to sell only if he was present in the surgery. After his conviction McIlwraith had been dismissed. John Thomson had been kept on and was still doing duty in the shop. The reason of that was this, that witness could not get an assistant with the proper qualifications whom he might employ permanently. He had tried to get such an assistant, but there was great difficulty in Scotland in getting assistants qualified under the Pharmacy Acts. John Thomson was about 25 or 26 years of age and he was a thoroughly able man. McIlwraith was also a capable man. The qualified man he had at present was not a permanent assistant. He was with witness for a fortnight only while a wholesale druggist firm in Glasgow was trying to get him a man whom he could employ permanently.

In cross-examination Mr. MORISON asked why John Thomson was not dismissed after his first conviction. Witness replied that that was because he had given him instructions not to sell poisons while witness was not at the shop. Asked if he admitted the necessity of having a qualified assistant in the shop witness replied that he admitted the necessity there was for the sale of poisons when he was present in the surgery. He could not tell daily from the appearance of the bottles whether John Thomson was or was not selling poisons, because the sale of poisons in his shop had always been very rare, so much so that he did not think the whole sales, apart from what was used for private prescriptions, would amount to £3 a year.

You have seen that the Medical Council requires immediate personal supervision of such persons as John Thomson; do you say that the sales in regard to which your assistants were convicted were made under your personal supervision?—No; otherwise the men would not have been taken into court.

Replying to Mr. HORSLEY, Dr. MARTIN THOMSON said that his shop in Grange-street, Airdrie, was open from 9 A.M. to 7 P.M. Witness attended at it from 11 A.M for an hour and from 6 to 7 P M.

Mr. HORSLEY wished to draw attention to a statement in Dr Martin Thomson's reply to the Council's summons. The notice issued by the Council as to the employment of unqualified assistants set forth that its provisions did not apply to the legitimate employment of dressers, midwives, and dispensers. Dr. Martin Thomson, perhaps relying on memory, seemed to have read that notice as having set forth that the employment of unqualified dispensers and surgery attendants was permissible. There was a very substantial difference between these two readings, and what he wished to ask was this: whether after the first conviction witness considered the subsequent employment of John Thomson as legitimate employment?

The Witness: I thought so.

Mr. HORSLEY: Why did you think so in view of the fact which had been proved that such employment was contrary to the conditions of the Pharmacy Acts?

The Witness: Because the custom is so universal in the West of Scotland, all round about, and even in the East of Scotland, and it has been so for years.

Mr. HORSLEY: Then I am to take that as an answer to my question?

The PRESIDENT: Yes.

Sir DYCE DUCKWORTH: How many times would it happen that the sale of poison was refused because you were not in the surgery?

The Witness: That happened rarely, simply because the sale of poison was so little.

In answer to questions by Dr. BRUCE, Dr. MACALISTER, Sir WILLIAM THOMSON, Dr. LITTLE, and Dr. GLOVER, Dr. MARTIN THOMSON explained that the sale of laudanum to the girl whose mother committed suicide with the poison took place when he was absent from the surgery. He could not tell how much was asked for or what price was paid for the laudanum given out. He did not know whether it was a half ounce or not. He trusted to his assistant to keep his stock and price it so much that if he ever sold anything over the counter—and sometimes he did so—he had to ask his assistant what price had to be charged. John Thomson had been years in trade before witness got him as an assistant. Witness did not suppose that the sale to Waddell's girl was entered in the poison book. He certainly kept a poison book and certainly there were entries of sales of poisons in it. He did not know if these were all recent, but the entries were made by his assistant in his presence and he signed them. He had not brought the book with him. Prosecution of chemist and druggist assistants might have taken place in Scotland during the 12 years from 1888, but he had not noticed them or had not paid special attention to them. The prosecution of his assistant McIlwraith in 1897 was practically the first intimation that he had in regard to any objection to the employment of non-pharmaceutical assistants in chemist and druggists' shops. He had been in medical practice for about nine years, and it was years after he settled in Airdrie when he started the shop. At present there were five medical practitioners in Airdrie, the population of which was over 20,000 One of the medical men dispensed at his house, while three had shops. In addition, two pharmaceutical chemists had shops. The sale of laudanum should have been entered in the poison book.

Mr. BROWN: Under what Act?

The Witness: I do not know.

Mr. BROWN: *Don't you know that laudanum is not in the* schedule?

The Witness: I do not know

Mr. BROWN: But that is the case and laudanum may be sold openly over the counter. You said that it was common in Scotland to keep unqualified assistants in these shops. For what are they kept?

The Witness: For dispensing and the sale of drugs. It is quite common for assistants in Scotch shops to sell drugs.

Mr. BROWN: Then the practice in Scotland differs from that in England. You consider that this man, John Thomson, would be perfectly competent to use poisons in dispensing prescriptions but not to sell them across the counter?

The Witness: Yes; and if he sold over the counter it would be against my wish.

Mr. BROWN: And the fact that it was done in the Waddell case is an incident which you regret?

The Witness: Most certainly.

By Mr. MUIR MACKENZIE: He could not look up his stock of poisons, neither could he tell whether his assistant might during the hours when he was absent sell three pennyworth of laudanum. He could not tell from the stock-bottle and if there was a sale the penny or three pennies would go into the common till. No record was kept of the sale of individual articles.

By Professor YOUNG: He admitted that the bottle in which the girl Waddell got the laudanum bore the name of Dr. Martin Thomson as the seller.

Professor YOUNG pointed out that while it did so Dr. Martin Thomson was not the actual seller. That had an important bearing on another matter that was before the Council.

Mr. SAUNT addressed the Council on behalf of his client. He claimed that Dr. Martin Thomson should be entirely exonerated from blame. The Council might disapprove of the manner in which things were conducted in some parts of Scotland, but a trial such as this was not the way in which to stop the practice complained of. If the Pharmaceutical Society desired to get the law altered they had their course, but it was not correct for them to induce the General Medical Council to act as prosecutors

Mr. MORISON remarked that appeal to the General Medical Council was the only way in which his clients could get the grievance stopped, for if they took the existing law they must proceed only against the "actual sellers in fact."

After some explanations in connexion with the manner in which Dr. Martin Thomson had been summoned, which, it was declared, was thoroughly correct and adopted only after very mature deliberation, the Council deliberated on the case in private. On the public being re-admitted—

The PRESIDENT announced the decision Addressing Dr. Martin Thomson he said: The Council have very carefully considered your case and I am instructed to read to you the judgment which they have desired me to deliver to you. It is this, that the charge which you are required to meet has been proved to the satisfaction of the Council and that the further consideration of the charge proved against you has been adjourned until the May session. You will receive a notice to appear here at the May session and you will have to produce evidence on that occasion that you are no longer conducting your business in the manner in which you have been doing. The Council feel it to be their duty to express their sense of the gravity of the offence and give you this opportunity to fully consider your position. That is the judgment which has been given.

Proceedings in Camerâ.

The Council sat for the rest of the day *in camerâ.*

TUESDAY, DEC. 4TH.

The Council met again to-day, Sir WILLIAM TURNER being in the chair.

Exemptions from Examinations.

Mr. HORSLEY asked the representatives of the Conjoint Board for England whether any, and if so what, exemptions from any portion of the examinations of the Board were granted during 1897 and 1898 to candidates presenting themselves for examination by the Board.

Sir DYCE DUCKWORTH said that he understood the question referred only to the final examinations of the Board.

Mr. BRYANT said that his question was not so confined.

Sir DYCE DUCKWORTH read the following answer:—1 No exemptions were granted in 1897 and 1898 or in any other year under any circumstances from any parts of the Final Examination of the Examining Board in England. 2. Exemptions were granted in those years from the first and second examinations of the Board to students of recognised universities only. 3 No exemptions from the earlier examinations of the Board were allowed to candidates who have passed at any examinations except those of recognised universities. 4. As an example of the exemptions allowed it may be stated that candidates who had passed the intermediate M B. examination of the University of London, or the first M B. examination of the University of Oxford, or the second M B. examination of the University of Cambridge, were exempted from the first and second examinations of the Board and were admitted direct to the final examination on producing the certificates required by the regulations. This applies to Scotch and Irish universities and to certain Indian, colonial, and foreign universities recognised for the purpose. 5. It is impossible at this short notice to give exactly the number of candidates during the years 1897 and 1898 who were granted exemption from the first and second examinations, but 100 students a year would be about the number. 6 If this question has any connexion with the returns of exceptional cases sent to the General Medical Council annually it is only necessary to draw attention to the fact that the return relates to exceptional cases "in regard to length of course of professional study" and not in regard to exemptions from examination.

Mr. **HORSLEY** said that he was sorry to say that this answer did not satisfy him at all; and he would move that the representatives of the Conjoint Board in England be requested to furnish the Council in writing the individual cases of exemption from any portion of the examinations of the Board granted during 1897 and 1898. He wished, of course, to point out that he only took the case of this Board as an example.

The **PRESIDENT** suggested that the request should be addressed to the officials of the Conjoint Board and not to the representatives on this Council.

Professor **YOUNG** thought that the request should be addressed to all the examining bodies in the United Kingdom.

Sir **DYCE DUCKWORTH** agreed that it was rather invidious to single out the Royal Colleges in England in this way.

As the outcome of some further discussion the motion was passed in this form:—

That the medical authorities who grant exemptions in any part of the professional examinations which they hold be requested to furnish the Council with a detailed list of the exemptions granted by them in the examinations held during 1897, 1898, and 1899.

The Council and the Royal Colleges in England: Sharp Conflict.

The Council then resumed the debate adjourned from May 31st, 1900, on the recommendations in the report of the Education Committee on certain communications from the Royal College of Physicians of London and the Royal College of Surgeons of England. When the debate stood adjourned Dr. **MACALISTER**, seconded by Dr. **PAYNE**, had moved that the Council approve of Recommendation I., which was in these terms—viz.: "I. On the first question the committee maintain the opinion they have frequently expressed that ordinary school education should be completed before the five years' medical curriculum is entered upon; and they believe that the regulation in question is the simplest practical method of insuring this. They therefore recommend that the Council should continue to adhere to it." The regulation in question is: "That no medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council and has produced evidence that he has commenced medical study at a university or school of medicine or at a scientific institution recognised by one of the licensing bodies and approved by the Council."

The **PRESIDENT** explained that since the debate in May the opinion of Mr. Muir Mackenzie had been obtained and was now before the Council. They had also before them the opinion of Mr. Cripps, Q.C., obtained by the Royal Colleges.

Mr. **BRYANT** said that he had a great wish to make this question between the Council and the Royal Colleges as clear as possible, and with this view he had drawn up a short memorandum which he would read. The memorandum was in these terms, viz.:—

Moved by the desire to make the position of the London Royal Colleges, in the question before us, as clear as possible, I have drawn up an epitome of the reasons which have influenced them in their action, as a supplement to the full statement contained in the memorandum appended to the report of their Committee of Management, printed on page 425 of vol. xxxvii. of our Minutes for this year. The English Colleges were desirous of making chemistry, physics, and biology subjects of study before the medical student began his professional career, under the conviction that it would be desirable to have these preliminary scientific subjects studied and got rid of by an examination test before the special medical curriculum was commenced.

With this object the Colleges accepted the teaching of these subjects at such schools and institutions—other than medical schools—as in their judgment afforded a high standard of efficiency; and to test this standard the schools were visited by representatives of the Colleges, with the exception of those which had been approved by the authorities at South Kensington—and more recently most of those schools have been and all will soon have been visited.

This Council, when the Colleges made this arrangement, sanctioned their procedure, as testified by the following minute of the Council, to be found in vol. xxxi., p. 162:—

Moved by Dr. Tuke, seconded by Dr. Bruce (Dec. 4th, 1894):—

"A student who has previous to registration attended a course or courses of study in one or all of the subjects, physics, chemistry, and biology, in any university, school of medicine, or teaching institution recognised by any of the licensing bodies, may without attendance be admitted to examination in these subjects: provided always that such course or courses shall not be held to constitute any part of the five years' course of professional study."

The Colleges at that period in 1894 hoped that the students of these subjects would qualify in them before they commenced their five years' curriculum, and that the period of study of these subjects would be included in the work of the year before registration, and they did so under the opinion that the scheme as sanctioned by this Council would be a step towards the realisation of the wish that the subjects of study would soon form part of a preliminary scientific examination which the medical student would in the near future be called upon to pass before he entered upon his more special professional work.

In this hope the Colleges have been disappointed, for the sister Colleges have not shown any disposition to follow their example, and the students who adopted the scheme in London soon discovered that the six or nine months which were taken up by the study of these subjects before registration gave them no advantage over their fellow students who took these subjects up as part of their five years' curriculum, as they had still five years of professional study to fill up.

Under these circumstances the London Colleges were unable to maintain their advanced position and adopted, although with regret, the ways of the other Colleges and universities which count as part of the five years' curriculum the time spent in the acquisition of these subjects when taken either at a medical school or at a recognised teaching institution.

But in so doing the Colleges continue to recognise the teaching of the accepted schools and institutions which they had previously recognised and at the present time deduct only from the full five years' medical curriculum the six or nine months which may have been spent in the acquisition of the required information, which has, moreover, to be tested by an examination. In fact, the London Royal Colleges in this matter place themselves alongside the London University, new or old, and are satisfied—if the examination test proves satisfactory—with the teaching which preceded it. And for adopting this practice some members of this Council have expressed their strongest disapprobation of our action and assert that the London Colleges, by their change of position, have practically nullified the regulation requiring a fifth year of medical study and have reduced the curriculum to the old four years' course. Whereas, under the scheme of the Colleges as now carried out, however long a period a student might take in passing the examination in these preliminary subjects—whether it be one, two, or more years—he is still required to devote four full years to his special professional studies; whilst in following the scheme this Council is now urging us to maintain, where, as in a large number of cases, the Preliminary Science Examination is not completed in one year, the more special professional subjects are necessarily crowded into the remaining period of the curriculum, which thus becomes less than four years, and at times seriously so.

With respect to the refusal of the London Colleges to give up to this Council the approval of the list of institutions which the Colleges may recognise for the purposes of study, I can only adduce two reasons: the first being that the Colleges are authorised, if not bound, by their Charters to bear the responsibility, and consequently cannot evade it; secondly, that if we handed over to this Council the power of selection we should be imposing duties upon the Council which it could not possibly satisfactorily carry out and which do not fall within its powers.

Under these circumstances it seems a pity that this Council should have entered upon a course of action which may seem to interfere with the rights and privileges of the Royal Colleges and at the same time involve this Council in duties which they have no power to undertake.

Sir **DYCE DUCKWORTH** said that his College, the Royal College of Physicians of London, had furnished the opinion of counsel and had no further information to give. The position of the two Colleges remained as before, nothing having happened to alter it. Any change that took place must take place in this Council.

The Council agreed to receive the cases put before the two counsel and their opinions and enter them on the minutes.

The Registrar read to the Council the opinions, viz.:—

MR. CRIPPS'S OPINION.

Questions.	*Answers of Counsel.*
I. Generally, whether the General Medical Council have any and what authority to lay down rules binding the Royal Colleges as qualifying bodies, constituting the Examining Board and interfering with the exercise of their discretion in the discharge of their duties?	I. The General Medical Council have no authority to lay down rules binding the Royal Colleges, as the qualifying bodies constituting the Examining Board, nor can they interfere with the exercise of their discretion in the discharge of their duties.
II. And in particular whether the Medical Council have any or what authority to control the Royal Colleges in their selection of teaching institutions recognised by them for courses of instruction and study before admission to examination?	II. It is clear that the General Medical Council have no control or authority in the selection of teaching institutions.
III. Whether the Medical Council have any statutory or other authority for their regulations as to the registration of students and resolutions thereto (of which a print is sent herewith), or can such "regulations" and "resolutions," or any other regulations or resolutions be received by the Royal Colleges only for what they are worth as recommendations?	III. The registration of students is a voluntary Registration Council Act for the convenience of all parties concerned. The Royal Colleges can by altering their own examining regulations disregard entirely the registration of students. If the Medical Council seek to introduce qualifications for registration of students including matters quite outside their jurisdiction it may be necessary for the Royal Colleges to alter their own examining regulations; but if the Medical Council merely desire to carry out their own duties, and there is a difference of opinion between the Council and the Royal Colleges, this difference could be brought for decision before the courts.

IV. If the Medical Council have no such authority as is referred to in questions I, II, or III., then what remedy have the Royal Colleges against the Medical Council, by mandamus or otherwise, for obstructing the Colleges in the lawful discharge of their *duties by refusing registration of students?*	IV. It is not a case for mandamus, but I think an action could be brought on the Chancery side asking for a declaration that the resolution which has been communicated, and to which the Royal Colleges object, is beyond the powers of the Council, and an *infringement of the rights of the* Royal Colleges
V. Generally in the matter.	V. I should advise a meeting between representatives of the Council and the Royal Colleges in order to agree, or, in the event of agreement not being possible, to act in concert in order to obtain the opinion of the court in the least expensive and most satisfactory way.

(Signed) C. A CRIPPS.

MR MUIR MACKENZIE'S OPINION.

I have fully and carefully considered the facts stated in the case and the questions in which my opinion is desired I have also very carefully considered the effect of the provisions of the Medical Acts of 1858 and 1886 which apply to those questions, of which the most important are Sections 18, 19, 20, and 21 of the Act of 1858, and Sections 3 and 4 of the Act of 1886 I have also referred to and considered the resolutions of the General Council, the terms of which are set out at pages 74 and 161 of the Council's Minutes for 1898, which are (I assume) those, or amongst those, to which the Royal Colleges object

My opinion on the questions on which I have been asked to advise is as follows:—

1 The General Medical Council is not, in passing resolutions embodying the opinion and recommendations of the Council with regard to the course of professional study which the licensing bodies ought to prescribe for their students, and communicating those resolutions to the licensing bodies, infringing any rights of the licensing bodies, or acting in excess of the Council's powers.

2 The General Medical Council is acting within its powers and rights in prescribing a regulation to the effect that no medical student shall be registered in the Students Register until he has passed the preliminary examination as required by the Council and has produced evidence that he has commenced medical study at a university or school of medicine or at a scientific institution recognised by one of the licensing bodies and approved by the Council The contention of the Royal Colleges that by prescribing this regulation as one which must be complied with by students as a condition of being registered in the Students Register the General Council is infringing the rights of the Royal Colleges, or acting in excess of its powers, cannot, in my opinion, be maintained

3 The refusal of the General Medical Council to register in the Students Register students who do not comply with the Council's regulations as specified in the Council's resolutions will not give either to the licensing bodies to which the students belong or to the individual students any right to institute or maintain any legal proceedings against the Council.

4 *The General Medical Council has no power to compel the* licensing bodies to comply with the requirements and recommendations contained in the resolutions of the Council with reference to the courses of preliminary study to be gone through by students If the licensing bodies decline to be bound by or adopt the recommendations of the Council there is no form of proceeding by which the licensing bodies can be ordered or compelled to adopt the Council's recommendations The only power which the General Council can exercise in such a case is that of making a representation to the Privy Council. But the General Council can only make a representation to the Privy Council if it appears to the General Council, on the information which it has obtained as to the courses of study and examinations to be gone through in order to obtain the diplomas of a licensing body, by means of the inquiries which the Council can make under the 18th Section of the Medical Act of 1858, and the attendance of members of the Council at the examinations, that the course of study and examinations of the licensing body are not such as to secure the possession by the holders of its diplomas of the knowledge and skill for the efficient practice of their profession

5 I would add in reference to the opinion of Mr. Cripps, Q C, a copy of which has been sent to me that in my opinion no such legal proceedings as are indicated in paragraphs 3 and 4 of that opinion could be maintained in the high court against the General Medical Council. (Signed) M. MUIR MACKENZIE.

In order to facilitate discussion it was agreed that the Council should go into committee of the whole Council for the consideration of the recommendation.

Dr. MACALISTER said that when he moved the adoption of the recommendation in May he pointed out that they of the Education Committee were of opinion that in the present state of the law this Council had no power to compel any body to adopt their views in regard to medical education or registration by any direct action—that all they could do if they were dissatisfied was to make a representation on the subject to the Privy Council He also pointed out that in the case of the registration of students the Students Register was a creation of their own and they had entire control over it—that they could say who should be admitted to it and who should not be admitted. It appeared to him that there was nothing in the law contrary to these views entertained by the Education Committee. Mr. Cripps maintained that they had no power to compel the Royal Colleges to do anything, and Mr. Muir Mackenzie said the same thing, and both counsel said that the rules of registration were matters within the power of the Council and the Council alone. It seemed to him that if they chose to make any rule as to the registration of students the legal opinions they had received entirely supported them as to their power of doing so. The question, therefore, was not a legal one any longer, but a question of wisdom and expediency. The question was whether it was a right and *proper thing that students should or should* not have *finished* their course of education at the ordinary school before they became technically medical students He had no doubt as to the wish and intention of the Council in this matter. The Council had decided that there should be a five years' course of medical study. There were many utterances of the Council on the subject, including this one: "That the period of professional study between the date of registration as a medical student and the date of the final examination for any diploma entitling to registration shall be a period of *bonâ fide* study during not less than five years" He had before him a list of nearly all the schools recognised by the Royal Colleges in England. Six months ago he mentioned three higher grade board schools, now called higher elementary schools, supported out of the rates, intended for children of the elementary education stage. By a recent decision of the Council of the Board of Education such schools would be open for the scientific instruction of children of not more than 15 years of age—that was to say, the child must leave such a higher grade school at the end of the year in which it was 15 years of age These schools were very well fitted for teaching chemistry and physics in their elementary aspects to children of that age, and they qualified for the examinations of South Kensington and for earning grants, but would it ever have crossed anybody's mind that such a school would be regarded as a medical school? He was credibly informed that two at least of these schools advertised that they were medical schools recognised by the Royal Colleges. Where was this going to stop? There were 100 or more schools recognised for this purpose throughout the United Kingdom. Looking at the grade or class of school already admitted, it was very difficult indeed to find a precedent for the rejection of any school, whether public or private, or board or anything else. The Royal Colleges had entered upon a course to which there was no obvious end. They would have to recognise all the schools in the country because in their own interests the various schools would have to fit themselves up with appliances for teaching physics and chemistry, That he would call the *reductio ad absurdum*. These schools were never intended to be medical schools and they were never intended by this Council to be so called. The question was whether this Council should approve of the thing if they could not stop it His own feeling was that they would be doing a most disastrous thing for medical education if they approved it. They could not control but they could at least say that the Students Register, which was issued by the authority of this Council, should not contain the names of these places, which they could not honestly approve as places of medical education. That was the only method which they had of checking what they thought was apt to become an abuse. For himself he had been wondering whether it would not do for neither this Council nor the Colleges to have anything to do with these secondary schools. How would it do if they said that no student should be registered unless he had passed a recognised preliminary examination and unless he had *studied at a recognised medical school?* If they wiped out these scientific institutions this Council would be saved all question of recognition and so also would be the Colleges. This, of course, would require to be accompanied by something else. They would have to allow that when a student had passed the recognised preliminary examination in general education he might be admissible to the preliminary scientific examination right away without having necessarily entered a medical school, and then when he did enter a medical school he would register, having got that examination behind instead of in front of him.

The PRESIDENT: That would be four years.

Dr. MACALISTER said it would still mean five years. The five years contemplated by that Council were five years of medical study, and if the schools had elaborated their education so as to include elementary drilling in chemistry, physics, and biology so much the better for the pupils who had attended them. He thought that students were as much entitled to the benefit of their education in these subjects as in Latin, or Greek, or French, or German. That was the suggestion which he had to offer. It would, of course, mean asking the Education Committee to draw up detailed rules, but it seemed to him that it would solve the difficulty and avoid a conflict between recognition and approval and all trouble with regard to the inspection of these secondary schools.

Mr. TEALE suggested that there might with advantage be a conference between the Council and the Royal Colleges.

Sir CHRISTOPHER NIXON protested that the scheme sketched by Dr. MacAlister would revolutionise the five years' medical curriculum, because if it could be once shown that favour was given to large bodies like the Royal Colleges of Physicians and Surgeons of England concessions would have to be made all round. The medical profession looked to this Council to secure uniformity of action among the medical authorities of the United Kingdom, and it should not be shown them that, after all, the Council had only the power to express pious opinions.

Dr. GLOVER, who regretted that the Council had to face such difficulty at the fag end of their present session, rose to propose a motion which he hoped would bring the discussion to a close. What he wished to move was:—

> That the President of the General Medical Council and the chairman of the Education Committee, with two other members of the latter, be empowered to meet the representatives of the Colleges with a view to the amicable settlement of this question, as suggested by Mr. Cripps, Q C., in his answer V. of his opinion, and to report to the Council.

Such a resolution, he thought, would bring the present crisis to an end. They would not come to any great disaster if they let things remain as at present, and he urged that the motion should be passed until at least next session.

Mr. TEALE seconded the proposal.

Dr. BRUCE trusted that the Council would make their five years' curriculum really five years' medical study, which he believed might be secured by the adoption of such a scheme as that put forward by Dr. MacAlister. There were deficiencies in the existing arrangement that might be remedied. For instance, the teaching of chemistry should be made far more thorough. Two or three years should be given to the subject in order to let the matter set in the student's mind, but he spoke from experience when he said that a great deal of the chemistry teaching of the present day was no more than tuition to enable students to secure a pass. Then there was the fifth year. Originally that had been proposed so as to obtain a full year for clinical study, but he challenged anyone to say that a tithe of the fifth year was given up to clinical study.

Mr. POWER mentioned that they used to have chemistry and biology taught in the second year. If they were going to eliminate them there would be this difficulty—What would they put in place of chemistry?

Dr. BRUCE: Medical chemistry.

Mr. POWER considered that Dr. Bruce was drawing a distinction that would not hold water. He should like the subjects in question taught to young people and to see them brought up to the quality given in the medical schools He hoped that Dr. MacAlister's scheme did not contemplate a sixth year of study. It seemed to mean that.

The PRESIDENT pointed out that members were wandering through matters that were not before the Council. The only subject before them was Dr. Glover's motion. In answer to Mr. HORSLEY, he added that instructions to a committee could not be given until the committee was appointed.

Dr. MCVAIL suggested that a vote on the motion should be taken at once.

Sir JOHN BATTY TUKE said that as chairman of the Education Committee he had held his tongue up to that moment simply in the hope that he might get some guidance out of the difficulty the Council were in. For many months past he had given much thought to this question, but he must confess that he still felt himself absolutely unable to come to any conclusion whatever. He could not vote for Dr. Glover's proposal because it meant only another postponement of settlement of the difficulty and he did not think the old way should be trod over time and again without result. As an individual member of the Council he wished to give expression to what he believed was in the mind of nearly everyone present, and that was this, that the Council were urgently called upon to decide whether the General Medical Council was the Council of Medical Education or whether the Council of Medical Education was to be put into the hands of the two great English Royal Colleges. That, to his mind at any rate, was the whole matter. The two great Colleges laid down regulations differing from those of the General Medical Council. These regulations, if continued, must be followed in the case of the minor bodies, and therefore the Colleges became practically the arbiters of medical education in this country. There was only one way in which to meet the case, and that was to fight it to the bitter end. He would rather fight and lose than go on in the way in which the Council were going on now. There was a demand for a new Act. If there was a new Act it would simply end the Council.

Dr. PYE-SMITH urged that if the Council were to embark on a legal struggle with the Colleges it would be to them a perfectly ruinous strife. They should go to almost any point sooner than go to law. If they gave up mutual recriminations he believed that they might come to a settlement.

Sir WILLIAM GAIRDNER said that he had seen nothing to disturb his original opinion that the Royal Colleges were moving in the right direction in trying to get elementary science teaching introduced into what Irish members called grammar schools, for he thought that the whole trend of the future would be to bring elementary science teaching into the elementary schools and make the upper forms of these schools places in which the elementary ideas of science could be communicated as the first portion of medical education. No consideration would induce him to evade in any way an attempt to turn science more broadly into the so-called grammar schools. On the other hand, he thought that the Colleges, as a matter of expediency, were wrong in taking upon themselves to lop off, as it were, one of the five years of medical study as set forth in the Medical Council's scheme. Now that they had taken the step he strongly wished that something like what Dr. MacAlister had suggested could be adopted as likely to bring them out of their difficulty, and meanwhile he should support Dr. Glover's motion.

Dr. MCVAIL, on the other hand, was opposed to Dr. Glover's proposal on the ground that it meant delay for another six months at least and the Council might take it for granted that the triple board in Scotland and the double board in Ireland would before the end of the period named have made their arrangements on the lines of those of the English Colleges, so that if the Council went into conference with the Colleges now they would be losing six months that they would never recover.

Mr. BALL contended that the matter under discussion was one of vital importance to the Irish medical corporations, and his belief was that if a large body like the Conjoint Board of England insisted on continuing in the course they had adopted in respect to the preliminary medical subjects other licensing bodies would have to follow so as to be able to face the very great competitive advantage which the English Conjoint Board would have.

A division was then taken, but as only eight members voted in support and the rest against Dr. Glover's proposal was rejected.

Dr. MACALISTER, seconded by Dr. MCVAIL, moved the adoption of Recommendation I., the text of which appears above.

Dr. PAYNE agreed with the spirit of Dr. Pye-Smith's remarks and expressed the hope that nothing like legal proceedings as between the two bodies interested would be adopted. Still, it appeared to him that if legal proceedings were to be avoided some concession was needed and that concession would require not to be a one-sided concession. The difficult matter was to find something that would prove acceptable.

Mr. HORSLEY, remarking that he had not spoken on this question himself, but considered that it had been amply argued by other members of Council, moved the closure.

Dr. BENNETT seconded the motion.

On a division 21 voted for the closure and 5 against. Three members did not vote and two were absent.

Sir DYCE DUCKWORTH explained that one reason why he had voted against the closure was that he had been seeking an opportunity to speak all the afternoon and had not obtained it.

The Council proceeded to a division on the proposal to adopt Recommendation I., with the result that 21 voted for the recommendation and 5 against. Again three members did not vote, while two were absent.

The Council resumed and approved of the report of the Committee's adoption of the recommendation.

Dr. MACALISTER moved—

> That the Royal Colleges should be informed that the Council had resolved to adhere to their regulation in regard to the registration of medical students which came into effect on the 1st of January, 1900.

Sir J. BATTY TUKE seconded.

Sir DYCE DUCKWORTH advised the Council to consider the full gravity of the position they had reached in deciding to send to the Royal Colleges intimation of their adherence to their former regulation in regard to the registration of medical students. He could not say what would be the result, but his own impression was that the Council's decision could not possibly receive the assent or the agreement, at all events, of his College—the Royal College of Physicians of London. The state of tension would continue in the future as it had been going on for the last 12 months, and he supposed the ultimate result, if the Council also resolved to adopt their Recommendation III., would be that the Royal College of Physicians would open its own office for registration. He reminded the Council that the Royal Colleges in question had to maintain intact the rights and privileges which they possessed under Acts of Parliament and Royal Charters, and their officers had to yield nothing to anybody. That they meant to do, and recognising fully the state of tension which at present existed and lamenting it very much he wished to say with an impartial voice—perhaps this was one of the last times he was using it in the General Medical Council—that he did think that the Council were overstepping their boundaries and going outside the Act in order to encroach in any way on the privileges of the Royal Colleges. He did not think that members of the Council realised what would happen if the Conjoint Board of Scotland was to be treated in the way the English Royal Colleges had been treated. There were medical bodies in this country who took no precautions whatever in respect to education, but the General Medical Council for some reason did not touch them. If the two English Royal Colleges were on all fours with these bodies, how was it that the state of tension between the Colleges and the Council had arisen?

Dr. MACALISTER: The Royal Colleges are the only bodies that have raised objection.

Mr. BROWN: If there are others name them.

Sir DYCE DUCKWORTH: The Scottish Conjoint Board have acted in the same way as the English Conjoint Board.

Sir JOHN BATTY TUKE and Dr. HERON WATSON, the representatives of the Scottish Conjoint Board, declared that that was absolutely not the case.

Sir DYCE DUCKWORTH: At all events, the Scottish Board accept all the bodies who are accepted by the English Board, and I think it is out of place and beneath the dignity of a body like the General Medical Council to attempt to enforce proceedings which they have no power to enforce.

Sir WILLIAM THOMSON reminded the Council that their regulations were not formed with regard to any particular body, but for the direction and control, if they had any control, of all the licensing bodies, and the matter came before the Council because the Royal Colleges in England alone among the bodies systematically disregarded the advice and regulation of the Council. What he had prophesied had happened, for it had come out in the course of the debate that some of the schools recognised by the Colleges termed themselves medical schools and advertised themselves as medical schools. If this Council were to have any say in medical education they could not stand by and see such a thing. It was casting a slur upon the dignity of the profession to which they belonged. Something had been said about conciliation, but he would point out that the representatives of the two Colleges had voted against the proposal for a conference. That meant, what he supposed they should have to face presently, war If the Royal Colleges in England had rights to defend, so also had the bodies in Ireland and Scotland, and they were just as jealous of them as the English Colleges. It had been said that if the English Colleges were allowed to go unchallenged the other Colleges would return to the four years' curriculum and he was authorised to say that his College would certainly do so. There surely was no reason why the Irish and Scottish bodies should be placed at a disadvantage in this respect. He therefore hoped that the Council would adhere to their regulation.

Mr. BRYANT protested against the imputation that the Royal Colleges in England had reduced the curriculum from five to four years. They had done nothing of the sort. The Colleges maintained that the best thing for a man to do in his professional education was to get rid of these preliminary subjects in his first year and not allow them to intrude into the work of the subsequent years. Some members had spoken as though the Colleges had nothing but board schools on their list, but he would remind the Council that the list contained such schools as Harrow, Charterhouse, Epsom College, and the Newcastle College of Science. In these and many other schools appearing on the list the teaching was infinitely better than in many of the schools connected with hospitals.

Dr. MACALISTER: Does Mr. Bryant mean to suggest that it is not true that there are board schools on the list?

Mr. BRYANT: Not at all.

Dr. MACALISTER: Why, I have a string of them here.

Mr. BROWN urged the Council to stand by their regulation.

The motion was then put and carried by 20 votes against 5.

On the motion of Dr. MACALISTER, seconded by Dr. BENNETT, two resolutions were passed, one to the effect that it be remitted to the Executive Committee, with such advice as they might think fit to obtain, to draw up and submit to the Council for approval a list of scientific institutions study at which shall qualify for admission to the Students Register; and the other to the effect that in the meantime individual applications for students' registration which the Registrar in the absence of special instructions cannot at present accept be referred to the Students' Registration Committee as exceptional cases to be dealt with on the lines laid down by the Council.

This closed the discussion of the subject.

Examinations of the Apothecaries' Hall of Dublin.

Sir DYCE DUCKWORTH presented reports from the Examination Committee with regard to the inspection of certain of these examinations.

The motion that the reports be received and entered on the minutes was under discussion when the Council adjourned.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Lemberg:* Dr. Victor Wehr has been promoted to an Extraordinary Professorship of Surgery; Dr. Gustav Bikeles has been recognised as *privat-docent* of the Anatomy of the Nervous System.—*Moscow:* Dr. P. Uskoff has been recognised as *privat docent* of Surgery.—*Naples:* Dr. Giulio Ascoli has been recognised as *privat docent* of Medical Chemistry.—*Tubingen:* Dr. B. Honsell has been recognised as *privat-docent* of Surgery.

THE BRITISH GYNÆCOLOGICAL SOCIETY: ANNUAL DINNER.—The annual dinner of the British Gynæcological Society was held at the Café Monico on Nov. 29th, when a most enjoyable evening was spent. Dr. W. J. Smyly, the President, was in the chair. Among the guests present were the President of the British Medical Association, Sir Henry Roscoe, F.R.S. (Vice-Chancellor of the London University), Sir William Thomson, Professor C. B. Ball, Dr. Lombe Atthill (President of the Royal Academy of Medicine in Ireland), Dr. J. Watt Black, Sir James Dick, K.C.B., R.N., Sir Christopher Nixon (President of the Royal College of Physicians in Ireland), Dr. R. Milne Murray (President of the Edinburgh Obstetrical Society), and Mr. Robert Jones. The toast of "The Guests" was (in the unavoidable absence of the Director General of the Royal Navy) responded to by Sir James Dick and Sir William Thomson. The latter referred to the work done by the Irish Hospital in South Africa and to its mobility. He described the march from Bloemfontein to Pretoria with Lord Roberts, dwelling upon the endurance, discipline, self-denial, and courage of the British soldier, and warmly repudiating the imputations which had been recently uttered by Mr. Kruger with regard to the British Army. He deplored as exaggerated and unpatriotic letters which had appeared with regard to the treatment of our soldiers in the campaign. He had not seen anything himself to justify such representations. Considering the exigencies of war and its first demands everything that could be done had been done. The Palace of Justice, a splendid building in Pretoria, in which they were located, offered exceptional advantages for the care of the sick and wounded. Within four days of its being given up to them they were able to accommodate 80 wounded and their results would compare favourably with those of home hospitals. The President of the British Medical Association in proposing the toast of "The British Gynæcological Society" referred to the foundations of the great obstetrical societies of Edinburgh and London, the latter being of a comparatively recent date as compared with the former, and he dwelt on the progress which made the foundation of a gynæcological society a necessity from the rapid advance in gynæcological science apart from obstetrics. He traced the early history of the society and referred to the good work which it had done and the great advantage which it had been to the profession at large by the diffusion of knowledge in this particular branch, and in coupling the toast with the name of the President he alluded to the high position which that gentleman occupied as an obstetrician. The President suitably replied. The toast of "The Universities and Medical Corporations" was proposed by the President of the Obstetrical Society of Edinburgh. He emphasised the objects of a university for the furtherance of research, quite apart from its teaching functions, expressing a hope that the new University of London would proceed on these dual lines which would insure its ultimate success. He believed that the corporations generally did their duty conscientiously with regard to the fitness of those whom they admitted into the profession and that they had the confidence of the public. Sir Henry Roscoe, who replied for the universities, briefly sketched the outlines on which the University of London would be conducted. There would be the same liberal attitude to all, both men and women, who could take advantage of its teaching and degrees. At the same time the high standard which had been aimed at by the London University in the past would be strictly maintained. He referred to the Institute of Preventive Medicine as a great means in the advancement of medical science, so great that it was hardly appreciated to the extent that it ought to be, and to which the liberality of Lord Iveagh had so largely contributed. Sir Christopher Nixon replied for the corporations in an interesting speech. The Westminster Glee Singers contributed considerably to the success of the evening.

LITERARY INTELLIGENCE. — Messrs. W. B. Saunders and Co. announce the immediate publication of the following works:—Beck's Fractures; Bohm, Davidoff and Huber's Text-Book of Human Histology, including Microscopical Technic; Dorland's Illustrated Medical Dictionary; Friedrich and Curtis on the Nose, Throat, and Ear; Heisler's Text-book of Embryology; Jackson's Manual of Diseases of the Eye; Leroy's Essentials of Histology; Levy's Elements of Clinical Bacteriology; Nancrede's Lectures on the Principles of Surgery; Ogden's Clinical Examination of the Urine and Urinary Diagnosis; Pyle's Manual of Personal Hygiene; Salinger and Kalteyer's Modern Medicine; Scudder's Treatment of Fractures; Stoney's Surgical Technic for Nurses; and also new editions of the following works:—Anders' Text book of the Practice of Medicine; Da Costa's Modern Surgery; Garrigues' Diseases of Women; Howell's Text-book of Physiology; Hyde and Montgomery's Venereal Diseases; McFarland's Text-book upon the Pathogenic Bacteria; Senn's Pathology and Surgical Treatment; Stengel's Text-book of Pathology; Stevens' Manual of the Practice of Medicine; and Warren's Surgical Pathology and Therapeutics.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION—This association held its autumn dinner on Nov. 28th, at the Hotel Cecil, under the presidency of Inspector-General W. H. Lloyd, R.N., honorary surgeon to the Queen. The company numbered upwards of 100 members of the association and their guests. After the usual loyal toasts the health of "Our Defenders" was proposed by Dr. Stokes and responded to by General Sir William Olpherts, V C., G.C.B, a guest of the association, who spoke in a hearty and emphatic manner in praise of the healing art, while he warned his hearers against the materialistic view that sees in a patient only so much flesh and blood. Major Clifford of the 1st Royal Engineers (Volunteer) also responded. Dr. James Little proposed the guests, for whom the Rev. Sir Borradaile Savory, rector of St. Bartholomew the Great, E.O, and Mr. Alfred Perceval Graves, the author of the famous ballad "Father O'Flynn," replied. Between the speeches there were interspersed songs from Miss Lilian Moreton and Mr. J J. de Z Marshall. Previously to the dinner the autumn meeting of the association was held under the presidency of Inspector-General W. H. Lloyd, when a resolution was passed in the following words with reference to the death of a famous member of the association, the late Sir William Stokes: "That the honorary secretaries be instructed to convey to Lady Stokes an expression of the deep sympathy felt by the members of the Irish Medical Schools and Graduates Association in her recent bereavement and of the loss they had sustained through the death of one whose conspicuous talent, genius, and eloquence not only won for him the admiration of his countrymen, but secured for him a world-wide reputation, and whose distinguished services to the association entitled him to their warmest gratitude." Dr. T. Gilbart Smith, the chairman of the council, reported that a letter had been sent to Field-Marshal Lord Roberts, V.C, inviting him to honour the association with his presence at a dinner upon his return from South Africa.

MUNIFICENT BEQUEST.—The late Mr. Edward Mackeson of Hyde-park-square, London, has bequeathed £20 614 to the Surgical Aid Society which supplies gratuitously surgical instruments of all descriptions to the afflicted indigent poor.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—The Cardiff Town Hall Committee on Dec. 3rd decided to recommend the town council to grant five acres in Cathay Park, free of cost, for the new building of the University College of South Wales and Monmouthshire. The value of the site is £20,000.

UNIVERSITY OF CAMBRIDGE.—During the past year 49 candidates have presented themselves for examination in sanitary science and 35 have obtained diplomas in Public Health. The annual appointments to syndicates and boards include the following:—Dr. D. MacAlister, General Board; Dr. H. K. Anderson, State Medicine Syndicate and Medical Board; Dr. Alexander Hill, Board of Agricultural Studies.

THE FIRST ANNUAL DINNER OF THE OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—Under the chairmanship of Sir William Dalby, the President, the first annual dinner of this society was held on Dec. 3rd in the Regent Saloon of the Café Monico. There were present as guests of the society the presidents of the leading medical societies—namely, Dr. F. W. Pavy, President of the Royal Medical and Chirurgical Society; Mr. John H. Morgan, President of the Medical Society of London; Mr. Watson Cheyne, President of the Pathological Society of London; and Sir Richard Douglas Powell, Bart., President of the Clinical Society of London. After the toast of "The Queen" Sir Thomas Smith proposed "The Otological Society of the United Kingdom" in an amusing speech, which had, however, its serious side. When he began to practise, he said, the condition of aural surgery was rudimentary; it certainly was not a science; it might have been called an art, but perhaps it would be more correct to designate it as being then a department of practice. Referring to the methods of aural treatment he instanced the case of a successful aurist who practised entirely with the assistance of wool off the sheep's back and described this somewhat unscrupulous specialist's methods in detail. The burnt onion, Sir Thomas Smith added, was then a means in vogue of treating aural disease, and it must have been extensively practised, for even now in the upper circles of society people can be heard asking an unfortunate individual with ear trouble: "Have you tried the burnt onion?" But after Toynbee made his admirable studies of the morbid anatomy of the ear the foundation of scientific otology was laid, and Sir Thomas Smith concluded by congratulating the society on its foundation, because such a society afforded the means of organisation and discipline and concerted action in the investigation of aural diseases. The toast was replied to by the President, who said that he was glad to see there the Presidents of the principal societies in London. He took it that those gentlemen had come to dine with them not as an empty compliment only, but in order to let them know that they believed that the position of aural surgery had very greatly improved. It meant that they recognised the necessity for the Otological Society and approved of their work as found in the Transactions of the Society, but he thought also that they came for something more—namely, to welcome the Otological Society in a kindly spirit as a sister society. He was proud to stand there and say that he was the first president of a society which he believed would be of very great use indeed in the surgical world. The idea was to make the society as cosmopolitan as possible and to maintain the best interests of aural surgery in the United Kingdom. Dr. A. W. Sandford of Cork proposed the toast of "The Guests," which was replied to by Sir Richard Douglas Powell, Dr. Pavy, Mr. Pridgin Teale, and Professor Young. Sir Richard Douglas

Powell thought that it was a great matter for congratulation that in a branch of science such as that of otology they should have a society founded for the concentration of its work and interests Dr. Pavy, as President of one of the oldest societies, said that so far from grudging the establishment of the Otological Society, he considered that the result of its foundation would be to effect an advancement in aural surgery. Mr. Teale and Professor Young spoke in a similar sense.

IN MEMORIAM.—A brass tablet has been placed in the parish church of Palgrave, near Diss, by the Marquis and Marchioness of Northampton, in memory of Mr J. E Simpson, L R C.P. Lond, M.R C S. Eng, who accompanied them on their visit to the Nile but who died suddenly in Cairo in March last

THE British Medical Temperance Association held a meeting on Nov. 30th in the rooms of the Medical Society of London. Professor Sims Woodhead presided, and a paper was read by Dr. Heywood Smith on Alcohol in Relation to Women. He gave reasons for believing that female intemperance was increasing owing to several causes He urged that one of the most urgently needed reforms was the abolition of shop licences. After a discussion in which, amongst others, Dr. R. Paramore, Dr. C. R. Drysdale, Mr. E. J. Donbavand, Dr. J. J. Ridge, Mr. W. McAdam Eccles, Mrs Drysdale, and the President took part, the following resolution was unanimously adopted:—

> That this meeting having had under its consideration the prevalence of intemperance amongst women and its effects upon the health of the community, expresses its conviction that the existence of shopkeepers' licences promotes female intemperance and believes it to be a matter of urgency that they should be abolished

A vote of thanks to Dr. Heywood Smith was also passed.

HARVEIAN SOCIETY OF LONDON.—The annual dinner of this society took place at the Café Monico on Nov. 29th, and was attended by considerably over 100 members of the society and their friends. The chair was occupied by the President, Dr. W. H Lamb. Among the guests were the President of the Royal College of Physicians of London and the Presidents of the Medical Society of London, the Royal Medical and Chirurgical Society, the Pathological Society of London, the Clinical Society of London, the Obstetrical Society of London, the Hunterian Society, and the West London Medico-Chirurgical Society. The toast of the evening, "Success to the Harveian Society," was proposed by Mr. John H. Morgan, President of the Medical Society of London, and acknowledged by the Chairman Mr Edmund Owen in a humorous speech proposed "The Sister Societies and Guests," and coupled the toast with the names of Dr W S Church and Dr. F W. Pavy, who both spoke in reply. The health of the President was proposed by Mr. George Eastes, who referred to the valuable services of Dr. Lamb to the society. A most excellent programme of music and recitations was provided by Mr. Bantock Pierpoint, Mr. Whitworth Milton, and Mr Frank Braine.

NOTTINGHAM GENERAL HOSPITAL.—The 118th anniversary of this hospital was celebrated on Nov 29th, when the President, the Mayor, members of the corporation, and governors attended a church service and afterwards assembled in the grand jury room of the Shire Hall for the transaction of general business. The service collection amounted to a little over £1230. The report stated that during the half-year ending June 30th last the number of patients admitted and discharged was as follows:—Admitted: remaining in hospital, Jan. 1st, 1900, 170, accidents, 164; emergencies, 647; by recommendation, 230, total, 1211, Discharged: cured, 265; to the Cedars, 312; to convalescent homes, 10; relieved, 23; made out-patients, 250; at own wish, 30; unsuitable, 23; *in statu quo*, 22; death, 118; remaining in hospital July 1st last, 158; total, 1211 The daily average of in-patients was 170, and the total number of out patients was 4419, of which casualties numbered 997. The Jubilee Wing was practically completed, and consequent on this an addition of 55 beds had been made to the hospital The pressure on the hospital for admission had been very great during the half-year, as many as 190 cases having been waiting for beds at one time The pressure would now be able to be relieved by the extra number of beds. The board, however, wished to draw the attention of the governors to the necessity of increasing the annual income of the hospital. Unless this was done the full benefit of the great efforts made for the erection of the Jubilee Wing would not be secured.

HOSPITAL MINSTRELS—An entertainment was given by the male staff of Gore Farm Hospital, designating themselves the "Hospital Minstrels," on Thursday, Nov. 29th. The audience comprised male patients and the general staff to the number of 350. An excellent programme was gone through

INFANT FEEDING.—On the suggestion of Mr S. Noy Scott, medical officer of health, the Plympton (Devon) Rural District Council resolved, at the meeting held on Nov. 30th, that a leaflet containing simple rules for infant feeding should be distributed by the registrars at the registration of each child's birth.

WATER-SUPPLY OF WADEBRIDGE.—The new waterworks which have been constructed at Wadebridge, Cornwall, were formally opened by Mrs. Ford on Nov. 28th. Mrs. Ford has given the Urban District Council the right to a number of springs from which the water-supply is derived. The reservoir is of 220 000 gallons capacity and the whole scheme has been carried out at a cost of about £6000.

ROYAL UNITED HOSPITAL, BATH—The annual meeting of the Ladies' Working Association of the Royal United Hospital, Bath, was held on Nov 26th, under the presidency of the Bishop of Bath and Wells. The report showed that during the past year this useful society had provided 1082 articles of the value of over £200, and that consequently the funds of the hospital had not been called upon to provide any linen, blankets, or quilts for the institution.

A DINNER TO SIR GEORGE HARE PHILIPSON.—On Thursday, Nov 29th, the Southern Branch of the Durham University Medical Graduates' Association entertained Sir George Hare Philipson, the founder of the association, at a complimentary banquet at the Café Royal, Regent-street, London, W Some 60 members and their friends were present, and letters and telegrams of congratulation, expressing hearty good wishes, were received from all parts of the south of England from members whose engagements prevented their attending to convey personally their felicitations to their old teacher. Dr. F. S Palmer of East Sheen, vice president of the association presided "The Guest of the Evening" was eloquently proposed by Sir James Crichton Browne, and modestly acknowledged by Sir George Philipson The health of "The Visitors" was proposed by Dr Frederick Spicer and responded to by Sir Walter Foster, M P. Sir William Turner proposed the health of the chairman, and Sir George Hare Philipson that of the honorary secretary, Dr T Outterson Wood.

PRESENTATIONS TO MEDICAL MEN.—Mr. John J Nason, M B. Lond, M R C S Eng., on his resignation after 40 years' official connexion with the Stratford-on-Avon Hospital as an honorary medical officer, is to be presented with a testimonial in recognition of his valuable services to the institution He has consented to sit for his portrait, which is to be hung in the board room, and he will be the recipient of an illuminated address, accompanied by a piece of plate —Mr James Thomas Neech, L R C P. Edin., L F.P.S Glasg., D.P H. Vict., was presented with a dinner-gong on Nov. 7th by his patients and friends at Tyldesley on his leaving the district to take up the duties in connexion with his new appointment at Halifax as a medical officer for the borough. —Mr. Thomas Carter Mitchell, M.R C S. Eng, of Topcliffe, Thirsk, Yorks, on the occasion of his resigning his practice to his son, Mr. Talbot Carter Mitchell, L S.A., and of retiring from active professional life, has been the recipient of a testimonial from the inhabitants of Topcliffe and the surrounding district in recognition and appreciation of his long professional activity amongst them. The testimonial consisted of an illuminated address in a gilt frame, a solid silver salver, and a purse of sovereigns. On the salver was engraved the following inscription:—"Presented by the inhabitants of Topcliffe and district to Thomas Carter Mitchell, Esq, M R C S, F S.A, on his retiring from the practice so ably and faithfully carried on for forty years. November. 1900"—Dr. E Magennis of Harcourt street, Dublin, was recently the recipient of an address and presentation from the medical men resident in the Lurgan Union The presentation consisted of a Harvard chair for his consulting-room, which bore on it a silver plate with the following inscription:—"Presented to Edward Magennis, Esq., M.D., J.P., by his fellow practitioners in and around Lurgan and Portadown on the occasion of his leaving for Dublin, as a token of their good fellowship and esteem. September, 1900." The address was signed by every medical man residing in the district.—At Llanelly on Nov. 29th at a meeting of the South Wales Branch of the British Medical Association, Mr. D. A. Davies, M.B. Lond., M.R.C.S. Eng., of Swansea, was the recipient of a testimonial consisting of a tea and coffee service.

CARDIFF INFIRMARY.—An effort is being made in Cardiff to free the infirmary from its debt of over £11,000. The mayor has opened a fund for the purpose and already over £1500 have been received. The *Western Mail* newspaper also has started a "Shilling Fund," which is being well responded to.

THE "BRITISH INSTITUTE OF MENTAL SCIENCE."—Before the Torquay bench of magistrates on Nov. 26th a young woman named Arundel was charged with professing to tell fortunes by palmistry with intent to deceive. Outside the defendant's rooms were printed the letters "F.B.I.M.S.," which her solicitor explained meant "Fellow of the British Institute of Mental Science." The magistrates eventually fined the woman 10*s*. and costs.

A CASE was recently heard in the C[illegible]t of Queen's Bench before Mr. Justice Wills, in which Dr. Richard Henry Barker, a medical man practising at Hungerford, sued the executors of the late Mr. James Thring Coxe to recover £201 17*s*. 9*d*. for medical attendance and fees paid to a specialist. Dr. Barker had attended Mr. Coxe, who was a man of means, for a period of 20 years. Previously to his death Mr. Coxe had suffered from acute gout and gangrene of one foot. Dr. Barker saw him every morning, for which, he said, his fee was half a guinea, and also, by Mr. Coxe's special request, at 9 o'clock every evening, when he remained with him for between half and three quarters of an hour. He also had to drive three miles from his own house to Mr. Coxe's residence, and he charged two guineas, besides supplying medicine. The defence was that the charges were excessive and that Mr. Coxe had given Dr. Barker £100 as a present shortly before his death. Mr. Justice Wills gave a judgment for the plaintiff. With reference to the £100 he said that if it were given to diminish the plaintiff's charges it could not be looked upon as a present

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Medical Men in the New Parliament.

THE Parliament which was opened by Royal Commission on Monday, Dec. 3rd, is not by any means remarkable for the number of medical men it contains. The number is even less than in the preceding Parliament, for while four old faces disappear, there is only a single new one by way of compensation. The newcomer is Mr. F. Rutherford Harris, a gentleman well known in connexion with South African administration and finance, who at the General Election won the seat for the Monmouth District of Boroughs. Mr. Harris is a Licentiate of the Royal College of Surgeons of Edinburgh and some 20 years ago when he was a very young man he went to South Africa to pursue his profession, which he did until other interests grew upon him. The four medical members of the last Parliament who do not appear in the present one are Sir Charles Cameron (Bridgeton Division of Glasgow), Mr. J. F. Fox (Tullamore Division of King's County), Dr. G. B. Clark who was defeated in Caithness shire by Mr. Leicester Harmsworth, and Sir George Pilkington who was defeated in the Southport Division of Lancashire by Mr. Marshall Hall, Q.C., himself the son of a distinguished physician, the late Dr. Alfred Hall of Brighton. The members of the last Parliament who reappear are Mr. Robert Ambrose, Mr. John Dillon, Dr. Farquharson, Sir Walter Foster, Sir Michael Foster, Mr. R. J. Price, Sir John Batty Tuke, Dr. M. A. MacDonnell, Dr. C. K. D. Tanner, and Sir Robert Finlay, the Attorney-General, who is an M.D. of the University of Edinburgh. With Mr. Rutherford Harris this list makes a total of 11 medical men in the new Parliament. Of the eight members who backed the Midwives Bill of last session there are six in the new Parliament—viz., Mr. Tatton Egerton, Sir William Hart-Dyke, Mr. Schwann, Mr. Heywood Johnstone, Mr. Flower, and Mr. Tennant.

Opening Proceedings.

On the opening day of the session the House of Commons devoted its short sitting to the election of a Speaker. The only nomination for this office was Mr. Gully, Q.C., who held it during the last Parliament and a portion of the Parliament preceding. His nomination was seconded by Dr. Farquharson. The second and third days of the session were mainly occupied with the swearing-in of members.

The Work of the Session.

The session is a special one, called for the single purpose of voting additional money for the conduct of the war in South Africa. It is therefore not proposed to introduce the ordinary class of Bills, but to reserve them for the normal session commencing early in the New Year. The debate on the Address will, however, afford opportunity for the discussion of prospective legislation.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ASH, T. LINNINGTON, M.R.C.S., L.R.C.P. Edin., L.S.A., J.P., has been appointed Honorary Surgeon in charge of the Winsford Cottage Hospital.

BEALE, H. R., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

BOYD, STANLEY, F.R.C.S., has been appointed Consulting Surgeon to the Paddington Green Children's Hospital, London, W.

BURD, G. VANHOUSE, M.R.C.S., L.R.C.P., L.M. Edin., has been appointed Honorary Assistant Surgeon to the Winsford Cottage Hospital.

BURFIELD, T., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

BURGHARD, FREDERIC F., F.R.C.S., has been appointed Surgeon to In-patients to the Paddington Green Children's Hospital, London, W.

BUTTERFIELD, FRANK, M.B. Lond., has been appointed Senior House Surgeon to the Blackburn and East Lancashire Infirmary.

BUZZARD, THOS., M.D. Lond., F.R.C.P., has been appointed one of the Representatives of King's College, London, on the Senate of the University of London, vice Lord Lister, resigned.

CLARKE, H. H. R., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

CUNNINGHAM, J. F., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

DUDGEON, L. S., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

EDWARDS, T. H., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

HARVEY, FRANK, M.R.C.S., L.S.A. Lond., has been re-appointed Medical Officer of Health by the Padstow (Cornwall) Urban District Council.

HARWOOD, H. M., M.A., M.B., B.C. Cantab., has been re-appointed House Physician to St. Thomas's Hospital.

HAWKINS, C. L., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

HEDLEY, E. W., M.A., M.B., B.C. Cantab., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

HOGARTH, R. G., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Children's Hospital, Nottingham.

JOHNSON, ROBERT G., M.R.C.S., L.R.C.P., has been appointed Registrar and Pathologist to the North London Consumption Hospital, Hampstead, N.W.

KINGDON, E. OWEN, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Assistant Surgeon to the Winsford Cottage Hospital.

KINLOCH, R. B., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

LEIGH, J. DICKINSON, F.R.C.S. Edin., D.P.H., has been appointed Certifying Surgeon under the Factory Acts for the Scarborough District.

LOCKYER, CUTHBERT, M.D., B.S., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Honorary Gynæcologist, Plaistow.

MCGREGOR, ROBINA, M.B., Ch.B. Edin., has been appointed House Surgeon to the Victoria Hospital for Sick Children, Hull.

MARTIN, A. E., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

MENNELL, Z., L.R.C.P., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.

NITCH, C. A. R., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

SELOUS, C. F., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

SIDEBOTHAM, G. W., M.R.C.S., has been appointed Certifying Surgeon under the Factory Acts for the Broughton Astley District of Leicestershire.

SIMPSON, ALEXANDER, M.A., M.D. Aberd., has been appointed Medical Superintendent of the New Lancashire County Asylum, Winwick, Newton-le-Willows.

SKERRATT, F. B., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.

STABB, EWEN C., F.R.C.S., has been appointed Surgeon to Out patients to the Paddington Green Children's Hospital, London, W.

STANFORD, W. B., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer for the Hollingbourn Union.

SWAIN, PAUL, F.R.C.S. Eng., L.S.A., has been appointed Honorary Consulting Surgeon to the Winsford Cottage Hospital.

TAKAKI, Y, L.R.C.P, M R C S, has been re-appointed House Surgeon to St. Thomas's Hospital

TAYLOR, T S, M.A., M B., B C Cantab, has been re appointed Assistant House Surgeon to St Thomas's Hospital

THOMPSON, C. H, M D, M R.C P, has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham road, London, S W

TURNER, J ANDREW, M B, C M Edin D P H Camb, has been appointed Executive Health Officer to Bombay

WILLS, B S, L.R.C.P, M R C S, has been re-appointed Assistant House Surgeon to St. Thomas's Hospital

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church street, Birmingham—Assistant House Surgeon Salary £60 per annum, with apartments and board

BLACKBURN AND EAST LANCASHIRE INFIRMARY—Junior House Surgeon Salary to commence at £60 per annum, with board, washing &c

BRIGHTON, HOVE, AND PRESTON DISPENSARY—Three House Surgeons, one for each Branch. Salary £160 per annum, with furnished apartments, coals, gas, washing and attendance Apply to Assistant Secretary, 113, Queen's road Brighton

BURY INFIRMARY—Senior House Surgeon Salary £100, with board, residence, and attendance Also Junior House Surgeon. Salary £80, with board, residence, and attendance

CENTRAL LONDON SICK ASYLUM DISTRICT—Second Assistant Medical Officer and Dispenser at the Asylum at Hendon for twelve months. Salary £75 per annum, with board and residence, subject to statutory deductions Apply to the Clerk, Office, Cleveland street Asylum Cleveland street W.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY Chesterfield—Resident House Surgeon for two years Salary £100 per annum with board, apartments, and laundry

DERBYSHIRE ROYAL INFIRMARY Derby—Resident House Surgeon for twelve months. Salary £100 per annum, with apartments and board

DEVON COUNTY ASYLUM, Exminster—Junior Assistant Medical Officer Salary £125, rising £10 annually to £155, with board, furnished apartments and washing

DONCASTER GENERAL INFIRMARY AND DISPENSARY—Assistant House Surgeon Salary £40 per annum, with board and residence

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries—Assistant Surgeon Board and lodging provided

EAST SUFFOLK AND IPSWICH HOSPITAL, Thorofare Ipswich—Two House Surgeons, unmarried Salary £80 for the senior and £70 for the second, with board, lodging, and washing

EXPLORATION EXPEDITION TO NORTHERN RHODESIA.—Medical Officer for at least two years. Salary £250 a year, with reasonable expenses. All medical and surgical equipment provided Apply to Mr L. Dampier, 30, Clement's lane, London, E C

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION, Gloucester—Assistant House Surgeon for six months Salary at the rate of £30 per annum, with board residence and washing

GLAMORGAN COUNTY ASYLUM, near Bridgend—Assistant Medical Officer, unmarried Salary £150, with board (no beer or wine) lodging, and washing

GLOUCESTER COUNTY ASYLUM—Junior Assistant Medical Officer, unmarried Salary commences at £120 per annum, rising £10 yearly to £150 with board (no stimulants) lodging, and washing

GREAT NORTHERN CENTRAL HOSPITAL, Holloway road, N—Non resident Assistant House Surgeon for six months Salary at the rate of £30 per annum, with luncheon and dinner in the hospital

GUEST HOSPITAL Dudley—Assistant House Surgeon, for six months. Salary at the rate of £40 per annum, residence, board, and washing

HARTLEPOOLS HOSPITAL, 15 Town wall, Hartlepool—House Surgeon Salary £100 per annum with board, washing, and lodging in the Institution

HOSPITAL FOR WOMEN AND CHILDREN, Leeds—Non resident House Surgeon for six months Salary at the rate of £125 per annum

HULL ROYAL INFIRMARY—House Surgeon for two years, unmarried Salary 100 guineas per annum, with board and furnished apartments. Also Junior Assistant House Surgeon for one year. Salary £40, with board and lodging

LIVERPOOL STANLEY HOSPITAL.—Honorary Assistant Physician

METROPOLITAN ASYLUMS BOARD ASYLUM FOR IMBECILES, at Caterham, Surrey—Assistant Medical Officer, unmarried Salary £150 per annum, rising conditionally to £170, with rations, lodging attendance, and washing subject to statutory deductions Forms of application obtained at the office of the Board Victoria Embankment, London, E C

METROPOLITAN BOROUGH OF STEPNEY—Medical Officer of Health Salary £750 per annum Applications to the Acting Town Clerk Town Clerk's Office Limehouse Town Hall, Commercial road, London, E

MILLER HOSPITAL and ROYAL KENT DISPENSARY, Greenwich road, S E—Junior Resident Medical Officer for six months Salary at the rate of £60 per annum, with board, attendance, and washing

NEWCASTLE UPON TYNE UNION—Assistant Medical Officer at the Workhouse, unmarried. Salary £150 per annum, with furnished apartments, rations, and washing subject to statutory deductions Applications to the Clerk to the Guardians, Union Offices, Newcastle-upon-Tyne.

NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man—Resident House Surgeon, unmarried Salary £82 per annum, with board and washing free.

NORTHAMPTON GENERAL INFIRMARY—House Surgeon, unmarried Salary £125 per annum, with furnished apartments, board, attendance, and washing

NOTTINGHAM GENERAL DISPENSARY—Assistant Resident Surgeon. Salary £140 per annum all found except board.

PADDINGTON INFIRMARY London—Clinical Assistant and Second Assistant to the Medical Superintendent for six months, unmarried Board, lodging and washing provided, and an honorarium of £36 given conditionally Personal application to the Medical Superintendent at the Infirmary Harrow road, W

RHONDDA URBAN DISTRICT—Medical Officer of Health for the district for one year Salary £500 including travelling expenses Applications to be made to the Clerk Public Offices Pentre (Glam).

ROYAL COLLEGE OF PHYSICIANS Pall Mall East, London—Milroy Lecturer for 1902

ROYAL EAR HOSPITAL, Soho, London—House Surgeon (non resident) Small honorarium given

ROYAL HANTS COUNTY HOSPITAL, Winchester—House Surgeon, unmarried Salary £65 per annum rising to £75 with board, residence, &c

ST MARYLEBONE GENERAL DISPENSARY, 77 Welbeck-street, Cavendish square, London—Resident Medical Officer Salary 100 guineas per annum, rising annually by 10 guineas to 120 guineas, with furnished apartments attendance, coal, and light.

SALFORD UNION—Assistant Resident Medical Officer at the Union Infirmary, Hope, near Eccles for one year Salary £130 with furnished apartments and attendance (but not rations) in the Infirmary Apply to the Clerk to the Guardians Union Offices Eccles New road Salford

SALVATION ARMY MEDICAL DEPARTMENT—Honorary Dental Surgeon Apply to Commissioner Pollard Chancellor of the International Headquarters 101, Queen Victoria street, London

SEAMEN'S HOSPITAL SOCIETY ("DREADNOUGHT"), Greenwich S. E—House Physician for "Dreadnought" Hospital Salary £75 per *annum with board and residence*

SHEFFIELD ROYAL HOSPITAL.—House Surgeon Salary £100 House Physician Salary £75 Unmarried. Board (exclusive of wine and beer) and lodging provided

SUSSEX COUNTY HOSPITAL, Brighton—Second House Surgeon and Anæsthetist, unmarried Salary £70 per annum, with board and residence in the hospital Also a Third House Surgeon unmarried Salary £60 per annum with board and residence in the hospital, and washing

THE CHIEF INSPECTOR OF FACTORIES gives notice of vacancies for Certifying Surgeons under the Factory Acts at Durrow, in Queen's County, at Darlington in the county of Durham and at Bangor in the county of Down

UNIVERSITY OF GLASGOW—Examinerships in Medicine Two additional Examiners for degrees in medicine The appointment in each case from Jan 1st 1901, to Dec. 31st, 1904, at an annual salary of £30

WARRINGTON INFIRMARY AND DISPENSARY—Junior Resident House Surgeon. Salary £100 per annum with furnished residence and board

WEST KENT GENERAL HOSPITAL, Maidstone.—House Surgeon, unmarried Salary 100 guineas, rising 10 per annum to 120 guineas, with board and residence Also Assistant House Surgeon for six months Honorarium at the rate of £50 per annum, with board and residence

Births, Marriages, and Deaths.

BIRTHS

BEVEN—On Dec 4th at Balham hill, S W, the wife of Octavius Beven, M D, D P H, of a son

BURGES—On Nov 25th at Hockley hill Birmingham, the wife of F A. l'Estrange Burges M R C S L.R C P Lond, of a son

DAVIES—On Nov 30th, at Home Lodge, Great Amwell the wife of Arthur Templer Davies, M D Cantab, F R C P of a daughter

MACLEOD—On Dec 2nd at The Turret Streatham, S W, the wife of Herbert W G Macleod M D M.S Edin, D P H Camb (Surgeon-Captain late H M's Service), of a son

RUBRA.—On Nov 23rd at Cecile-park *Crouch-end, N, the wife of* Henry H Rubra, M D, M R.C S, L.R.C P, of a son

MARRIAGES

O'KINEALY—TREVOR.—On the 10th of November, at St. Paul's Cathedral, Calcutta, by the Rev Canon Luchman, Captain F O'Kinealy, I M S, eldest son of J O'Kinealy, Esq, late Judge of the High Court of Calcutta, to Helen Mabel, only daughter of Rev Geo A Trevor, of Queen's gardens, London

STEVENS—JENKINS.—On Dec 1st, at Llandaff Cathedral, by the Rev J R. Buckley, assisted by the Rev Minor Canon Price, Dr. W Mitchell Stevens, 21, St. Andrew's-crescent, Cardiff to Annie, only daughter of E Jenkins Netherwood, Llandaff

WALL—FRASER.—On Nov 12th, at the Cathedral, Cape Town Charles Percivale Bligh Wall, M B, Ch B, of Butterworth Transkei, Cape Colony, to Emily C Fraser, youngest daughter of the late A. Fraser, of Island Bank, Inverness N B

DEATHS

CARROLL.—On Nov 27th, at his residence Lower Leeson street, Dublin, Deputy Surgeon-General James Carroll, M R.C S, M B Dubl

CURRIE.—On Dec 3rd at Eastbourne-terrace, Hyde-park, W, Surgeon General George Vernon Currie, I M S, aged 72 years.

HART—On Nov 25th at Wellswood Park, Torquay, in his 67th year, Gratian Charles Barry Hart, M R C S

SUTHERLAND—On Nov 30th, at *Pietermaritzburg* Natal, Peter Cormack Sutherland, M D, F R.G S., late Surveyor-General of the Colony of Natal, aged 79

N B—A fee of 5s is charged for the insertion of Notices of Births, Marriages, and Deaths

Notes, Short Comments, and Answers to Correspondents.

THE MEDICAL PROVIDENT LEAGUE.

To the Editors of THE LANCET.

SIRS,—I deem it incumbent upon me to request of your courtesy some space in your widely-read columns to enable me to bring before my professional brethren a new movement which I have taken some small part in commencing. For many years past I have felt a deep interest in the various methods proposed, or carried out, for affording provident medical aid to the working classes. Being, fortunately for myself, unconnected with any such work, I have been able to take an impersonal, and therefore independent, view of the facts connected with that work—and may I be permitted to say that those facts have so deeply impressed me that my conscience has constrained me, as I am thankful to know it has constrained others, to steadfastly determine to do all that lies in our power to find and carry out some remedy for a condition of affairs which we feel justified in considering to be deeply discreditable to our profession, gravely detrimental to thousands of medical practitioners, and too often deceptive to the provident poor?

May I briefly give some of the many reasons for that belief?

In every part of the country and to an ever-increasing extent, medical practitioners are being employed by commercial agencies, bent, as is therefore natural, on paying as little to, and getting as much in return from, their doctors as they possibly can. [illegible] therefore exploit their doctors' skill and labour; sweat them so that "Jew tailors in the East End of London do not make as much out of their victims" (THE LANCET Report "Battle of the Clubs," p. 43); overwork them even more and treat them with insult and contempt (p. 103, &c.). It is heart-breaking treatment for an educated, refined man to suffer. Is it not a disgrace to the whole profession that its members should so suffer? Must it not lower the profession in public esteem?

In the next place, when a doctor contracts to attend thousands, or even let us say hundreds, of people, knowing that his average payment per visit and medicine will not be 3*d*.—I prefer to overstate the figure—it is beyond dispute that he cannot make a bare living if he devotes much time and attention to each patient. It is a physical impossibility. It is easy to say that what is worth a guinea cannot be bought for seven farthings (THE LANCET Report "Battle of the Clubs," p. 177), and that the poor cannot expect it. But, then, is it just, is it creditable, to make a contract which cannot be faithfully fulfilled? I know of men who have tried to do their contract work faithfully but broke down in the struggle to achieve the impossible. I doubt not that scores of other men have similarly worked and similarly failed.

It is well known that efforts have been made, but that they have failed, to prevent the growth of the evils of the present system. Councils and colleges have been appealed to—in vain—in the hope that they would make restrictive enactments and thus insure that, if any practitioner resigned a club appointment the conditions of which were inequitable alike to himself and to any sick members, some neighbouring practitioner or some newly-imported—generally newly-qualified—medical man would not instantly take the post in question. This has so often happened in the past that men have openly declared that however ardently they might desire to resign all connexion with medical aid associations it might almost involve them in professional ruin to do so—so completely were they at the mercy of their commercial employers, and so cut-throat was the competition in the ranks of the profession. For reasons which possess much force the authorities appear to have expressed their inability to give any assistance. On the other hand, some local efforts have been made to combat the evil—in rare instances with temporary success, but far more often with failure.

So it has been often suggested that, in the first place, the movement for reform must be central and general, so as to afford, on the one hand, the greater assistance and, on the other, to obviate the chances of local jealousies and friction. In the second place, it has been suggested that such a national union should begin by supporting those provident organisations which already treat their medical officers fairly, and by such support exert a leverage to induce similar organisations to follow the same course. Such a plan seems to be more common-sensible and more easy of fulfilment than to start a new provident organisation under medical control; because the latter would require a very large amount of capital and would involve great business responsibilities and organisation. Accepting these two principles, the working of the various friendly societies was closely investigated, and it became apparent that one of those bodies pursued utterly different methods to most of the others; and methods which appeared to obviate every one of the objections urged against the medical aid associations. This body—the National Deposit Friendly Society—has grown from a small beginning in a little Surrey village into a powerful organisation which is rapidly spreading all over the country, the membership of which is increasing by leaps and by bounds, and which already has a quarter of a million sterling invested. This society *has no contract work*. Each member can consult any medical practitioner he or she chooses. The society has a fixed scale of medical fees and if a medical practitioner accepts this scale the society pays him promptly as soon as his attendance upon the member is concluded. If the medical practitioner does not accept the scale of charges he can arrange with the member, personally, to pay any excess over the specified amount—the society still paying its fixed quota. But it is noteworthy that, in many cases, when special circumstances have been proved the society has generously defrayed the extra fees charged by the practitioner. *No contract work; prompt payments for work actually performed.* Surely these are excellent principles. The society, moreover, has established a sliding scale of fees. Under the Friendly Societies Acts it cannot establish a wage-limit for its members; but it does something better still, because the fees paid to practitioners increase upon a graduated scale according to the amount of sick-pay benefit for which the member subscribes, and which cannot exceed £3 a week. A man receiving £3 a week would have to pay his doctor 5*s*. a visit and medicine for two days—a fee which from a working man will not be condemned as inadequate by any of your readers. A member receiving 30*s*. a week sick-pay in like manner pays 2*s*. 6*d*. per visit and medicine for two days. The society has exhibited its desire to work harmoniously with the medical profession, and from every part of the country a remarkable consensus of opinion is expressed that the methods of working and the payments of this society to medical practitioners deserve professional approval. It appears, therefore, that the National Deposit Friendly Society offers a system which might with much advantage be adopted by medical men throughout the country. It has been publicly stated that the society always welcomes the assistance of medical practitioners in starting branches of the society in districts where such do not at present exist. The society is just about to commence an insurance department for the benefit of its members, and it was suggested that if practitioners willing to attend its members on the scale of fees adopted by the society formed themselves into an organised body the society would be glad to recognise that body officially and to receive from it any complaints or suggestions which the medical officers of the society might desire to make, and which in such a case would be made direct to, and considered by, the governing body of the friendly society. By this means, harmony would be secured, friction and misunderstandings prevented. The views and complaints of any medical officer would go direct to headquarters. As an earnest of their desire for such harmonious working the society offered to give the medical organisation two representatives on its governing body and to accept from the former any recommendations for the appointment of medical referees for the insurance department.

These details having been decided upon in October I addressed a circular on the first of this month to the 1500 practitioners who have in the last year attended members of the society, proposing the formation of a Medical Provident League with certain definite objects, and calling their attention to the above decisions of the National Deposit Friendly Society with the methods of which they were all familiar. Within a fortnight I received nearly 200 applications for membership of the league and many expressions of sympathetic coöperation. I therefore called a meeting of those who had sent their subscriptions, and this was held on Friday, Nov. 23rd, at Exeter Hall. It was unanimously decided to found and carry on a Medical Provident League. A provisional committee was appointed to draw up the necessary by-laws and to summon a meeting of members next May in order to elect permanent officers and a council. The meeting honoured me by electing me as president. The meeting then adopted as the objects of the league the following programme which I had ventured to suggest:—

1. To unite medical practitioners throughout the United Kingdom for their better defence and furtherance of their professional interests.
2. To bring about better arrangements for affording provident medical aid to the working classes.
3. To support such existent provident schemes as are equitable to medical practitioners; and to oppose such schemes as are inequitable in their working or management.
4. To unite and coördinate the personal influence of medical practitioners with individual Members of Parliament, in order to direct the course of any legislation which affects the interests of the medical profession or of the public health.
5. To initiate, or support, schemes incidental to, or conducive to the furtherance of, the above objects.

There are one or two points which perhaps I ought to emphasise. The Medical Provident League will be open to all registered practitioners who desire to improve the conditions of provident medical aid in this country. It will be, of course, absolutely independent of any lay organisation, but it will earnestly advocate and support those organisations—and, to commence with, the National Deposit Friendly Society—which prove themselves willing to treat their medical officers with justice and respect. The League will endeavour to bring about reforms which are urgently needed; it will endeavour to draw practitioners together in a united effort to raise the general conditions of provident work. It appeals to the whole profession to aid it in work which must be of interest and importance to the vast majority of practitioners. The League will doubtless meet with the opposition and abuse which is the accepted reward of every effort at reform; and the cold-water criticism of the superior person who has never experienced the trials and troubles of the general practitioner and whose sympathy with those troubles is very skin deep. It may be long before the League can succeed, but it has already attracted so much help, it is designed to meet so urgent a need, it is founded upon such principles of justice and professional honour that I cannot but believe that in due time it will attain its objects and will secure the success which I venture to think those objects deserve.

I am, Sirs, yours faithfully,
J. W. J OSWALD,
President of the Medical Provident League.
Kennington road, S E., Nov. 28th, 1900.

"DOES AN ADVERTISEMENT CONSTITUTE A WARRANTY?"

To the Editors of THE LANCET.

SIRS,—Many thanks for sending your issue of present date and calling attention to your notice of our suit against Mr. H. Mott of Oxford, who purchased, by correspondence, one of our five-guinea belts, and not being able to pay the full amount proposed to pay 21*s*. down and the balance in monthly instalments of 21*s* each. He had the belt just five months, during which time he failed to take any notice of any letters or statements that we sent him until we threatened suit, when he returned the belt, which showed signs from the oxidisation of the wires that he had worn it the whole time and was no doubt benefited by it. When in the witness box the judge asked him if he doubted the genuineness of the appliance as a producer of electricity and his answer was "that he did not doubt it" Mr. Mott produced no medical certificate to show that he was ill these five months, nor did he show that he, his wife, or any friend could not have returned the belt in a shorter time, but evidently held on to it till suit was threatened and it was a question of parting with four guineas. The judge was evidently prejudiced from the beginning and determined to decide against us although we called the judge's attention to the medical testimony on p 65 in the inclosed pamphlet and to the standard medical works on p. 72. That we make no claim that our appliances will cure everything we referred the judge to p. 52, No 17, where we say distinctly the appliances must not be used in cases of fever. That our appliances are beneficial may be proven from the fact that we frequently sell to poor people on the instalment system of 5*s*. weekly, or according to their ability to pay, and that we have never had occasion to sue anyone prior to this case. It is well for us to know that we cannot receive justice in the collection of an account when suit is brought against us, and we shall have to conduct our business accordingly in the future. We may add that we invite medical men as well as electricians to call on us at any time and test our appliances to their entire satisfaction. Trusting you will insert the above in your valuable journal,

We are, Sirs, yours faithfully,
J. L PULVERMACHER AND Co., Limited
Regent-street, W., Nov. 24th, 1900 (ARTHUR LOWETH, Secretary)

"THE CASE OF DR. PATRICK QUINLIVAN."

THE following additional subscriptions have been received towards the fund in aid of the wife and family of the late Dr. Patrick Quinlivan:—

	£	*s*	*d*.		£	*s*	*d*
Dr. F. J. Smith	3	3	0	K. W. N	0	6	0
Mr. Caldwell	1	0	0	Mr. E. T McDonnell ..	1	1	0
Mr. C. T. Hirsch (Woolwich)	1	1	0	Mr E H Niall .. .	0	10	6
Mr. Hugill	1	1	0	Mr R Balfour Graham (Leven, Fife)	0	10	6
Surgeon-Major H. de Tatham	3	3	0	Mr. Ambrose Carney ..	1	1	0
Mr F. St. John Bullen (Clifton)	0	10	6	Rev Father Walters ...	1	1	0
Mr. O. A Wickham ...	1	1	0	Dr Sansom	1	1	0
Dr M. McCarthy (Warrington)	0	10	6	Dr J Cotter (Cork) ..	2	0	0
Mr. and Mrs. Quinlivan (Cooreclora)	2	0	0	Mr. Moynahan ..	1	1	0
Mr R. Swyer	1	1	0	Dr Sheahan (Portsmouth)	1	1	0
Mr. I Dorran	0	10	6	Dr. Spooner	0	5	0
Mr. S. P. Snook (Weymouth)	1	0	0	Dr. Bevan	0	6	0
				Mr John Mulvany (Portsmouth) .. .	1	1	0
				Dr. Lehane	1	1	0

PAYING PATIENTS IN HOSPITALS.

AN action was recently brought by Mr. P. J. Hayes, a surgeon of Dublin, against a gentleman farmer named M'Hugh whose leg Mr. Hayes had amputated in the Mater Misericordiæ Hospital in which the surgeon recovered a verdict and judgment for £50 The verdict and judgment have now been set aside upon appeal and entered for the defendant upon grounds which show, if it needed to be shown, that those managing public hospitals should either not admit to their wards persons capable of paying for aid rendered to them or should make it clear to the patient before admission that he will be expected to pay according to his means. It is, for those connected with the management to do this rather than the individual member of the staff who may perform the operation. Mr. Justice Murphy, in delivering the judgment of the Queen's Bench Division in the case referred to, pointed out that the defendant, who had been brought from the Roscommon County Infirmary to Dublin by his own wish, was placed in a public ward and there was no evidence while he was in the hospital that any intimation was made to him that he was a paying patient or that he was treated so that he must reasonably know that he should pay or that there was any express contract. Any evidence of admissions of liability related to statements made by the patient's relatives without his authority, whereas he was quite capable of acting for himself. In these circumstances we cannot see that the decision of the court is in any way surprising. Mr. Justice Murphy pointed out that having regard to his means the patient might be acting shabbily but that was not the question which the court had to consider. We are, all of us, accustomed to the "shabbiness" of patients well able to pay who avail themselves of free medical and surgical aid, in hospitals and out of them Mr. M'Hugh appears to have broken his thigh in a horse accident and to have been brought to Dublin by his own preference; there must, therefore, have been time and opportunity to make it clear that his treatment would not be free, whether he were satisfied with the skill of the surgeons of his own district or preferred to put himself in the hands of those of Dublin. At the same time the medical profession is not one skilled at making bargains, and public opinion is often the only tribunal to which it can appeal when its aid has been distributed gratuitously to those who in other matters would deem themselves insulted if "charitable assistance" were offered to them

THE SPECIAL TESTS FOR DRUNKENNESS

To the Editors of THE LANCET.

SIRS,—In a recent case of alleged drunkenness one of the magistrates asked a witness, "*Did the doctor in your presence apply any of the* special tests for drunkenness?" I should be glad if you could inform me what the special tests for drunkenness are

I am, Sirs, yours faithfully,
[illegible] 28th, 1900. BACCHUS

** We know of none There are certain shibboleths which, if police-court reports are to be trusted, are applied by police surgeons, such as the ability to articulate clearly the words "British constitution" or "[illegible]ary abilities" Some 25 years ago at Oxford no man was considered to be drunk at a "wine" until he attempted to light a cigar with a fork.—ED L

"MOTOR-CARS FOR MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—I notice that the question of the utility of the motor-car for the practitioner has again cropped up in your columns and that you devote an article to its consideration in THE LANCET of Nov. 17th, p. 1452. I find, too, that it is just about a year ago (THE LANCET, Oct 28th, p 1192, and Nov 18th, p 1402, 1899) since I addressed some letters to you on the subject A further year's experience may be of utility to some who are thinking of buying, and in some cases the second year's experience may be of more value than the first Case in point—I heard of a neighbouring practitioner who bought a motor-car He was most enthusiastic, told all his friends that it was the best thing going, and that he had saved £90 in the first six months Within a twelvemonth after he had sold that motor-car, and by the time he had paid his bills for repairs and written off the loss on the sale, I doubt whether this saving was as great as he had reckoned it At all events, I believe his friends have heard less on the subject lately To my own experience, then. Since November last my car has been laid up and not available for use pretty nearly as long as it has been in use, but this includes a long spell of last winter when I did not attempt to use it at all, in fact the minute there is a quarter of an inch of mud on the roads half the utility of the car has gone I am speaking only of a solid tyre car—I know nothing of pneumatics, and after reading the *Autocar* weekly for a year or two do not want to In fact, if there are two things I would more strongly impress upon my *confrères* than others, after a careful study of motor journals, they would be (1) have nothing to do with any car containing a pump, and (2) have nothing to do with pneumatic tyres. Further, I would say, before buying a car buy the last dozen numbers of the *Autocar* You will find therein various accounts of journeys with their incidents, mainly pump and tyre, amongst them a very interesting series of papers by the well known novelist Mrs Edward Kennard, and in the last of these an interesting snap-shot of the lady on the road with a punctured pneumatic tube in her hand. Imagine this on a round with none too much time to spare It is the sort of thing that does not matter much when you are out for a fortnight's holiday and your time is your own to spend at Little Pedlington or Slowcum in-the-Hole, as the case may be, but imagine yourself on the road, getting rather late—bang goes a tyre—and you have to get down, jack up the heavy car, get off the heavy cover of the inner tube, get out tube, repair, replace, pump up More visits to pay and consulting-room appointments made at home for afterwards! How like you the prospect? Again, it is to be borne in mind that tyres are expensive; while the motive power (petrol) of the car will work out at about 3*d*. per mile, the pneumatic tyres work out at about 2½*d*. per mile.

Only in the current number of the *Autocar*, in reference to the Southsea run noticed by you, Sirs, will be found "by the time appointed for the processional descent of Portsdown Hill and entry into Portsmouth, 80 of the 100 odd cars had arrived." There it is: 20 per cent. failed to arrive at a given place in a given time. Apply the figures to one car and to country practice and there you are. You start out on a round, all goes perfectly well for four journeys, then you have had your 80 per cent. On the fifth journey your car fails to arrive at the time you expected it to Then you get your 20 per cent. Again, I will say, read Mrs. Kennard's "Cruise of the Sir Charles." You will be able to form some estimate of the frequency and duration (one of them, I think, about five days) of stoppages—no matter at all on a holiday, but simply maddening in medical practice, and bear in mind that this is a very powerful car, probably not to be bought under £600 or £700. My bills for maintenance of car, as distinct from running it, come to about £43 for the year. To this must be added at least 10 per cent. written off value of car, another £20, and it will be seen that its economy, as compared with horse-keep, is not remarkable. The motor-car is a pleasant hobby, useful on hard and fairly level roads, very little use on muddy roads or in a hilly country; as long as it is in running order it is a great boon in very hot weather, for it is faster and saves knocking one's horses about, but whoever buys a motor-car under the idea that he is going to use it in his practice and economise by giving up horses buys trouble. In addition to maintenance, running expenses, and depreciation a considerable sum must be allowed for hire when the car is unavailable.

A word as to the buying of second-hand cars. On no account buy one second hand from *anyone* without independent expert advice. I have bought horses from dealers and motors from dealers. Horsedealers have the reputation of being able to look after their own interests, but I should class them as childlike and innocent when compared with certain motor-dealers I have met. At the risk of repeating myself—have nothing to do with pumps; have nothing to do with pneumatic tyres; have nothing to do with common German tyres—insist on Connolly's tyres on *all* wheels of a car, not on driving wheels *only*. Get the best expert advice before you buy; make sure the car will go up the hills in your neighbourhood; and on the whole, do not buy at all unless you only intend to keep it as you would a yacht or a steam-launch, for pleasure mainly—and it may be useful in business. On looking over what I have written I find I have charged nothing on account of "wages," to account of car. This must be added, some portion, at all events, of a man's time, as I fancy the practitioners must be very few who would care to do all the cleaning, lubricating, and oiling for themselves. Altogether I am disposed to advise that a £20 screw, a £20 dog-cart, and annual expenses much the same, will go further in practice than a £200 car.

I am, Sirs, yours faithfully,
Stratford-on-Avon, Nov. 19th, 1900. HARRY LUPTON.

TRAVEL IN MENTAL DISORDERS.

To the Editors of THE LANCET.

SIRS,—The treatment of mental disorders by travel, discussed by the Medico-Psychological Association and reported in THE LANCET of Dec. 1st, p. 1579, is a subject upon which a poet has spoken:—

> "Oh, never let the wretched, if a choice
> Be left him, trust the freight of his distress
> To a long voyage on the silent deep!
> For like a plague will memory break out,
> And in the blank and solitude of things
> Upon his spirit with a fever's strength
> Will conscience prey."
>
> (Wordsworth's "Excursion," Book III.)

I am, Sirs, yours faithfully,
Leek, Dec. 1st, 1900. D. A. ALEXANDER.

INSTITUTIONS FOR THE GRATUITOUS TREATMENT OF PHTHISIS BY THE OPEN-AIR METHOD.

To the Editors of THE LANCET.

SIRS,—I shall be greatly obliged if you or any of your readers can inform me if there are any institutions for the gratuitous treatment of phthisis by the open-air method existing in this country.

I am, Sirs, yours faithfully,
Nov. 27th, 1900. H. H.

"HAVE MATERNAL IMPRESSIONS ANY EFFECT ON THE FŒTUS IN UTERO?"

To the Editors of THE LANCET.

SIRS,—In connexion with the recent article on the above subject in THE LANCET of Nov. 3rd (p. 1266) the following case may be of interest. Mrs. ——, 2-para, was admitted into the Clapham Maternity Hospital on account of ante-partum hæmorrhage. The patient was seven months pregnant and had had attacks of hæmorrhage at irregular and frequent intervals since the third month. Shortly after admission the patient was delivered, the membranes rupturing at the same time, and the entire contents of the uterus being expelled with one pain. The fœtus was deformed as follows. the head and the thorax were apparently normal; the entire abdominal viscera and probably part of the heart were external to the body wall. The pelvis seemed to be normal, but the sex could not be distinguished by external examination. The legs were united by skin and soft tissues in their whole length and were strongly flexed on the child's back, the knees being turned towards the back. Both feet were in a condition of talipes calcaneus. The umbilical cord was represented by a membranous band from one and a half to two inches long, so that any movement of the fœtus must have dragged on the placenta, causing the hæmorrhage. The placenta was very soft and degenerate and was incompletely demarcated, the entire chorion being villous with only small patches of smooth membrane here and there. The heart pulsated for a short time after delivery. There was no history of deformity in the family, the patient's two former children having been well formed, though the elder died during delivery. On questioning the patient, before she knew anything of the condition of the child, the information was elicited that between the second and third months of her pregnancy and before she had had any hæmorrhage she was much impressed by seeing a dog run over in the street, the lower part of the body being completely crushed and "the legs hanging off."

I am, Sirs, yours faithfully,
J. D. GRANGER, M.B., Ch.B. Glasg.,
Resident Medical Officer, Clapham Maternity Hospital, S.W.
Nov. 30th, 1900.

◆

Joseph H.—We do not give medical advice. If our correspondent's medical man thinks the condition is one that could be relieved by surgical treatment an application for admission to a hospital might be made. Our correspondent's means, from what he tells us, would not suffice to allow him to pay for the performance of the operation by his family medical man.

M.B.—1. "The Outlines of Psychology" and "The Teacher's Note-book of Psychology," both by Professor James Sully. For further information see the Student's Number of THE LANCET, Sept. 2nd, 1899, page 627. 2. There is, we regret to say, no such school.

Mr. J. Permewan.—The subject of the purity of beer is dealt with in another column. An account of the manufacture of lager beer at Messrs Allsopp's brewery at Burton appeared in THE LANCET of Nov. 25th, 1899, p. 1462.

Lex should consult "Professional Education in the United States," published by the University of the State of New York, at Albany.

A. J. R. O.—The notes have been received and we hope to publish them.

A. A. W.—We cannot say anything definite yet.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 6th, 1900

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rain-fall	Solar Radia in Vacuo	Maximum Temp. Shade.	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Nov. 30	29·64	N.	...	68	48	44	43	44	Cloudy
Dec. 1	29·66	E.	0·01	47	46	44	44	45	Raining
" 2	29·79	E.	0·02	47	44	42	42	44	Overcast
" 3	29·90	SSE	...	55	54	42	41	43	Overcast
" 4	29·51	W.	0·06	78	56	43	51	53	Stormy
" 5	29·57	WSW	0·09	58	56	52	51	52	Raining
" 6	29·74	W.	0·56	59	53	49	48	50	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (12th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (15th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (10th).—SOCIETY OF ARTS.—8 P.M. Prof. J. A. Fleming: Electric Oscillations and Electric Waves. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. F. de Havilland Hall: The Diagnosis and Treatment of Thoracic Aneurysm. (Adjourned Discussion, with special reference to Treatment by Injection.)—Mr. A. Doran: Painless Calculous Pyonephrosis without Fever, Nephrectomy, Recovery.

TUESDAY (11th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. Manson: A Brief Resume of the Recent Advances in the Parasitology of Malaria.—Dr. Sambon and Dr. Low: An Account of the Experiments conducted on behalf of the Colonial Office and the London School of Tropical Medicine in the Campagna and in London.—Dr. Rees: Demonstration of the Human and Mosquito Cycles of the Malaria Parasite and of the Anatomy of the Mosquito.

WEDNESDAY (12th).—HUNTERIAN SOCIETY (London Institution, Finsbury circus).—8 P.M. Council Meeting. 8.30 P.M. Papers.

SOCIETY OF ARTS.—8 P.M. Prof. F. Clowes: The Treatment of London Sewage.

THURSDAY (13th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—Clinical Evening. 8 P.M. Cases and Card Specimens. 8.30 P.M.: Mr. J. H. Fisher: Case of Congenitally Imperfect Separation of Iris from Back of Cornea.—Mr. W. T. Lister: Large Dermoid Growth of Cornea in the Eye of an ox.—Mr. G. B. James: (1) Rare Example of Persistent Pupillary Membrane; (2) Large Pigmented Area below Disc, probably of the nature of a Coloboma.—Mr. A. S. Morton: Growth on Cornea.—Mr. F. Fergus: A Case showing an Easy Operation for Ptosis.

CHILDHOOD SOCIETY (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Mrs. D. Colman, M.D. Lond.: Causes of Failure in the Health of School Girls.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Mr. F. Jordan, Mr. B. Jessett, and Dr. H. Snow. Papers:—Dr. Elder: Some Unusual and Interesting Abdominal Cases.—Dr. Hodgson: Circulatory Phenomena as a Sequela of the Pregnant Uterus.

FRIDAY (14th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Meeting.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. Tyson: A Case of Ankylostomiasis.—Dr. Calvert: A Case of Hæmatoporphyrinuria.—Dr. J. Fawcett and Mr. Steward: A Case of Pneumococcal Suppurative Pericarditis treated by Incision and Drainage.—Mr. W. G. Spencer: Bursæ filled with Concretions of Urate of Soda in a Case of Gonorrhœal Rheumatism.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Dr. Waddell (Potter's Bar): The Suppression of Malaria. (The Fellows will dine together at Verrey's Restaurant, Regent-street, W., at 6.45 P.M.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (10th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Galloway: Consultation. (Skin.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. L. A. Bidwell: The Preparations before Abdominal Operations.

TUESDAY (11th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Campbell: Consultation. (Medical.)

THE HOSPITAL FOR DISEASES OF THE SKIN (Stamford-street, Blackfriars).—5 P.M. Clinical Lecture:—Dr. C. F. Marshall: Tertiary Syphilides.

WEDNESDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. E. W. Roughton: Consultation. (Surgical.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Perkins: The Diagnosis of Incipient Pulmonary Tuberculosis.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Discussion on *Some Practical Aspects of the Plague at Sydney* (with illustrations). Opened by Dr. F. Tidswell. Among others who are expected to attend are Dr. H. T. Bulstrode, Mr. J. Cantlie, Dr. W. Collingridge, Mr. A. W. Harris, Dr. R. T. Hewlett, Dr. H. F. Parsons, and Mr. S. M. Kaka.

THURSDAY (13th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street, W.C.).—4 P.M. Dr. Still: Jaundice in Children.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. L. A. Bidwell: The Treatment after Abdominal Operations.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Gibbs: Surgical Cases. (Post-graduate Course.)

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical Demonstration.

FRIDAY (14th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—2-3.30 P.M. Dr. J. Taylor: Class. Clinical Examination of the Nervous System. 4 P.M. Mr. T. Collins: Consultation. (Eye.)

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It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

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I.—*Indian Medical Gazette*, Editor of.

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U.—Unsatisfied.

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Y.—Mr. R Young Glasgow.

Z.—Dr. T. Zangger, Zurich.

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The Harveian Lectures

ON

PROGNOSIS AND TREATMENT IN PULMONARY TUBERCULOSIS.

Delivered before the Harveian Society of London on Nov. 1st, 8th and 15th, 1900,

BY ROBERT MAGUIRE, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, AND PHYSICIAN TO OUT-PATIENTS, ST. MARY'S HOSPITAL.

LECTURE III.[1]

Delivered on Nov. 15th.

MR. PRESIDENT AND GENTLEMEN,—In the previous lectures I asked you to think of the tubercle bacillus in its progress, of how we can estimate its influence upon the lung tissue and the general system, the extent of its progress, and the likelihood of its further action. Now I come to the question of how we can prevent its action and progress and remedy the results of its action. Once more I ask you to think of pathology, for in a perfect knowledge of that must consist not only our prognosis, as heretofore discussed, but also our rational treatment. We must consider (*a*) how we can increase the resistance of the tissues (normally present) to the influence of the bacillus tuberculosis and its congeners; (*b*) how we can hinder the action of the bacillus by destroying its congeners, the staphylococcus pyogenes and the pneumococcus; (*c*) how we can hinder the action of the bacillus by interfering somewhat with its own vitality; and, finally, (*d*) what means can we adopt to kill the bacillus *in situ*?

(*a*) We can obtain increase of the resistance of the tissues by adding to their vital power and this can be done, and has been done since the disease was first known, by over-feeding, fresh air, and adjuvant measures. Before recent agitation we had been doing all this, and I show you here a record from my in-patient department at the Hospital for Consumption and Diseases of the Chest at Brompton of a case, treated on just simply the old lines of care, supervision, good feeding, and especially discipline of habits under a competent sister of the ward. The patient gained in weight 21 pounds in a fortnight, and he is not a very unusual example. Others show similar improvement and that without other treatment which need be considered. The "Open-air Treatment" is, of course, good as adding to the vitality of the patient and increasing the resistance of his tissues. We have practised this, more or less, not only in pulmonary tuberculosis but in other diseases also, long before it was brought before the public so prominently as has been done recently. Debove first advanced the idea of forced feeding. Many had recommended open air in phthisis, and yet let us give honour to the men who systematised the methods. But like all enthusiasts, they were as I think, somewhat wrong. It is right to stimulate the absorptive powers and to encourage them to deal with cod-liver oil, maltine, excessive food, and *so on*. It is right to make the patient breathe pure air, cold air (if needs be), and again to harden himself to exposure—*if he can do so*. But I would like to give you a word of warning. The profession seems to have gone mad on this matter. Remember what Wilkie said about *his* methods. Someone asked him how he mixed his colours so as to get such wonderful effects and he replied, "Juist wi' brains." Mix your prescription of open-air treatment (so called) with a little common sense. Now, is it common sense to make a patient sit down and try to eat another mutton cutlet when he has previously vomited two? Yet I am told that this has been done in a well-known sanatorium and the patient commended for his perseverance. Surely his digestive organs required a little more consideration. And when we know a certain patient to be very liable to the effect of slight chills and also to inflammation as the result of such chills, is it necessary to put him into the open air, covered as it may be from the external atmosphere, but inhaling the cold air into his bronchi, in order to "harden" him? We sometimes cry down the methods of the bone-setters, rightly or wrongly; but surely what I have described savours of them, and I say at once that this idea is wrong. You must mix the open-air treatment and also the treatment in sanatoria "wi' brains" or else leave them alone. But let it not be supposed that I cry down the open-air treatment. I have seen what good it may do with and without the discipline of a sanatorium. I have known what good may be got by it in the best of circumstances, also in such open air as we can obtain in the Brompton Hospital, there, too, with discipline and good feeding; and I have known one patient (whom I saw with Dr. C. F. Knight) to do surprisingly well when dwelling in a tent erected in a back garden in Fulham. But we must remember that all these are only methods of bolstering up the tissues against the bacillary invasion.

Drugs of all kinds have the same effect. So, too, have *other remedies which will be mentioned later*, though their advocates may possibly take a different view of their action. I have used arsenic for many years as a hæmic stimulant in pulmonary tuberculosis and for the reason that, from some cause or other, iron is not well borne by phthisical patients. I have seen good come from its use and I refer to the matter here because of what has recently been said as to cacodylate of sodium being a cure for tuberculosis of the lungs. I have used it and it is useful. It is a good alterative when arsenic by the mouth is not tolerated, and when one wishes to give the same or even an increased dose of the drug by the skin. I have prescribed it in blood diseases and rarely with ill effect, but it acts only as a stimulant to the formation of red blood corpuscles and therefore can only have a very indirect effect upon the tubercle bacillus. It is a useful tonic remedy, and that is all.

Under this heading there may be mentioned my colleague Dr. S. H. Habershon's treatment by the subcutaneous injection of glycogen and that of De Backer by the administration of special preparations of yeast, though the consideration of the latter more properly belongs to a later section. Of these methods I have no personal knowledge and will say little. Dr. Habershon's idea is to increase the phagocytal power of the leucocytes by supplying them with glycogen as a stimulating food, and I hear from him that he has had some encouraging results. He has not yet completed his work but allows me to mention it here. De Backer holds the view that the yeast cells may act as additional phagocytes and absolutely destroy the tubercle bacillus. Allied to Dr. Habershon's method is that of subcutaneous injection of nuclein which will be more conveniently described below.

I cannot within the limits of the lectures discuss with you all the methods of treatment which have been adopted, and most of them discarded, in modern times. I wish to devote the remainder of this lecture to a description of a method of treatment of pulmonary tuberculosis and also of other disorders of the lungs which I have been working at for some time, which is on absolutely new lines, and which I have reason for saying is likely to be successful. I give it now to you for the first time in order that my professional brethren may form an opinion upon it. Its object is to fulfil the indications mentioned under the sections (*b*), (*c*), and (*d*). We would like to kill the tubercle bacilli *in situ* as mentioned in (*d*). But failing that, we may do good by weakening its action (*c*) and so enable the body powers to deal with it more advantageously, and finally, if we can produce no good action upon this very resistent tubercle bacillus, we may be able (*b*) to destroy the more vulnerable assistant germs, the staphylococcus and pneumococcus. What follows I must ask you to consider as a preliminary communication to which details will hereafter be added elsewhere, and I will style the subject

ASEPSIS OF THE LUNG.

It appeared to me that the anatomy of the lung-circulation lent itself to a special mode of treatment. We have seen how successful, and at times unsuccessful, may be the effort to increase the vitality of the lung by excessive feeding, open air, and so on. No pronounced effect is produced on the disease by inhalations of antiseptic vapours, for these cannot be administered so as to pass the glottis in any such strength as could produce effect upon germs, even if the inhalations ever reached the lungs. They do not reach the lungs, for we have reason to believe that they never go much beyond the bifurcation of the bronchi in any appreciable strength. We know only too well, however we may appreciate our successes, that by all these methods we have a lamentable number of failures. The same, I am afraid, must be said of many other methods of treatment which have been put forward at various times and this view I mention with every due respect to the authors of those methods and to the immense amount of work which they have given to the subject. Undoubtedly the rational cure for pulmonary, as for all tuberculosis, is the administration of an antitoxin derived from the tubercle bacillus itself, as was designed by Koch. But, as you are well aware, this has hitherto proved useless and worse than useless. So we must still say of the further attempts in the same line by modifications of his methods. Some day, though probably not in our time, the end thus aimed at will be attained and then we shall have a perfect cure. But before this result is reached we must still go on treating our patients and trying to cure them. Again, attempts have been made to obtain an antitoxin from the growth of the tubercle bacillus, not on our laboratory cultivations, as was done by Koch, but in the living bodies of such animals as the ox, the ass, and the horse. I allude here to the so-called anti-tuberculous serums, all of which have proved to be practically useless. It has appeared to me at times that, seeing how tuberculous patients who suffer from pleural effusion seem to be much better when the effusion is allowed to be absorbed naturally and is untreated by paracentesis—and this you will remember I alluded to in my former lecture—that the good result might be due to the re-absorption of an anti-tuberculous serum grown on human soil. It is not easy to get such serum without doing an injustice to the patient, for, as I have stated, the effusion is best left alone. Yet occasionally it happens that an effusion is so great as to by its actual presence endanger the life of the patient. Such a case occurred to me a little time ago at St. Mary's Hospital and I determined, on removing the effusion, to ascertain whether it possessed any property which was antitoxic to the bacillus. But before using such a serum for experiment it is absolutely necessary to remove from it all active tubercle bacilli, and I could not conceive of any other method of doing this than by passing it through a Pasteur's filter under pressure. But the solution could not by any means be made to pass through the filter and so the experiment had to be abandoned Possibly another chance of which I can take advantage may offer itself in the future. (It may be interesting to record the later history of this case in connexion with the danger from hæmorrhage to which the patient is liable in the third stage and to which I referred at the close of my last lecture. The patient, a youth, aged 18 years, was taken into the hospital because of his effusion and I aspirated his chest though I knew that he had phthisis in the third stage. After a few days he had recovered from his effusion and his phthisis being quiescent I allowed him to leave. He walked from the hospital down Praed-street, was overtaken by copious hæmoptysis before reaching the Great Western station, and was brought back to the hospital dead. I was very thankful that his hæmoptysis did not occur during my aspiration.)

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[1] Lectures I. and II. were published in THE LANCET of Dec. 1st and 8th, 1900.

I have mentioned the methods of Dr. Habershon and De Backer by which it has been thought possible to inject underneath the skin substances which may reinforce the lung tissue in its fight against the bacillus—namely, glycogen and yeast respectively. Dr. Habershon's work is not yet completed, and I am afraid that De Backer's results must be said to be unsatisfactory. Others, too, have attempted to administer antiseptics by means of the skin—that is, subcutaneously—and without any success. Nor is this to be wondered at when we think that any remedy placed under the skin must be diluted with all the fluids of the body before it reaches the lungs and then cannot fail to be powerless. For many years antiseptics, like creasote and its essence guaiacol, have been given by this method in so dilute a form, to begin with, as to be useless even if applied directly to the bacillus. Yet they are still further diluted in the stomach and more or less altered in their passage through the liver and other digestive organs so as to have not the slightest effect for our purpose when they reach the lungs. It is true that by reason of direct absorption through the blood-vessels of the stomach these drugs—especially creasote, guaiacol, iodoform, and naphthalene, all of which I have used—reach the lung unaltered and can be detected in the expired air. It is true also that these expired vapours are of some slight use in preventing the decomposition of the secreta in the lung. All of these points I have observed and willingly admit. But they have not the faintest direct effect upon the progress of pulmonary tuberculosis; in fact, they are almost useless. It has again been suggested by the followers of De Backer that the yeast-cells, and again other reagents, should be injected directly into the infected parts of the lung; and once more I admit that good results have ensued. But remember, however, that such injections cannot reach very far into the tissues, and they must be very numerous, therefore painful and frequently repeated, if they are to touch even the recognised foci of disease. But what about the unrecognised foci? For surely none of us, however experienced, will venture to say that he can detect by physical examination every spot of the lung affected by an attack of tuberculosis. And what about the patches which, recognised or suspected, are beyond the reach of any injection syringe? Surely there will always remain such spots, inaccessible to all such treatment and ready to spread to neighbouring and other parts of the lung. Such treatment cannot possibly be really curative. And as to the more surgical procedure of removing affected parts of the lung—and this has been done—well, the less said the better, for fear that the mere mention of it may encourage an unduly bold surgeon to practise it.

But let us come back to what I have mentioned above—that the anatomy of the lung-circulation lends itself to our treatment. This has been impressed upon me for some time, for it must be obvious that anything introduced into the veins must necessarily pass directly through the lungs by way of the right side of the heart and without dilution with other fluids of the body than the amount of blood contained in the right ventricle at the time when the injected fluid reaches that cavity. I determined to try this method, and with much trepidation when I thought of the manifest dangers involved in the introduction of a foreign substance into the blood-stream. But I was encouraged to pursue the investigation by hearing that my colleague, Mr. Ernest Lane, had been treating syphilis by injecting 2 per cent. solution of cyanide of mercury into the veins and by seeing the beneficial effects upon one patient of mine at St. Mary's Hospital whom he treated for virulent syphilis. I went to the Lock Hospital to see Mr. Lane's method, and seeing what he had done I thought that if he could inject cyanide of mercury with impunity—for he had done it some 3000 times without other mishap than the occasional missing of the vein by the needle—and seeing, too, that cyanide of mercury was not only anti-syphilitic, but also a powerful germicide, I also might safely use the same on tuberculous patients. Mr. Lane was in the habit of injecting 20 minims of a 2 per cent. solution, but I injected 30 minims of the same solution into the veins of two patients at the Brompton Hospital. But as that strength would be useless for my purpose, and wishing to use the drug in stronger solution, I asked my colleague, Mr. Plimmer, to inject a solution of 5 per cent. into the ear-vein of the rabbit. The rabbit died before the injection could be completed, and, as we found, from coagulation of blood in the right side of the heart. I immediately hurried, as you may readily understand, to see what had been the effect of the weaker injection upon my tuberculous patients and found that both of them had become very collapsed and had suffered from painless diarrhœal flux. It was obvious that what might be safe enough for Mr. Lane's otherwise strong men suffering only from syphilis would not do for my weakly tuberculous patients. Moreover, it seemed probable, though I offer this only as a suggestion, that the mercury of the cyanide combined with the albumin of the blood, causing coagulation and liberated cyanogen and the latter, combining with water, produced a considerable amount of hydrocyanic acid, the effects of which would be to cause vaso-motor collapse and the diarrhœa which was observed.

Let me here say that before using any other remedies and those in any particular strength I was always careful before applying them to patients to test their safety upon rabbits—or later on myself. Rabbits and monkeys are the only animals, except man, which offer suitable subjects for such trials, since their superficial veins can be easily reached without incision of the skin. Obviously, if the intravenous method is to be practised frequently, as it must be for therapeutic purposes, section of the skin by the knife is out of the question, and, indeed, I would incidentally commend to the surgeons the results of technique which I have arrived at in various ways, as being improvements upon the methods hitherto adopted for intravenous injection when employed for other purposes. Again, let me remark that all these trials upon animals were performed by Mr. Plimmer, who possesses—as I do not—the requisite legal permit. Rabbits were used as being cheaper and more easily obtainable than monkeys. Further, before any advance of method was attempted, we tried to inject about 10 cubic centimetres into the ear-vein of a rabbit, that is, five times the quantity I wished at that time to inject into a man, and weight for weight an enormous dose. This having been done with safety I concluded that I was justified in applying the method to man.

To conclude this part of the subject I must here refer to an objection which may possibly be raised in reference to experiments upon animals. It may be asked, Why did I limit myself to merely testing the safety of the various solutions to be mentioned and did not first produce tuberculosis of lungs in the animals and attempt its cure by injection? Here are my reasons. Rabbits and monkeys were the only animals available for this particular purpose and they are very liable to tuberculosis. But it is by no means so easy as you would otherwise suppose to artificially give them tuberculosis of the lungs with certainty. Tuberculosis of any other organ would be of no use for my purpose, for it is only the lungs which are supplied directly with blood from the external venous circulation. Now it is possible to infect a rabbit's lungs with tuberculosis by injecting an emulsion of a culture of tubercle bacillus into the ear-vein. Mr. Plimmer has occasionally done this but never with certainty. The emulsion is prone to coagulate and block the vein and it is very difficult to determine whether a given culture is toxic or not at the moment of injection. I tried to get tuberculous monkeys from the Zoological Gardens, wishing to attempt to cure them; this would I think, be an experiment permissible by the law. But the authorities of the Gardens, who were most courteous to me, naturally did not wish to part with their monkeys until they were practically moribund and useless for any therapeutic effort. Rabbits can be made to suffer from tuberculosis of the lungs by subjecting them to the inhalation of dust containing tubercle bacilli, as has been shown by Cornet. But such infection cannot be done without some risk to other persons than the experimenter. For instance, Cornet himself found that when he entered the room in which the rabbits lived, in order to stir up the dust, and in spite of taking such precautions as plugging his nostrils with cotton wool, nevertheless found afterwards tubercle bacilli in the mucous secretion of his nose. Further, such a series of results as could be obtained in this way would require an almost endless time and far more continuous observation than I could possibly give to them. But, of still more importance to a practising physician, there seemed this objection, that the animals could not tell one how they felt and in human beings we have to consider not only pathological anatomy but many other points in the well-being or ill-being which cannot easily be ascertained from animals. Therefore, I contented myself with ascertaining the safety of such remedies as I wished to apply—from observation on animals and myself—trusting for further results to actual trials upon patients.

Having failed, then, with the cyanide of mercury I cast about for some other germicide. Perchloride of mercury, carbolic acid, and other well-known antiseptics would obviously be useless because of their destructive action upon the blood. I tried, however, upon a rabbit the effect of the potassic iodide of mercury in the way described, for this salt is said not to cause coagulation of the blood. The result, however, was that the rabbit died in about an hour, not from intravascular coagulation like the former one, but from simple poisoning and stupor. Thus far the trials for an intravenous germicide seemed to be futile. I heard, however, from Mr. Wallas, the pharmacist, that diastase had been found to digest cellulose. Now it has been observed that the tubercle bacillus contains grains of cellulose[2] and it is probable that its envelope consists of some form of cellulose. From rough experiments which I made it seemed that diastase had really some power of destroying the tubercle bacillus as it exists in the sputum. This was almost a forlorn hope, but I determined to try the effect of a solution of diastase used intravenously. It was by no means easy to do, for diastase forms a very mucilaginous solution, totally unfit for such injection. Ordinary diastase I found to be quite useless, but it is possible to get a solution of taka-diastase of 5 per cent.—that is, the product known by that name and discovered by Takamine—by growth of germs upon bran. The substance has some undetermined composition, it is certainly mucilaginous, and has a diastasic power. It is of great use, as probably you know, in the treatment of flatulent dyspepsia by helping to digest the starches. It forms with water a thin mucilage which after standing for awhile deposits something which looks like a colloid form of some crystalline substance. After a while, however, a brown translucent fluid is obtained lying over the deposit; this is stable for a few hours, and undoubtedly possesses diastasic properties. But before using this as an intravenous injection it was above all things necessary to make the solution sterile of germs. For this purpose heat could not be employed, for it would destroy the diastasic ferment. The solution was too unstable and too mucilaginous to pass through a Pasteur's clay filter, and, besides, this process would require to be repeated immediately before each injection, which would be impracticable for clinical use. I tried the addition to the solution of such a small amount of perchloride of mercury as would probably act as a germicide. This precipitated the diastase in a few hours, but adding it shortly before the injection I managed to get a solution which would keep for a short time in the fluid condition and this I tried, without ill effect, upon rabbits. Later, Messrs. Squire and Sons prepared for me a fairly permanent solution of taka-diastase made with tri-cresol as the antiseptic, and afterwards with formic aldehyde in the strength of 1 in 250,000. This [illegible] tried upon patients with the view of therapeusis which I have mentioned. I injected 30 minims—that is, two cubic centimetres—at intervals of four days. But the immediate result of the infection (a result which appeared in about half an hour afterwards) was rigor, pyrexia, and sweating; in fact, an exact imitation of an ague attack. The pyrexia reached to the height of about 102° or 103° F. and afterwards the patients felt much better; certainly they took food more freely and there could be no doubt of some improvement in the condition both generally and as judged by the physical signs of the chest. Yet there was not so great an improvement as to encourage me to pursue the treatment. Mr. Horace Brown, F.R.S., so well known for his researches on diastasic zymes, very kindly gave me his advice on the question under discussion and suggested that I should try the effect of cytase, such as he had obtained from freshly crushed oats. He has shown, and has described in his published papers, that this substance is very powerful in digesting the cellulose envelope of cereals. I show you here a solution of cytase which has been prepared for me by Mr. Peter Squire in a form which might be used for intravenous injection, and the solution I have found to have a very definite solvent action even upon cotton-wool. Again, you see under the microscope two sections of barley. One has been treated with a solution of formic aldehyde alone—that is, with an antiseptic; the other with the same reagent, but also with cytase, and the latter specimen shows a marked solution of the cellulose envelope of the grain, while the former appears to be intact. We would like to get the same solution of the tubercle bacillus in the lung, but, unfortunately, the reaction is very slow and is likely to be greatly interfered with by dilution in the process of intravenous injection. I have obtained the solution of cytase which I show you only within the last few days. I will certainly try its effects, for possibly one may be able to hasten its action.

In the last lecture I mentioned the surprising effects which I had obtained by administering nuclein by the mouth in the treatment of such tuberculous glands as could not be removed by operation. I tried nuclein given thus, upon patients suffering from tuberculosis of the lungs, and without the slightest effect. The idea, of course, is that the nuclein will so strengthen the leucocytes as better to enable them to fight the bacillus. But it seemed to me desirable to ascertain what effect the same substance might have when used intravenously. For this purpose I employed the Liquor Nucleinicus of Messrs. Squire and Sons, a sterilised solution of the nucleinate of soda (which I show you), and I injected two cubic centimetres on each occasion. The results were exactly the same as in the case of the diastase solution, a distinct febrile reaction and afterwards some improvement in the condition of the patient but the results were not encouraging, nor do I think it desirable to use a remedy on a tuberculous patient which, like diastase, nuclein, or the tuberculin of Koch, increases, if only for a time, the already existent pyrexia. Yet I think this matter may very well be a subject for future investigation.

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[2] See Lehmann, Bakteriologie.

The pyrexial reaction after the use of such prospective remedies is very curious and interesting. I may say here, with Dr. Habershon's permission, that in his experiments on the subcutaneous injection of glycogen, he found that the same febrile reaction occurred when the glycogen employed was not entirely freed from nitrogenous matter and did not appear when this matter had been previously removed. Again, during the last few months I have treated four cases of aneurysm of the aorta by the intravascular injection of sterilised solutions of gelatin, following, with some little modifications, Lanceraux's method. After each injection I observed a distinct febrile reaction, the temperature on one occasion rising to 104° F., but always (in these cases) without any inconvenience to the patient. Putting all the results together, one is led to the idea that the fever is dependent upon the introduction into the system, by any method whatever, of some foreign albumin.

But in the course of the above-mentioned experiments the question of antisepsis became, as I have hinted, very important, and I thought that one ought to ascertain whether the results had been produced by the diastase or the nuclein or by the antiseptic used to sterilise the solutions. Mr. Squire told me that he found 1 in 250,000 of formic aldehyde a sufficient antiseptic and this, and afterwards 1 in 100,000, I tried on rabbits and afterwards on patients. I need not give you further details, but let it suffice to say that I at last reached a solution of 1 in 2000 of the pure formic aldehyde gas, that is, 125 times stronger than I had at first used. In my earlier trials I found that I could inject two cubic centimetres of solution in the space of five heart beats, but by later improvements in the technique I could admit into the veins at least one cubic centimetre for each heart beat and frequently double or treble this proportion if the patient could be kept quiet. The reason for measuring the rapidity of injection by heart beats and not by seconds you will see in a few moments. We can calculate with fair accuracy what is the strength of such a germicide solution passing through the lungs when injected into the veins. Using for the purpose of injection the syringe ordinarily employed with anti-tetanic serum, I at first found, as I have mentioned, that I could inject two cubic centimetres in the average course of five heart-beats, meaning that two-fifths (or 0·4) of a cubic centimetre were injected with each heart beat and therefore mingled with each one filling of the right ventricle. The right ventricle of a man who weighs about 10st. 7lb. is believed to hold approximately 100 cubic centimetres, the solution used is of a strength of 1 in 2000, therefore the strength of the solution in the right ventricle will be $\frac{2}{5} \times \frac{1}{100} \times \frac{1}{2000} =$ 1 in 500,000. Not a great strength, it is true, but probably of some efficacy seeing that a certain amount of the reagent will remain in the lung to be added to by future heart beats. Moreover, as I will shortly show you, it is possible by other methods to inject quite easily one cubic centimetre for each heart beat and even twice or thrice that amount. But with the one cubic centimetre for each heart beat we reach a strength in the right ventricle of 1 in 200,000, which is of formic aldehyde a strength which has been proved to be a very efficient germicide. To anticipate, I may say that I have been able to inject 50 cubic centimetres in the space of 25 seconds, when the pulse was beating at only 60 per minute, and even this rate may at times be exceeded. But this speed means two cubic centimetres for each heart beat of a 1 in 2000 solution of formic aldehyde which is added to each filling of the right ventricle, making a solution of 1 in 100,000, which will sluice out the lung for the space of about 30 heart beats. This certainly must be a fairly powerful germicide even for the tubercle bacillus, let alone its more easily attackable congeners, the staphylococcus pyogenes and the pneumococcus. Therefore I determined to use such a solution in the treatment of pulmonary tuberculosis. At first I did not venture to inject more than two cubic centimetres at one time, but becoming bolder I increased the quantity and at the same time the strength of the solution until, by means of the syringe used for diphtheritic antitoxin, I could inject 10 cubic centimetres of a 1 in 2000 solution of pure formic aldehyde gas at one time. Wishing to go still farther I thought it desirable to make the solution of the gas, not with plain water, but with normal saline solution so as to prevent any destruction of the red corpuscles, and it is this solution which I show you now, as prepared by Messrs. Squire and Sons, by their own methods of sterilisation, and called for convenience "Hæmasepsin."

It will be convenient now to describe the method of injection. It seems an easy thing to pierce a vein with a needle and to inject a solution into its interior. In practice it is anything but easy to do so. The vein rolls under the needle and presents great resistance to the piercing. Again, the needle, in spite of all care, will often transfix the vein or at least puncture the opposite wall. In either case not only does the injection fail but the solution is deposited in the circumvenous tissue and causes great pain. It is only after considerable experience and with a certain amount of technical skill that the injection can be properly given, and in view of the manifest dangers no one should lightly undertake it. I find it best first to ligature the arm above the elbow so as to make the veins prominent, and then plunge the needle boldly into one of the large veins on the front of the elbow. The ligature of the arm should now be loosened and the injection proceeded with, carefully watching for any swelling which would indicate escape of the fluid into the circumvenous tissue. I have tried to use a needle on the principle of the Southey's trocar, hoping that on the withdrawal of the point one might easily introduce the canula farther into the vein without risk of re-piercing the wall. This, however, I have not found feasible. Again, I have tried what one might call a valvular puncture—viz., perforating the skin first and afterwards piercing the vein at a higher point. This, however, is difficult to do because of the rolling of the vein—and it must be remembered that any attempt to steady the vein leads to its collapse—and, moreover, there is considerable risk of causing a troublesome hæmatoma in the subcutaneous tissue. For these reasons it is best, I find, to plunge boldly into the vein through the skin, first anointing the skin with carbolic vaseline, 1 in 12. Naturally the needle and the skin must be rendered perfectly aseptic and if the patient be very nervous the skin may be sprayed with a solution of cocaine to anæsthetise it, though this is really unnecessary.

So far, however, the limit of an ordinary syringe—10 cubic centimetres—was reached, and to give larger amounts with one puncture required special apparatus. I therefore devised and had made for me by Messrs. Squire and Co. a syringe (Fig. 1). It is really a miniature stomach pump the tube of

FIG. 1.

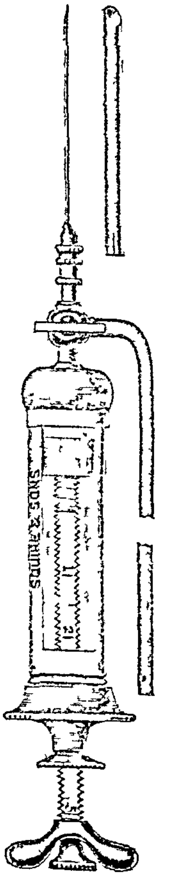
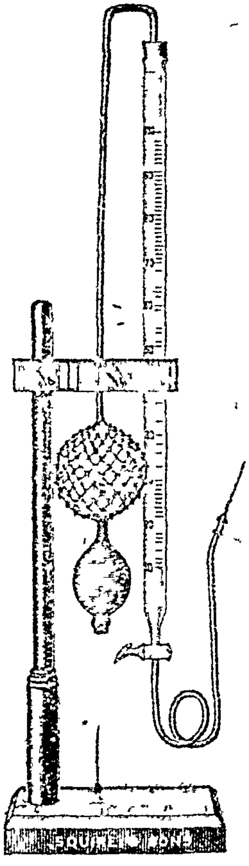


FIG. 2.



which holds a few cubic centimetres and can be replenished from the bottle without removing the needle from the vein. But this instrument must be used with the greatest care, since the mere movement of turning the stop-cock and reversing the piston is frequently just enough to cause the needle to transfix the vein and ruin the injection. Because of this I have employed mere hydrostatic pressure, using an ordinary 100 cubic centimetre burette of narrow calibre, so as to get as high a head of fluid as possible, and I connected this by an indiarubber tube with a rather wide-bore needle. The burette is furnished with a stop-cock, and the needle being rendered aseptic a certain amount of fluid is run through it so as to fill the whole apparatus with the reagent. I may say here, however, that no fear need be entertained from the entrance of a small amount of air into the veins. This is an old-fashioned surgical fallacy. For ordinary use the burette is the more convenient instrument, though somewhat cumbersome to carry, but occasionally it happens that the venous pressure is so great that the syringe is useful. It was by means of the simple burette and of a large bore needle that I was able to inject one cubic centimetre of the hæmasepsin during each heart beat. Later, however, I have used in addition to the burette the hand-pump you see here, which enables one to make a much more rapid injection (Fig 2). After the injection the needle is withdrawn. A little bleeding may occur and it may sometimes be necessary to cover the puncture with a few threads of alembroth wool and collodion, but commonly the pressure of the finger upon the puncture for a moment or two is enough to stop all oozing. The part is triflingly tender on the next day, but no further ill-effect is usually seen. The slow injection of the solution at ordinary room temperature is accompanied by a curious cramp like pain in the fingers and up the arm as far as the axilla. This I have observed on myself. The pain can be prevented by warming the solution to blood-heat, but I have grave doubts whether this is desirable. The heating may possibly be done with due precautions without destroying the effect of the remedy, but it must be remembered that formic aldehyde is a very volatile substance and the heating of its solution may cause the gas to be driven away. The pain is not great and can really be very easily borne up to the injection of 50 cubic centimetres, so I think it better to give the solution cold; moreover, rapidity of injection almost minimises the pain. In this way by one or other instrument I succeeded in giving daily injections of 50 cubic centimetres without any bad or unduly unpleasant effect. This means, as stated above, that for at least 50 heart beats the lung was sluiced out with a solution of formic aldehyde of a strength of 1 in 200,000 or more. The stronger the solution and the more prolonged its contact with the lung tissue, the more powerful would be its action as a noxious agent on the germs contained in the lung. It was therefore desirable to ascertain the danger-limit of such injection. This could not be found by experiments upon animals—it was scarcely fair to submit a patient to the risk—so I had the trial made upon myself. One morning at about 11 o'clock I asked my house physician, Dr. van Praagh, to inject 100 cubic centimetres of a 1 in 2000 solution of formic aldehyde into a vein of my arm. I wished to ascertain whether the aldehyde passed out of the kidneys as such, and in about an hour it was detected in the urine by the rosanilin test. Incidentally, however, it appeared that albumin was present, but no blood-colouring matter, and that the urine was very acid. Now, at that time of the day the urine of an ordinary man is usually alkaline, and my own is generally so alkaline—as I have frequently observed—as to deposit phosphates at the time of micturition. The ascertained acidity of the urine was therefore abnormal and was probably due to the presence of formic acid, though I had no means at hand for testing this. In about another hour, all these conditions had disappeared. A few days later Dr. van Praagh injected into my arm, and at a somewhat quick rate, 263 cubic centimetres of a 1 in 2000 solution. We only stopped the injection because our stock of solution was exhausted, though I certainly experienced a good deal of cramp-like pain in the arm and a curious nervous uneasiness in the thorax and especially in the cardiac area. Immediately I passed urine which was copiously loaded with blood. Many red corpuscles were found in the urine, but not so many as would be expected from the amount of blood-colouring matter present. An hour later the urine was still more bloody. Then for about four hours it happened to be inconvenient for me to micturate, but on doing so it was obvious that the blood had formed small clots in the bladder, which were expelled only with some straining, and for some little time there was considerable irritation of the bladder. Still later the urine was of a brownish tint containing no ordinary albumin or ordinary blood-colouring matter, but I had no means at hand to collect it or to further ascertain its composition. On the next day all urinary changes had disappeared, but I was very dusky and yellowish as regards the sub conjunctival tissue. During this period, too, I had a certain amount of bronchial catarrh and was conscious too of being unduly irritable in temper. It was here a question as to whether the bad results were due to the formic aldehyde or to the volume of fluid injected, so four days later I determined to have injected a solution of 1 in 1000. This is really (as I found afterwards) a caustic solution and I could not bear the injection of more than 63 cubic centimetres The injection was stopped because of the extreme cramp-like pain and faintness. Very shortly afterwards I suffered from severe bronchial catarrh, accompanied by much wheezing in the chest and the expectoration of considerable quantities of frothy, white mucus. Soon (but subsequently) there occurred catarrh of nearly all the mucous membranes, except, as far as one could ascertain, that of the stomach. There was much running from the nose and conjunctivæ, there was great irritability of the bladder, but no urinary change, and a mild but troublesome dysentery, the bowel pouring forth much clear mucus. On the next morning, too, there was a thrombus in the injected vein of about three inches in length, surrounded by an inflammatory zone and very painful. The thrombus has now become smaller and less painful, but it has not entirely disappeared. This was an unpleasant experience, but it served its purpose and showed that the maximum strength of solution to be employed in its then form must not exceed 1 in 2000 and the maximum injection must not be more than 50 cubic centimetres for an adult.

The experiments showed more. They are imperfect scientifically, for I was not prepared for the result and had not means at hand for its proper investigation. They are sufficient, however, for therapeutic purposes, and naturally I do not care to repeat them on my own person. They show that formic aldehyde is an irritant to the mucous membrane of the lungs and that even after passing through the lungs, its solution may be of sufficient strength to irritate the mucous membranes connected by circulation with the left side of the heart. I have already mentioned what strength of solution we may expect in the right side of the heart from the injection into the veins of a 1 in 2000 solution of formic aldehyde. Naturally this will be enormously diluted by the time it reaches the general circulation and it is difficult to estimate this dilution. But let it be remembered that a dilution insufficient to kill the tubercle bacillus may nevertheless weaken its action, and may still kill other minor germs, such as the staphylococcus pyogenes or the pneumococcus, the presence of which favours the growth of the tubercle bacillus. Experiments are in progress to ascertain the effect of various weak solutions of formic aldehyde on the growth and action of these germs; the results of such experiments I will publish later. Again, let me call attention to the fact that the aldehyde in strong solution caused bronchial catarrh. Below I shall have to mention that cough is not only unrelieved but often increased during the treatment of patients by this method. Possibly such mild irritation may be beneficial as a counter-irritant to the lung tissue, stimulating it to more healthy action, but its existence warns one that the treatment must be pursued with caution and frequent inspection. In fact, I have sometimes found, as I will describe, that improvement only appeared when the treatment had been suspended for a few days.

Again, to prevent disappointment, one ought to remember that the pulmonary artery—the only vessel directly affected by the intravenous injection—is not the only artery which goes to the lungs. As I have elsewhere explained it is the "functional" vessel of the lungs, while the bronchial arteries coming from the aorta are the "nutrient" vessels of the lungs and are not primarily touched by the injection. Nevertheless, I have not found great need for such warning in practice, so great is the diffusion through the pulmonary capillaries.

In estimating the result of such a method of treatment upon the human subject it is of all importance to take care not to deceive oneself. Of, say, 100 cases of early tuberculosis of the lungs probably 90 will show good results with no other treatment than improved hygiene and feeding. If any new treatment were applied to such cases one could easily be persuaded that it was successful. Naturally one would always wish to carry on a treatment in an early stage, but judgment of the effect of such treatment would be futile. For this reason I have only tested the treatment on severe and even desperate cases, thinking it better to meet with some failures if only one could get good results in a few cases where other remedies might have probably been useless. I append a few of such results, to be followed by a further series shortly. The test points are the steadying and reduction of hectic temperature, the quieting of the circulation, the diminution of the amount of sputum, the disappearance therefrom of pus and of the tubercle bacillus and other germs, and the abolition of such physical signs as indicate active tuberculous mischief.

I will tell you, here, the method which I have pursued in testing for such results. In hospital and elsewhere I have treated thus some 50 persons. Some of them were at the Brompton Hospital with surroundings, feeding, and discipline specially designed for their complaint. Others were treated at St. Mary's Hospital with the ordinary course of dietary, &c., pursued in a general hospital. And not all of these had the intensive treatment which of late I have adopted. Dr. R. G. Reid of [illegible]beth has in consultation with me treated some 20 patients who might be considered equivalent to those at the Brompton Hospital, but with their own home surroundings. Dr. A. Findlater of Edgware, who is in charge of the Hendon Workhouse Infirmary, has similarly treated seven cases with practically home surroundings, but also in a country atmosphere, or as near that as one could obtain within easy reach of supervision from London. I must not here give you details of these cases but merely the summary of the results. Almost every case has shown some improvement and in some this has been very marked. Most usually in my own cases the physical signs have diminished in amount as the earliest indication of improvement; appetite and general condition have been better after injection, and in nearly every case the patient has gained weight. The sputum became more frothy and less purulent, and in a few cases tubercle bacilli and other germs have already disappeared. I show you here one such patient. He came under my charge at St. Mary's Hospital in the autumn suffering from a very marked outbreak of the multiple pleuritic form of tuberculosis. His temperature, as you see, showed a rapid decrease, his physical signs diminished, tubercle bacilli disappeared from his sputum, and now he seems to be perfectly well. If you will examine his chest you will find nothing but some thickening of pleura in patches on the left side. Dr. Reid's cases have shown similar results in spite of the somewhat hard circumstances under which the patients were placed. Dr. Findlater, who is here to-night, will tell you himself of his results, one in particular being extraordinary.

The patients should be carefully watched during the treatment, for you have heard how I myself suffered from the effects of an overdose of the injection. If the injection be pursued too long the formic aldehyde will unduly irritate the lung tissue and increase the symptoms. It is only practice and experience which can tell one when to suspend the treatment, but, as a general rule, I should think it desirable to give up the injections for a few days when the temperature has fallen, when the sputum has become mucous and frothy, and when the cough is unduly troublesome. With regard to the latter symptom I do not see the same objection to treating it by opium as obtains in ordinary coughs. This cough is due to irritation of the pulmonary mucous membrane, and the same irritation causes the excessive secretion of mucus. An opiate will relieve both and is not, I think, counter-indicated.

Though it is somewhat outside our present subject, I may here mention the results of the treatment on bronchiectasis. As you know, scarcely anything can have a fouler smell than the sputum from this complaint, and at times so bad is this symptom as to incapacitate the patient from intercourse with his fellows. A patient came under my care at Brompton who had been supposed to be suffering from this, though I found that he really had a tuberculous cavity of the base of the lung with pleural adhesions, which kept the walls of the cavity constantly stretched. This was a similitude of bronchiectasis. His sputum was very offensive, so much so as to render it undesirable to keep him in the same ward with other patients. It separated on standing into the three usual layers. At this time I had not given a greater injection than two cubic centimetres and that by the syringe. After even the first injection distinct improvement was observed in the condition of the sputum. It became almost devoid of odour, less purulent, and much less copious. He left the hospital much improved. I have treated a few typical cases of bronchiectasis similarly and with like, though not such immediate, results. But my last case requires special mention. My colleague, Dr. Percy Kidd, asked me to apply the method to one of his patients at the Brompton Hospital. The patient was a country policeman whose bronchiectasis and accompanying condition were so bad that he had been warned to leave the force if he could not get better. He was really unfit to associate with his fellow men. He had been treated by inoculations in our "guaiacol room," but when I saw him he was in a wretched condition, although he had showed some slight improvement. At this time he was coughing up much more than a pint per day of very foul sputum. I began with the two cubic centimetres of injection on each day and afterwards administered 50 cubic centimetres of injection by means of the burette. He rapidly improved and when I last saw him he was expectorating only three ounces of matter which had only a faint odour. He then had to leave the hospital in order to report himself so as not to lose his pension, but I have little doubt that he could have been permanently cured.

[Since delivering the lectures I have tried, by modifying the vehicle, to use a greater strength of the formic aldehyde solution. At present I will not give details, but I think the result can be accomplished. I purpose bringing the whole matter before one of our societies at an early date in order that it may be adequately discussed.]

ABSTRACT OF THE

Purvis Oration

ON

DIETETIC PROBLEMS.

Delivered before the West Kent Medico-Chirurgical Society on Dec. 7th, 1900,

BY GEORGE VIVIAN POORE, M.D.,
F.R.C.P. LOND.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE, UNIVERSITY COLLEGE, LONDON.

DR. POORE commenced his address by expressing the pleasure which it had given him to accept the honourable duty which the society had asked him to perform, after which he referred to his anxiety first of all to do honour to the senior member of the University of London, and secondly, to do his best to keep up the reputation of the Purvis Oration. He said that he had taken for his subject one that must be in the minds of most of his hearers at the present moment, but he would like at the same time to explain that this particular subject was chosen some months ago and though it happened to be a singularly appropriate one in view of the crisis in connexion with beer that had arisen in some parts of the country, his selection was necessarily made without any reference to that state of things and without any knowledge that such an event was likely to happen. Charles Lamb in one of his well-known essays rather found fault with the members of a certain nation because they were too positive in their utterances. He said that they never seemed to be in doubt; if they were orthodox they were orthodox, and if they were infidel they were infidel, but they never seemed to wander in the dim twilight of dubiety. So far as the West Kent Medico-Chirurgical Society was concerned Dr. Poore deprecated this charge being brought against himself, because it was owing to the fact that the twilight of dubiety had settled upon him in regard to some dietetic problems that he had ventured to address them.

Nothing in this world, he continued, made entirely for good and nothing entirely for evil: roses had thorns and silvery fountains contained mud. We had to balance our accounts and see on which side the benefit lay. Nothing was more remarkable than the change which had come over the dietary of the people of England in the last two centuries At his club the other day he had taken down an old book of household accounts of the sovereigns of England extending from Edward III. to William and Mary, and it was curious to read how limited was the diet of people living in what was then considered to be the lap of luxury. Princes lived practically on fish, flesh, fowl, and beer, and on very little else. It was true that in addition to beer there were other fermented beverages such as wine and drinks made from honey, but many of the articles of diet which we of the present day consider essential were then remarkable for their absence. Sugar and spices were mentioned as real luxuries. Fresh vegetables were hardly mentioned at all, and but for the occasional introduction of pippins, referred to by Shakespeare, there was a lack of almost all fresh fruit. It was hard to imagine at the present day a dietary table without tea, coffee, cocoa, fresh milk, and such like, and without fresh vegetables. It must be remembered how late it was in the history of this country before the potato was introduced into dietetics. It was not till 1767 or somewhere thereabouts that it was introduced into the dietary of St Bartholomew's Hospital. A country gentleman some years ago showed Dr. Poore some old half-yearly rent audit books and on the front page of the books were the summer and winter bills of fare for the feasts which took place at those audits. As late as 1780 no mention was made of the potato. The difficulties a couple of centuries ago in getting fresh meat, and especially fresh vegetables, in the winter months were very great indeed, and it was not until the improvement of agriculture and the introduction of the turnip and other roots as foodstuffs, and the subsequent improvement in horticulture and gardening, that fresh vegetables were at all available for the masses of the people. It could be quite well understood that scorbutic tendencies must have made themselves evident in the winter, and "spotted fevers," and the "purples," and the "bloody flux," and other diseases which had a scorbutic taint about them must have been rife But with the improvement of agriculture and the advent of free trade this state of things passed away. There could be no doubt whatever that the admission of corn to this country free of duty, and food of all kinds at rates against which the home producer was powerless to compete, had improved the dietary of the population at large. When he considered the variety of foodstuffs which were grown in foreign countries and reflected how London was the best mart in the world—one where most things could be got at moderate prices, where bananas were almost as cheap as turnips and pineapples were not the exclusive luxury of the rich—he felt that probably to this fact more than to anything else we owed the approximate abolition of typhus fever, the total abolition of scorbutic diseases, and the general improvement of the public health. Erasmus had said in the sixteenth century that the masses of the British people were fed as well as the monarch, and this remark was not altogether inapplicable at the present day. There must, however, be something that had put a check on the improvement of public health which had undoubtedly taken place, and there were certain facts which must make us pause. One of these facts was the diminution of the birth-rate. Just at present the birth-rate had diminished more than the death-rate, and if we looked at the subject fairly we must see that there must be some lack of stamina in the people at large Another cause for uneasiness was the large number of people living at the expense of others and those who found it impossible at the present day to maintain themselves in a condition of independence. He hesitated to speak of these persons as paupers because the word pauper had a political connexion, but the fact remained that there was an enormous number of people who lived in workhouses, asylums, prisons, and other rate-supported institutions, and the number of such persons seemed to increase rather than to diminish There might be many explanations of this phenomenon, and he was unwilling to speak too positively of its causes. Infant mortality, again, did not show the diminution that was to be desired. The mortality under one year of age was as great as ever and we knew that these children had succumbed to dietetic diseases such as diarrhœa. Rickets was also a dietetic disease, and Barlow and Cheadle had pointed out that scurvy occurred among young children in consequence of dietetic errors. Then, again, women had largely given up the sacred privilege of suckling their offspring and they allowed their children to be brought up on advertised proprietary foods. It was impossible to avoid thinking that the enormous amount of dental caries must be due to some error or deficiency in diet. Most of those who worked in the City of London suffered from dyspepsia, and gastric ulcer was not less common now than it was formerly. Was it not possible that this was also due to some deficiency of diet?

In spite of all that had been done for public health the British constitution seemed very vulnerable to enteric fever, whether in this country or in South Africa, and it was impossible not to mention in connexion with it the insidious increase of malignant disease which puzzled every one. Another subject worth considering was the hand feeding of infants, a difficult question for the solution of which chemistry had been invoked. Attempts had been made to imitate human milk by various manipulations of the milk of the lower animals, but the chemical question was not the only one, for biological and other conditions must influence the digestibility of such milk. He was inclined to think that milk in the mammæ was entirely different from milk *in vitro* When milk was withdrawn from the mammæ it underwent certain physical changes. It was exposed to infection and accidental contamination, its temperature fell, and it began to separate into its constituent parts; moreover, in a few hours it might become sour. Just in proportion to its remoteness from the mother in point of time the milk was more and more unsuited for the nourishment of the suckling. When a young animal was joined to the mother it was joined very much like the bud on the stock. It took in nourishment without exposure to the air or a fall in temperature, and the whole process was altogether unlike the taking of milk from a feeding bottle. Under natural conditions the child sucked a thin stream from the living cells of the mammæ direct into its own stomach, and surely that was a very different thing from taking half rancid food through a rancid indiarubber tube. On this matter we had little positive information, and although obstetricians were quite unanimous that breast feeding was in every way superior to hand feeding still when facts and figures were asked for they were not forthcoming. He had only been able to avail himself of one instance, the data being supplied by a medical friend who had three children, all thoroughly healthy babies. This gentleman had furnished him with figures which showed that two of the children, hand fed, had at the end of 11 weeks gained 37 per cent and 25 per cent. respectively on the birth weight, while the third child, which was nursed at the breast, showed at the end of the same period an increase of 84 per cent. This was very remarkable, especially when it was added to the consensus of opinion in the matter. Of course the use of milk for failing health was common; his hearers would remember that in medical history there were accounts of invalids who had recourse in their extreme old age to the services of a wet nurse, and it is reported that Dr. Caius, the President of the Royal Society, had to be fed in this way. He was rather a petulant old gentleman, but when he got a sweet-tempered nurse his temper completely changed. Many years ago he (Dr. Poore) was called in to see a patient who belonged to the upper classes and who was in a pitiable state, the result of bulbar paralysis. This gentleman was attended by Dr. W. B Cheadle, but about once a month he would become restive and on one occasion he called in Sir William Gull who told him that he wanted a little nourishing food and that at 11 A.M. each day he was to have half a pint of ass's milk with a *petit verre* of noyeau. The ass was driven to the door each day and the patient had the milk hot from the animal. The prescription was entirely Sir William Gull's, but it was represented as his opinion conjointly with those of Dr. Cheadle and Dr. Poore Whether in consequence of the treatment or not the man lived for three years. On looking back at this case Dr. Poore was not at all sure that the prescription was not the cause of the prolongation of the man's life. Much was heard of the dangers of milk, most of which were attributable to the manipulation of the milk itself. Of the disease attributable to the cow we had very little certain knowledge. It had been proved that tuberculosis might be conveyed to the lower animals fed upon milk from a tuberculous udder, but we were very much in the dark as to the part which milk played in the causation of tuberculosis in man.

Evidence on this head ought to be forthcoming before drastic laws were passed regulating the supply of milk. In a herd of cows belonging to the best-known family in this country 38 out of 40 were found to be tuberculous, and this state of things had probably existed for many years. Alongside of this herd was a family of four generations, and as far as he knew there had not been a case of tuberculosis in that family. They should therefore pause before directing that all milk ought to be boiled. Variola and tubercle were diseases common to human beings and to cows. How was it that the variolous cow was at a premium and the tuberculous cow at a discount? He felt that children fed upon boiled milk were likely to suffer in health and that that deterioration in health might lay them open to tubercle. Milk that had been manipulated, whether sterilised or otherwise, ought to be labeled so that all might know what they were buying. Again, a habit was growing up of putting chemicals into the food of children. As a profession medical men ought to resist this. Enough was not as yet known about boric acid and it was disgraceful to make experiments upon babies. With regard to meat he thought that it was best when it was fresh, and most nourishing probably when it was raw. Of late years we had had a revelation in dietetics in relation to the thyroid gland. It was known that when thyroid extract was administered in suitable cases the stunted idiot would grow and develop physically and mentally and the myxœdematous woman would recover her health. That was a most remarkable thing. It was still more remarkable when it was remembered that this power of the thyroid gland was greatly decreased with staleness and was practically abolished by cooking and that the chemist could tell very little about the difference between the cooked and the uncooked gland—the one potent for action and the other that had no action at all. There was a belief, especially among the poor, that beef was most nourishing when raw, and this was probably not mere prejudice. The oyster—almost the only animal food that was taken raw in England—was known to be extremely digestible and stimulating. He reminded his hearers that one of the advantages which the South African Boer had had over us was in regard to his food. With a lump of biltong, the sun-dried flesh of the deer or ox, his commissariat was complete. British officers who had eaten biltong were all loud in its praises. He also referred to the charqui of South America, the pemmican of North America, and the hung beef of Hamburg. When animals were put to stress for food—when, for instance, dogs or cats were about to have puppies or kittens—they were very active in finding fresh food. When he saw his cat hunting for mice or stalking birds in a more than usually active manner he was perfectly sure that there was a litter of kittens in the coal-cellar. His friend Dr. Taylor had been carrying on some experiments for him with regard to the digestibility of muscle. The fresh quivering muscle of a rabbit, muscle in the condition of rigor mortis, and muscle when the rigor mortis had passed away, were respectively put into similar mixtures of pepsine and hydrochloric acid. In the fresh muscle the digestibility was 25 per cent. more than in the other samples. They seldom ate food that was absolutely fresh. To show that absolutely fresh food could be eaten with relish he instanced a case in the war in South Africa A herd of deer were surrounded, killed, skinned, cooked, and eaten at once. It was an interesting thing to note that it was said that a coursed hare could be eaten on the same day that it was coursed, but on the other hand a hunted stag was an impossible food. He mentioned this because it was one of those things of which he should like to have more knowledge. Finally he asked what it was that happened to meat when it was hung and ripened? He could not give the answer, but he strongly suspected that there was a microbial action concerned. It was the cultivating medium which stimulated our appetite.

They were apt to look too much to chemistry in the matter of food. Who when they ate considered whether they were taking too much carbohydrate or too much proteid? It was what they digested that did good, and this depended on whether it was savoury and stimulating to the glands of the palate and so forth. If a person sat down to a repast selected so as to contain a certain percentage of proteids it was very likely that the stomach would rebel. He thought that there was too much of this sort of thing and that physiological chemistry was doing itself no good by it. He could not help thinking sometimes that there were manufacturing firms who kept chemists very much as advertising tailors used to keep poets and for the same reason. In conclusion, Dr. Poore referred to "shop eggs" and to the difference between fresh and frozen meat. He also gave a humorous account of a visit to a village on a Saturday night where the grocers' shop-windows were filled with potted vegetables and where the smell from shops in which slabs of semi-transparent flabbiness were frying in oil could be appreciated a quarter of a mile away. Replying to a note that was handed to him asking for his opinion on the doctrine of not taking any meat, he said, "All flesh is as grass."

THE CONDITION THREE YEARS AFTER OPERATION OF FIFTY SUCCESSFUL CONSECUTIVE OVARIOTOMIES;

FIVE PATIENTS LOST SIGHT OF, 32 IN EXCELLENT HEALTH, SEVEN CASES NOT QUITE SATISFACTORY, THREE UNSATISFACTORY, AND THREE PATIENTS DEAD.[1]

(Notes of some cases refused operation and of the author's unpublished fatal cases of ovariotomy are added.)

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THE statistics of ovariotomy have been made a subject of competition amongst surgeons, and it may be admitted that when the operation was new and its mortality was great the rivalry served a useful purpose, but now that the mortality is small the announcement that one has attained the lowest death-rate is apt to prove misleading; for the fact that a surgeon is able to publish a series of 50 consecutive recoveries from ovariotomy has not necessarily any scientific or clinical value. Even a much larger number of consecutive successes might be recorded without proving any special skill in the surgeon, whilst, on the other hand, there might be no discredit to an operator in the occurrence of fatal cases under his care at short intervals. The man who has the lowest death-rate is not by any means necessarily the best surgeon. The mortality is influenced to a considerable extent by two factors which are quite independent of surgical skill. One of these is chance. A surgeon may have a long series of simple cases or of difficult cases, and this factor cannot be eliminated altogether in any number of operations. It is obvious, however, that a man who has the opportunity of performing ovariotomy very frequently is likely to be asked to undertake an undue proportion of operations that are difficult and dangerous, so that his death-rate might possibly be increased in consequence of his recognised ability. It is also obvious that if a surgeon selects a series of cases from his work, as I have selected the cases which form the subject of this paper, the results recorded may offer no indication of his true death-rate. A brilliant series of successful cases may by chance be part of a very poor record.

Another factor which influences the death-rate is the care and skill with which the cases for operation are selected. Some of the authors of statistical papers on ovariotomy have asserted that they made no selection of the cases operated on. I do not understand such an assertion. Every surgeon must select his cases. It is hardly possible that a surgeon could see a large number of patients with ovarian tumours without meeting with a malignant ovarian growth which he could not remove. If he has met with such a malignant case and has not operated on it, whilst asserting that he has made no selection of cases for operating, he really makes an unjustifiable claim.

I have elsewhere pointed out[2] that a statistical paper on ovariotomy has little or no value unless it is accompanied by an account of the cases simulating those of ovarian tumour in which the surgeon has declined to operate, but I do not know of any series of cases in which this plan of publication has been adopted. In the series which I am now about to consider there are three cases in which the mistake of refusing to operate was very nearly made, and in two of them operation was delayed for a considerable time because of errors in diagnosis. In one case I thought that the tumour was malignant, but on exploration of the abdomen I found a simple ovarian cystoma. In a second case a soft fibroid had been diagnosed four years before I operated. In the third case I opened the abdomen thinking that the patient suffered from chronic inflammation of the ovaries and Fallopian tubes. She had been under my observation as a hospital out-patient for many months, operation having been postponed from time to time after consultation with my colleagues. These cases might easily have passed out of my care, and indeed the second and third had passed out of other hands before I saw them. From this it is obvious that I may at times have seen cases of ovarian tumour without detecting the condition, and of course other surgeons may have had a similar experience.

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[1] A paper read before the Medical Society of London on Dec. 11th, 1899.

[2] Illustrations of Some Modes of Death after Ovariotomy, Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii.

Apart from cases in which the existence of an ovarian tumour is uncertain there are cases, such as two of those recorded at the end of this paper, in which ovarian neoplasms are diagnosed, but it is doubtful whether the patient has any chance of recovering from the operation of ovariotomy. Under such circumstances surgeons may come to different conclusions as regards the advisability of interfering; some holding that an operation is useless and therefore should not be performed, others maintaining that the boldest surgery is justifiable because cases of ovarian tumour complicated by very serious exhaustion or other adverse conditions are almost invariably fatal if left alone, whilst the patient may sometimes be restored to long life if her tumour is successfully removed. Clearly the decision which is come to in such cases must influence the death-rate, and therefore some record of cases in which ovarian tumours are known to exist or in which they might possibly exist but in which no operation had been performed, is essential if the publication of the statistics of ovariotomy is to have any scientific value, or any value for comparison with the statistics of other operators. It is obvious that a man who is keen to exhibit a low death-rate must tend more or less strongly to avoid operating on serious and dangerous cases. Quite apart, however, from any idea of future publication, every surgeon, I think, must have occasionally felt some hesitation in recommending and undertaking an unusually hazardous operation immediately after a similar case has proved fatal in his practice, or after a run of bad luck. That the treatment of a particular patient may be influenced by the state of a surgeon's statistics at the moment when he gives his opinion, is a possibility which should be eliminated by every available means; but undoubtedly the practice of publishing and comparing statistics, without giving any details of similar cases in which operation has been refused, tends to intensify the influence of the surgeon's personal, even if temporary, feelings on his treatment.

There is another very important and serious objection to the practice of publishing and comparing statistics of ovariotomy—namely, the fact that the figures are not all drawn up according to the same plan. Some surgeons have set aside in supplementary lists those cases in which the operation is incomplete or otherwise complicated: I have never been able to see any justification for this method from a scientific point of view, and from a clinical point of view it seems to me simply misleading to exclude incomplete or complicated cases from statistical tables. By such means it is possible to modify the death-rate to a very large extent. Take, for example, the six fatal cases which I reported in the Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii. These were all of my fatal cases of ovariotomy at the time of publication. Two of them were incomplete and two were complicated by hysterectomy; and for these reasons they might have been put in supplementary lists and excluded for purposes of quotation from my death-rate. In the fifth case the tumour had already been explored by abdominal section by one well-known surgeon and another surgeon had refused to operate on it before I saw the patient. I completely removed a papillomatous tumour and the patient survived 35 days, death being then due to obstruction of the bowels. I attributed this obstruction to the irritation of serous exudations and of frequent tappings which had induced extensive adhesions. There is no doubt in my mind that I did right in removing this tumour, and that both from a scientific and from a clinical point of view the case should be counted amongst my fatal ones. But for purposes of comparison with other statistics this case might fairly be set aside by me or it should be carefully referred to by the other gentlemen concerned when their statistics are published. The tumour ought to have been removed when the abdomen was explored 18 months before I operated, and the chances of success would then have been far greater. Thus, for purposes of quotation, five out of six deaths might have been removed from my death-rate. The sixth death was due to a uterine condition, and it also might have been excluded from my statistics without much ingenuity, leaving no mortality. Some such manipulation would have been necessary to get a fair comparison with many of the published tables, but all six patients died after ovariotomy or attempted ovariotomy, and I repeat that I have never been able to understand why each one should not count as a death in my statistics. Any other plan would amount to this, that in publishing statistics a surgeon may determine that certain cases in which he has removed an ovarian tumour or part of one are not to be considered cases of ovariotomy, and, if the patients die, they are not to be counted as fatalities in his statistics of this operation, he alone being the judge as to which are to be eliminated. This method of setting aside and excluding from the death-rate cases in which ovarian tumours have not been completely removed has, unfortunately as I think, received the support of men of very high standing; but if cases in which the surgeon has failed to complete his operation may be excluded from statistics, another surgeon might with equal reason exercise his ingenuity in proving that his patients died from complications, and not from ovariotomy. Thus the statistics of this operation might eventually depend, and do now to some extent depend, on a skill and ingenuity which are certainly not surgical.

It is not always easy to say whether the death of a patient is caused by an operation or not. For instance, a patient may get pneumonia and die a week or 10 days after a simple ovariotomy in which otherwise everything has gone well. Perhaps no one is in fault, and it may be abundantly clear that the death is not attributable to any want of skill or care on the part of the operator. It would be hard on a surgeon who was collecting statistics for purposes of comparison to have to include such a case amongst his deaths. Nevertheless, in the circumstances suggested it is fairly certain that the patient would have escaped the pneumonia if the operation had not been performed, and although it might possibly be argued that a death from an intercurrent disease should be excluded from the surgeon's statistics, because there is no necessary connexion between the operation and the death, it is also quite certain that in excluding such cases when quoting a death-rate to a patient the surgeon would conceal a risk which the patient must undergo if ovariotomy is performed.

Again, it is sometimes not possible to say whether an operation is an ovariotomy in the sense of *removing an ovary for new growth* or not. At the end of this paper I shall refer to a fatal case in which I am not prepared to say definitely whether I removed a suppurating ovarian tumour or an abscess of the ovary. In publishing this case a surgeon might fairly choose to put it amongst his operations for new growth or amongst those for inflammatory disease, but for scientific and clinical purposes it would be better to refer to it in the statistics of both these operations.

A fatal case which I shall hereafter record illustrates a fallacy seldom noted in statistics. It was first diagnosed as an ovarian tumour but the disease was really a severe pelvic inflammation. When an ovarian tumour is diagnosed the possibility that the disease may be something else always exists. There are some conditions, such as those found in certain cases of retro-peritoneal cysts and in some cases of cystic uterine fibroids, which it is quite impossible to differentiate from ovarian tumours before the abdomen is opened. Thus the risks run by a woman who is advised to have an ovarian tumour removed include those which may arise in case some other condition is found. Some of these conditions are easily dealt with by an experienced surgeon, so that possibly the average risks may not be greatly, if at all, increased by this possibility of a mistake in diagnosis being made. In one instance, however, that subsequently came under my care, a cystic fibroid tumour of the uterus had been cut down upon and the scar of the incision was 14¾ inches long when I measured it. A tumour of this kind always grows, and therefore ought to be removed, but the operator neither removed it nor told the patient to seek further advice, and an interval of two years and eight months elapsed before she came under my care, when I performed successfully a hysterectomy, which was really a very simple operation. The case shows that the risks run by the patient in case of a mistake in diagnosis may be very considerable.

Owing to such considerations as the foregoing I have never paid much attention to statistics either in my work or in publishing an account of it. The majority of statistical papers concerning ovariotomy, especially those of recent date, seem designed chiefly to show the best side of a series of cases and if possible to beat the record as regards recoveries. The fatal cases which occur in every practice, if it be long enough, are, however, the really instructive ones. I have therefore published most of the deaths from ovariotomy and from attempted ovariotomy which have occurred in my practice, and I propose to relate those not yet published at the end of this paper.

My object in the present communication is to record the condition of a series of patients three years after the last operation of the series was performed (Oct. 2nd, 1896), and I have chosen 50 successful consecutive cases because they seemed to give a better foundation for a paper than a series in which there were some deaths from operation. I shall say little about the simple and satisfactory cases, but I shall record certain accidents and mistakes that occurred, and I will give a more detailed account of those cases in which the later condition is unsatisfactory or not so satisfactory as might be desired. Deductions from a comparison with the statistics of others would be utterly illogical, for it is practically impossible that another series of 50 cases could occur in which the initial conditions would make such a comparison useful in any way. Details of the operations and of the convalescence of the patients will be referred to only in so far as they seem important in connexion with the more recent conditions to be recorded.

Four cases in which operation was refused during the period covered by the 50 cases under consideration.—Before discussing the 50 cases referred to in the title of my paper I propose to fulfil the conditions which I have laid down as necessary in a statistical paper by recording shortly the cases which I saw during the period covered by the series under consideration, and concerning which I was conscious that I might possibly have made a mistake in refusing to remove ovarian tumours. These were four in number.

The first was the case of a hospital out-patient whom I was asked to examine by my colleague Mr. A. Corrie Keep. She was an elderly woman, who had an abdominal swelling which I diagnosed as a malignant ovarian tumour which I could not successfully remove. The inguinal glands were enlarged, and the tumour was firmly fixed in the pelvis. As the bowels were much loaded I advised that the patient should take some laxative medicine and be examined again later. She did not come back to the hospital and I have no knowledge of her subsequent history.

The second case was sent to me by the late Dr. R. E. England of Dover. The patient was a woman, 47 years of age, from whom Dr. Pregaldino of Ghent removed an adeno-carcinoma of the right ovary in November, 1894. On Oct. 8th 1895, she consulted me, and I found a tumour, partly solid and partly cystic, which projected freely into the vagina to the left of the cervix uteri The tumour extended along the left side of the uterus above the pelvic brim. The uterus was easily defined beside it, although firmly fixed to it, and the growth was so closely adherent to the pelvic wall that I thought that any attempt to remove it would end in failure. I therefore advised that no operation should be performed and the patient died nine months after I saw her. This is the only case I have seen in which a tumour that I believed to originate in the ovary sprouted freely into the vagina.

The third case was one in which I opened the abdomen on Jan. 14th, 1895. I found a tumour of the left ovary which was extensively adherent, but seemed as if it might be removed without much difficulty. Another tumour on the right side was firmly adherent to many coils of small intestine. The most easily reached of these coils had new growth penetrating its wall and protruding into the lumen of the gut. I did not persevere with the operation because a resection of bowel would have been necessary and there were many adherent coils behind, any or all of which might have required similar treatment. The patient recovered, but I regret that I have lost all trace of her.

In the fourth case in which I did not operate an abdominal growth and a uterine growth were discovered in a patient 50 years of age. The patient had a great deal of offensive discharge from the vagina and the uterine cavity was dilated and curetted in order to determine the nature of the uterine disease. A malignant uterine growth was diagnosed, but the case was not considered suitable for hysterectomy. After the exploration there was an irregular temperature with abdominal distension and pain. The gentleman who had curetted the uterus thought that the patient had an ovarian tumour with a twisted pedicle in addition to the uterine disease, and he asked and urged me to open the abdomen. It seemed to me, however, that if the uterine condition were malignant the abdominal tumour was also malignant and that the patient was suffering from an inflammation spreading to the peritoneum from the recently disturbed intra-uterine diseased tissues. Under the circumstances I considered operative treatment quite hopeless. I therefore declined to interfere, and the patient died. At the post-mortem examination a ruptured ovarian cyst was found with acute inflammation of the peritoneum in its neighbourhood. There was no twist of the pedicle. There was no malignant disease, but the uterus was affected by fibroid neoplasms, some of which had sloughed. The two questions of diagnosis which arose in this case are occasionally a source of very great difficulty. I was not in any way responsible for the diagnosis of malignant uterine disease; but some 12 or 13 years ago I saw a somewhat similar case in which I did not know what the patient was suffering from. I consulted a man of far greater experience than my own, and he said without hesitation that the patient had a malignant growth of the uterus, a diagnosis which I accepted. A few days after our consultation I was sent for because the patient could not pass water and was in great pain. She was in bed, and I suggested that she should try to pass water in the erect position. The bladder acted without difficulty, and the patient at the same time expelled from the vagina a putrid fibroid tumour of oval shape measuring nearly five inches in its greatest length. After that she rapidly recovered her health

In cases of doubt between malignant disease in the abdomen and an ovarian tumour, either on account of twisting of the pedicle or of rupture of one or more cysts, it is only by opening the abdomen that it is possible to make the diagnosis certain. But if this question should be placed before me again in a patient whom I believed to be suffering from malignant disease of the uterus, with peritonitis developing soon after the uterus had been disturbed by exploration, I doubt if I would operate unless it seemed feasible to remove the uterus also.

Five cases which have been lost sight of.—As regards the 50 cases now under consideration, I regret that there are five of them which I have been unable to trace. Their histories are shortly as follows:—

In the first of these cases the patient was a married woman, 40 years of age. She had noticed a tumour for nearly two years. I removed a multilocular ovarian cystoma which distended the abdomen as high as the costal margin. There were some very vascular adhesions to the pelvis and bladder, but the highest temperature during convalescence was 100·6° F. in the vagina, and after three days the temperature was normal. The patient left the hospital on the twenty-third day after the operation.

In the second case the patient was a widow, 60 years old, who had a large cystic tumour filling the abdomen. The tumour was deeply buried in the left broad ligament, and the sigmoid flexure was pushed high up in the abdomen by the tumour, to which it was firmly attached. There were some omental adhesions, but the chief difficulty lay in the deep enucleation from the broad ligament. The Fallopian tube formed a loop six inches long on the front of the growth, the fimbriated extremity being within an inch of the other end of the tube. The uterus was atrophied, and I could not discover the right ovary. The highest temperature during convalescence was 100·8° F. in the vagina, and the patient left the hospital on the twentieth day after the operation, being then very well.

The third case was that of a neurotic single woman, aged 33 years, who had a very tender tumour of the size of a duck's egg on the right side of the uterus. The pain made her quite unfit for work during four days of each period At the operation there was no difficulty except that the ovaries had very short pedicles. There was a small fibroid tumour on the right side of the fundus of the uterus. Both ovaries were removed. The right was cystic and the left contained a dermoid cyst about three-quarters of an inch in diameter. During the first week of convalescence the temperature once rose as high as 101° F. in the vagina, the pulse at the same time being 70. The temperature came well down to normal, but on the tenth day there was a sharp rise to 102·2°. Apparently this thermal disturbance was connected with the administration of a purgative. At this time the pulse did not rise above 72 and the temperature was again normal two days later. The patient left the hospital on the twenty-first day after the operation and she was then in very good condition.

In the fourth of these cases the patient was 26 years old. I diagnosed and removed an extra-uterine pregnancy of the size of a large Tangerine orange An ovarian tumour of somewhat smaller size was also removed The highest temperature during convalescence was 101° F. in the vagina. The patient left the hospital on the twenty-first day after the operation, the temperature then having been normal for a week.

The fifth case was that of a married woman, aged 27 years. The patient had been told that she was pregnant, although her menses had not ceased and there was no enlargement of the mammæ; but the abdomen was as large as if it contained a uterus at the seventh month of gestation. The patient was very feeble, with a weak pulse, and a loud hæmic murmur was heard all over the cardiac area. She was much afraid of the operation. I removed over three pints of ascitic fluid and a solid ovarian tumour weighing 2 lb. 14 oz. Mr. Targett examined the growth and informed me that it showed no evidence of malignancy. This patient had an attack of bronchitis and a high temperature for nearly a week after the operation. On two nights the temperature was as high as 103 4° F. in the vagina, and the patient's condition made me very anxious, but she slowly regained her strength, and about 18 months later she was very well. Since that time I have not been able to trace her

In the remaining 45 cases, 32 of the patients seem to me to be in really good health; seven others have very little to complain of; three are in an unsatisfactory condition; and three are dead.

Thirty-two patients in really good health.—In 1887 I argued that the recovery of a patient after an abdominal section depends to a very great extent on the success with which the surgeon prevents intestinal troubles, and I showed that intestinal difficulties due to paralysis of the bowel and obstruction of the bowel had been generally mistaken for inflammatory conditions of the peritoneum. The views I then published are now universally regarded as correct, and the importance of paresis of the bowel as a factor in bringing about symptoms of obstruction after an abdominal section is insisted on by all who write on this subject. I would on this occasion further point out that not only the immediate result of the operation but also the future health of the patient is largely influenced by the extent to which the functions of the intestines are unimpaired or are interfered with by peritoneal adhesions. If adhesions exist in such positions that the propelling effect of peristalsis is hampered in any way they may induce much pain, constant indigestion, and a permanent liability to symptoms of intestinal obstruction of an acute or chronic character. It is an important fact that intestinal adhesions may stretch or become absorbed so as to give less trouble as time goes on. To such changes I attribute the fact that a number of the patients whom I now report as in every way satisfactory complained of bowel difficulties for varying periods after their operations.

It is not safe, however, to count too confidently on the disappearance of adhesions. I have evidence that they may be persistent for many years after an operation, and there can be no doubt that they may continue indefinitely. Hence, if an acute illness, with intestinal difficulties that might be due to an obstruction by band, arises at any time after an abdominal section has been performed, the fact that these symptoms may be due to adhesions should be kept prominently in mind. Under such circumstances I would urge that all the arguments in favour of immediate operation should be considered as of unusual weight. I have been forced in consultation to delay operation in two cases of this kind. In both death was proved to have been brought about by an obstruction caused by an adhesion. Neither of the patients had the slightest chance of recovering without an early operation, but one of them would almost certainly have recovered if she had been operated on when I first advised interference.

It is to be expected, therefore, that the best results after ovariotomy will be obtained in those cases in which the tumours have no adhesions and require no enucleation from the broad ligaments. If I put on one side the five cases which were lost sight of and the three cases in which the patients have died; I find that in 15 of the remaining 42 cases there were no adhesions, and no enucleation of the tumour was required. In 12 of these cases the present condition of the patients is thoroughly satisfactory. In 27 cases the operative difficulties varied from the slightest adhesion to complete union of the tumour to all neighbouring structures, and in some cases a very deep enucleation from the broad ligament was necessary. Of these 27 patients 20 are quite well. Thus in this series the proportion of really satisfactory cases did not greatly differ whether there were adhesions or not before the operation; but in the three cases which are not quite satisfactory after simple operations the patients have little to complain of and might very possibly have been quite as uncomfortable if they had never developed tumours requiring removal by operation, whereas in the seven not quite satisfactory cases in which adhesions were found three of the patients are now not at all as I would wish them to be

Numerous adhesions do not, however, always lead to bad results. They cause no harm when the adhesions do not interfere with the function of the bowel. For example, the intestines in cases of tuberculous disease may be almost or quite universally adherent and yet bowel symptoms are not necessarily prominent. One of my cases in which adhesions must be numerous has already been published[3] The tumour was an unusually adherent dermoid cyst and the patient during convalescence gave no cause for anxiety for 16 days. She was then allowed to get up and symptoms pointing to the existence of a pyonephrosis gradually developed; the patient became very ill, the temperature rose to 105° F., and she appeared to be dying On the twenty-seventh day after the ovariotomy I incised the left kidney, which was very much enlarged, but I found no pus. Nevertheless, this second operation was followed by an immediate improvement and convalescence progressed favourably, being interrupted only by occasional attacks of pain and high temperature, which, however, were always relieved by purgation. The loin wound closed and in July, 1897, 13 months after the operation, I reported that the patient's health was thoroughly re-established. She still has occasionally a little pain which is relieved by the administration of laxatives. She can walk as well as can most of her friends, but she has not ventured to ride a bicycle or to take horse exercise, to which she had been accustomed. (Since the above was written the patient has told me that she is in excellent health.)

Within three weeks of the operation last referred to I removed another dermoid tumour from universal adhesions. These two operations were very similar, the patients being 32 and 35 years of age respectively. The second patient has also had occasional pains, which have been relieved by rest and laxatives, and she can now do everything she wants to, with the exception that if she stands for any length of time she becomes very tired. She can, however, ride a bicycle and skate freely without the slightest trouble. In both these cases it is fairly certain that a great deal of adhesion of the intestines still exists, the tumours having been literally peeled out of strong inflammatory attachments. Both growths were very hard, heavy, and irregular in outline, with many bony parts projecting under the surface, and the adhesions seemed to be due to the mechanical irritation caused by the rough surfaces, for one tumour had no twist of its pedicle, and the other had only the slightest turn, which was not sufficient to obstruct its blood supply. Of course it is impossible to say positively that these patients have any adhesions now, but recently I have performed second operations on two very similar cases, with intervals of 18 months and four years and three months respectively after the first operations, and in each of them adhesions were very numerous, firm, and extensive, around the site of the first operation Patients with such extensive adhesions, if they recover well from the operation, are more free from danger of serious trouble than they would be with one or two isolated bands of adhesion, because the danger of an obstruction arising after the patient has completely recovered from the operation is much less when a large area of intestine is fixed than it is when the intestines are for the most part freely moveable and are held firmly at one or two points only.

The history of another patient in whom no adhesions were found at the operation shows that bowel difficulties do not always depend on adhesions, but may be caused by a sluggish peristaltic action, such as may be found in patients who have not been operated on. This woman was 36 years old and had suffered from severe constipation for many years, for which horse exercise had proved very beneficial. This kind of exercise had to be discontinued when the patient's abdomen became of great size from the development of two ovarian tumours. For four months before the operation the constipation was very obstinate; and during convalescence the patient was much troubed in this way until I allowed her to resume horse exercise, when the bowels acted more satisfactorily, and she very soon reported herself as quite well.

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[3] *Twenty six Cases in which an Abdominal Section has been performed a Second Time*, Transactions of the Medical Society of London, vol. xx., Case No 20, p. 26.

Some of the other cases that have made good recoveries have points of interest. In one I opened the abdomen, letting out much fluid which I thought was free in the peritoneal cavity. I tapped a very soft, friable, multilocular cyst, and then found that I was working within a thin-walled cyst and that I had tapped a secondary cystic growth. I was not able to separate the main cyst from the peritoneum of the anterior abdominal wall at the site of my incision. I therefore cautiously opened the cyst behind and exposed the small intestines which were only slightly adherent to the tumour. I was then able to separate the cyst from behind forwards. It was very thin-walled and firmly adherent to the liver and to the peritoneum of the anterior abdominal parietes. The patient, who was 23 years of age, had an extreme lateral spinal curvature and was very delicate. She had worn a spinal support from childhood. The enlargement of the abdomen caused by the tumour had been noticed only six months before she was sent to me. This operation was a very dangerous one on account of the extensive tearing of tissue that was necessary and the feebleness of the patient. So far as the operation is concerned, however, the result is perfect and since she left my care the patient has been able to dispense with her spinal support.

In four of the cases an ovarian tumour had already been removed at an earlier date. In one of these the bowel was injured at the second operation, but the result is very satisfactory. Mr. Knowsley Thornton removed a tumour of this patient's left ovary in 1882 and on Nov. 18th, 1895, I removed a tumour of her right ovary of the size of a small orange. This was deeply embedded in the right broad ligament with coils of small intestine firmly adherent to its posterior and upper surfaces. In order to make sure that the intestines were not punctured in removing the tumour I had to separate a large mass of matted small intestine which was firmly adherent in the pouch of Douglas. The walls of the intestine were torn in many places and at one point its lumen was opened. The perforation and many other injuries of the parts were sewn over with Lembert sutures; the patient made a good recovery and is now, four years later, quite well. As a rule it is not wise to meddle with extensive adhesions which have caused no symptoms of intestinal obstruction, but sometimes, as in this case, the surgeon has to effect a partial separation and then it may be wiser to proceed to divide all the adhesions. There is no more difficult question than to decide how much should be done in this way.

In one case of the series, owing to a mistake on the part of a nurse in counting the sponges, I left one in a patient's abdomen and removed it half an hour after she was put to bed. She also is quite well and the incident of the sponge gave rise to no trouble.

On one occasion I removed a cystic tumour of the left ovary and found a small horn like growth on the right ovary. As the disease on the right side seemed to be confined to a small portion of the gland I removed the new growth with a wedge-shaped portion of healthy tissue and sewed the parts together by means of fine silk, leaving the greater part of the ovary. This patient writes that she has since been in good health.

The following case was reported as untraced when this paper was read. The patient was a single woman, 23 years old, and I diagnosed an ovarian tumour deeply buried in the right broad ligament. On opening the abdomen I found, as I thought, a tumour closely attached to the right side of the uterus. The uterus seemed to stand out so well to the left of the tumour that I expected the latter when tapped to shell out of its capsule easily and I therefore tried to complete the operation through a short incision. After tapping, however, I could not quite understand the conditions and on enlarging the incision in the abdominal wall I found that I had tapped the pregnant half of a double uterus. I very carefully closed the punctured opening. There happened to be a small cyst of the right ovary which I removed and the existence of which brought the case within the series under consideration. The patient, of course, miscarried and I had to scrape away the placenta and membranes, but she made a good recovery. I lost all trace of her until February, 1900, nearly four years after the operation, when I heard that she had been delivered of a seven and a half months child in a lying-in hospital. The resident medical officer of that institution has kindly informed me that when she left the hospital the whole uterus was larger than normal and that at the fundus it was possible to distinguish the left uterus, which was softer, from the right, which was smaller and firmer. The septum of the cervix was easily felt, the left os uteri being the more patulous. (Mr. Corrie Keep informs me that this patient, who had been under his care before I saw her, had been pregnant on a previous occasion—a fact which I did not know or had forgotten.)

There is one other case that should be mentioned amongst those in which the results are quite satisfactory. The patient had a dermoid tumour of very irregular shape, which was deeply embedded in the right broad ligament and which was diagnosed by myself and others as a fibroid uterine growth. Before and for months after the operation I found granular and epithelial casts in the urine which was pale and was passed in large quantity. Its specific gravity was never above 1010 and it did not contain albumin. Five months after the operation the patient had an acute attack of nephritis, with much blood in the urine, but she is now in a very satisfactory condition; she looks well, does a great deal of work, and has not required medical assistance for nearly three years. A specimen of her urine examined in June, 1900, contained a decided trace of albumin and a very small quantity of pus or proliferated epithelial cells, with a few vesical epithelial cells, but no renal casts were found, nor was any blood found. The urine was acid and its specific gravity was 1013.

Several of the patients have had intestinal difficulties from which they have perfectly recovered. In one I thought malignant peritoneal growths might be developing, but the suspicious lumps which I felt in the abdomen were cleared away by laxatives and enemata and the patient is now quite well again. In another case I removed a large multilocular tumour with very friable walls, which had already burst in places before the abdomen was opened. The second ovary was also taken away I thought both ovaries were completely removed, but the patient, whose age was 36 years, had a slight white and red monthly discharge from the vagina until very recently. Two years after the operation this patient had an attack of severe dragging pain in the abdomen lasting a week, and she was afterwards confined to bed for four months, there being much difficulty in getting the bowels to act. The patient is now very well, and the periods have quite ceased.

In one case I thought that the tumour was malignant, but it was not examined microscopically. The patient has remained quite well. Several of the patients have borne children since their operations, one as early as 13 months afterwards. Two patients have married after single ovariotomy, and two after double ovariotomy. The latter appear to be quite happy. (One of the patients married, after double ovariotomy, in July, 1899, at the age of 25 years. She was quite well till Christmas when, after nursing her husband through a serious illness of some months' duration, she suffered from bearing-down pains with a vaginal discharge, and became very thin. I have not seen her since then.) In the whole series I have no knowledge of any case of hernia, but I have not examined all the patients.

Seven cases which are not quite satisfactory.—Of the cases in which there were no adhesions and in which the results were not quite satisfactory one patient was operated on when she was four months pregnant. The operation was quite a simple one, the tumour being of oval shape and about five inches in its longest diameter. The patient had no trouble after delivery at term, but she took little care of herself. Although advised to wear a belt she did not do so. She has now very lax abdominal walls, with wide separation of the recti muscles, but there is no hernia of the scar. The condition might have arisen without the operation having been performed, and was due to her neglect of obvious precautions. Of course, the tumour described did not cause any very great abdominal distension at the fourth month of pregnancy. (This patient died from acute pneumonia on April 9th, 1900. Obviously the condition of the abdominal walls must have diminished her chances of recovery from an acute lung disease.)

The second case was that of a woman, aged 50 years, who had borne 10 children. She complained much of debility and of an occasional dragging pain in the side. She also had a "pendulous belly," for which she had not worn any support. (When last I examined these cases, December, 1900, I could not find anything abnormal in either of them beyond the laxity of the abdominal walls.)

The third patient was 38 years of age. She said that she was in very good health but that she suffered from occasional soreness in the left side. I have not seen her recently.

In these three cases the unsatisfactory conditions might have arisen if the patients had never developed tumours requiring operations. Nor were the conditions very serious in four of the seven cases in which, after operations complicated by adhesions, the results were not altogether satisfactory. In one of these cases I removed a small tumour deeply embedded in the right broad ligament The patient was 37 years of age and had complained of pain and weakness in the back for 16 years before the operation. Now her only trouble is that her back is not strong. Everything else is satisfactory.

Another case was that of a woman, 43 years of age, from whom I removed an ovarian tumour deeply embedded in the right broad ligament and so thick-walled and red in colour that I mistook it for a fibroid uterine growth. Even after the abdomen was opened the tumour seemed to be a part of the uterus, but an exploring needle showed that it was cystic, and when the fluid contents were drawn off the relations of the parts were easily defined. The attachments were so extensive and the tumour was so friable that it was impossible to be certain that I had removed the whole of the new growth. The left ovary, which was also cystic and deeply buried in the broad ligament, was removed. This patient has complained much of pelvic and abdominal pains, but she can get about freely. She is very fat but not flabby, and she has all the appearance of being in robust health.

Another patient, aged 23 years, at the date of operation in January, 1896, had two ovarian tumours, each of about the size of a big cocoanut That of the left ovary, which had a very long pedicle, was situated in the right loin, no part of it being on its own side of the middle line of the body. The pedicle had become twisted, and the tumour was firmly adherent in the situation described. The tumour of the right ovary was in the right side of the lower abdomen, below and rather to the inner side of the left one. It was firmly adherent to the other and slightly adherent to neighbouring structures. Both tumours were removed. Since the operation the patient has been without any obvious signs of ill-health. She is stout and full-blooded, but she has complained a great deal of pain in the back and sensations of creeping in the head which are very distressing. The abdomen is soft and natural in every way to palpation, but the bowels are very constipated. The case seems to be one of severe neurotic symptoms due to the artificial change of life; and probably a gradual improvement will take place. I may add that the patient's medical attendant wrote recently that she had enjoyed excellent health since the operation. She is now at work.

In another case the patient, a married woman, aged 34 years, suffered from chronic inflammation of the ovaries accompanied by increasingly painful menstruation for seven years. She was under my observation for two years, and had been confined to bed for considerable periods under medical observation with only temporary benefit. The presence of new growth was not suspected. Eventually I opened the abdomen and removed two small ovarian tumours which were deeply embedded in firm adhesions. This patient made a rapid recovery but her periods have not ceased. About 18 months after the operation they became somewhat painful, and there was tenderness in the left broad ligament on palpation. In this case the sexual appetite has been so increased as to be a source of great distress. When I operated I thought that I removed both ovaries completely, but it is not possible to be certain of this when many adhesions have been separated (Since the above was written this patient has had prolonged intervals between the periods, and probably the menopause will shortly be established With the exception of the nervous symptoms the general health is very good.)

The results cannot be described as very bad in any of these seven cases, although they are not so good as might be desired.

Three cases which are unsatisfactory.—In the three following cases the results so far have been decidedly unsatisfactory. In the first I removed a small, flat tumour of the right ovary from numerous very strong adhesions. The patient had felt big in the abdomen and had suffered from increasing backache and difficulty in walking for three years before the operation Since the operation she has had much trouble from constipation, weakness, and pain in the side aggravated by walking Her condition recently in these respects is better than it has been and I may add that the patient seems to consider her health much more satisfactory than I think it. (Since the above was written this patient has improved very much She says that she is in good health though she cannot walk very far She is able, however, to "do a great deal of walking about indoors, mounting the stairs, about 40, many times a day." The bowels give little trouble and aperients are not required so often or in such quantity as was necessary a year ago.)

The second unsatisfactory case was that of a woman who had suffered from attacks of pelvic inflammation for six years before I saw her. She had been in several hospitals. In one she had been put under an anæsthetic and plugs had been inserted every night for a time, but she got no benefit I removed a small cystoma of the left ovary which was firmly adherent deep in the pelvis The ovary and Fallopian tube on the right side were also fixed by strong adhesions and were removed with difficulty Possibly the appendages were not completely extirpated in this case. The patient continues to have discharges of blood from the uterus, sometimes as frequently as every fortnight She has had attacks of peritonitis occasionally, like those which occurred before I operated, and recently these attacks have been more frequent. (In June, 1900, this patient was better in many ways, but she still had attacks of pelvic pain, although these did not occur so frequently as they did a year earlier. There was a tender thickening of the tissues in Douglas's pouch. The patient looked much more healthy than she did when I saw her 18 months earlier. This patient and the patient in the previous case are certainly improving in the local conditions, probably on account of a gradual yielding of adhesions.)

The last living case to which I shall refer was that of a patient whose age was 42 years. She had first noticed the abdomen large three and a half years before I saw her. It grew rapidly, and then all the signs of a rupture of a cyst occurred—namely, sudden violent pain followed in three days by complete disappearance of the swelling. In a few months the abdomen was again large, and again the tumour ruptured. This happened a third time. Two months before the patient consulted me her abdomen was tapped and three and a half gallons of clear fluid were removed. At the operation I found considerable omental adhesions and the pedicle of the tumour was very broad. The second ovary was healthy. This patient made a smooth convalescence. The temperature in the vagina rose to 101° F. on the second evening and was normal within a week. I have not seen her since she left my care a month after the operation, but she writes that she is much better than she ever expected to be. She says that she cannot hold her arms up without a burning and aching in her side and that she has "a great weakness." She cannot eat solid food. If she does she "is sure to bring it up again." The patient, who was a widow, was, however, well enough to re-marry within two years of the operation.

Three cases which have died.—Of the three patients who are now dead one has been referred to already in the earlier part of this paper. I thought that the growth was malignant, but I explored the abdomen and removed a simple multilocular cyst The patient was subject to frequent severe attacks of asthma and was extremely emaciated and feeble. She had no asthmatic attack, however, whilst under my care, although convalescence was prolonged very much by the formation of a bedsore. Recovery was ultimately good. Two years and three months after the operation the patient died from bronchitis complicating an asthmatic attack, the illness being of only two days' duration.

In the second of these cases the patient died from malignant disease six months after the removal of a semi-solid ovarian tumour. There were some adhesions to the omentum, but no real difficulties were encountered in the operation or during convalescence. Both ovaries were removed. Within three months the patient suffered from severe and increasing constipation. By the kindness of Mr. F. M. Corner of Poplar I saw the patient about a fortnight before she died and she then had large masses of new growth in the upper part of the abdomen.

The third case in which death has occurred was also one of malignant disease. The patient was 35 years of age and I had no doubt that she had an ovarian tumour. This had been diagnosed in India, but the patient had come home with the idea that she might be pregnant, and Dr. F. H. Champneys kindly saw her with me and confirmed the diagnosis of ovarian cystic disease. When I opened the abdomen I exposed an ordinary cystoma of the right ovary with a fairly small base. There were no adhesions However, when I had tapped and extracted the cyst I found that there was a solid tumour attached to it by a narrow neck. This solid growth was of the size of a very large orange and of a somewhat flattened, oval shape. It was buried in the outer part of the broad ligament, and was pressed so tightly against the iliac vessels and the pelvic brim that I had considerable anxiety as to whether I should succeed in removing it and arresting hæmorrhage. I was able, however, to get away all the visible new growth more easily and completely than I expected, the broad ligament being secured in many pieces. On the left side there was a slightly smaller solid tumour buried in the broad ligament exactly like that on the right side. This was attached by a narrow neck to an apparently healthy ovary in precisely the same way as the solid tumour on the right side was attached to the base of the ovarian cyst on that side. That is to say, both the solid tumours were completely extra-peritoneal between the folds of the broad ligaments. On the left side the ovary was attached to the broad ligament in the usual way and the solid growth was attached to it between the folds of the broad ligament. On the right side the ovary was replaced by a cyst which was also attached to a solid growth by a narrow neck between the folds of the broad ligament. I also removed the left ovary and tumour. I have never seen any tumours which at all resembled these solid growths in their situation and connexions. Microscopically they consisted of an epithelial growth of a papillary type. I exhibited the tumours at the meeting of the Obstetrical Society of London on May 6th, 1896, and a note concerning them appeared in the Transactions of that Society for that year (p. 166). The patient made a good recovery and returned to India in excellent health a few months later, but I warned the medical man who had sent her to me that her future must be looked upon with great anxiety. Eighteen months after the operation the patient (having lost her husband very suddenly) was again in England, and she consulted me in May, 1897, when I found a return of the growth. The tumour seemed to be to some extent moveable, but it had very extensive attachments in the pelvis and to the uterus. I decided that it could not be removed. I expected to see the patient again in July; but on the 9th of that month I was informed that she had been placed by her brother, who is not a medical man, under the care of another surgeon, the physician who had sent her to me not having been consulted. The patient had been seen twice by her second surgeon with an interval of about a month. I was informed that he stated that the tumour was growing rapidly and that he asserted in the most positive manner that it was not malignant, but that it must be removed at once. Neither I nor the gentleman who sent the patient to me was consulted, and the facts stated in the Transactions of the Obstetrical Society of London must have been unknown to the surgeon under whose care the patient had been placed. He operated on July 7th, 1897, and I understand that the difficulties encountered were very much greater that he had anticipated. The patient died on the next day. The operator was a man of very large experience. The incident proves the soundness of the opinion which I put forward at the beginning of this paper—namely, that mistakes are to be expected in dealing with these cases, and that statistical papers are of no value unless this possibility is recognised and full details of all cases are given whether an operation is performed or not.

The study of these and other cases has impressed upon me very strongly the importance of an early recognition and removal of ovarian neoplasms. When a tumour is buried deeply in the broad ligament at the beginning of its growth it is only by the merest chance that its removal will become more easy as time passes. It is quite as likely that it will bury itself deeper, and in every case delay in operating exposes the patient to the onset of complications which may cause great difficulty and great danger, when the abdomen is opened or before an operation is arranged for.

I wish now chiefly to point out that when inflammatory conditions are set up around an ovarian growth the risk of trouble *after complete recovery from the operation* is very much greater than it is when there has been no inflammatory disturbance. All the patients whose cases I have traced in the series under consideration in which the operation was simple, are practically in good health with the exception of the one who died from asthma (and, of course, of the one who died from pneumonia since this paper was read); and those who are known to be in bad health now had all suffered from prolonged inflammatory attacks before being operated on. There can, I think, be no doubt that in a series of uncomplicated operations for simple ovarian tumours, the success ought to be very nearly, if not quite, complete and perfect, and therefore no opportunity should be allowed for the development of complications by delay in operating. If the possibility of the existence of a malignant element in the tumour be considered the urgent necessity for early operation is still more obvious. Nevertheless, cases are even now seen in which, although ovarian tumours are recognised, either the patient is advised to wait till serious symptoms arise before being operated on or the possibility of operative treatment is not suggested.

There are, of course, cases in which the patient, on account of bashfulness or timidity or simply because there has been no sign or symptom of mischief, does not consult a medical man until some complication forces her to do so. When, however, an ovarian tumour is diagnosed it should be an absolute rule to have the question of its removal discussed at once. I have occasionally told a patient that I did not anticipate any harm from a delay of a few weeks, but the circumstances are very few in which it is advisable to postpone the removal of an ovarian tumour beyond the time necessary to make proper arrangements for the performance of the operation; and the reason for delay should never be that the patient is quite well. There must, of course, be always some risk in performing even the simplest ovariotomy, but this risk is smaller than that of allowing the tumour to remain. Although I am now chiefly urging an early resort to operative treatment in the interest of those patients who recover from ovariotomy, because the dangers of after-trouble are so much less if the operation is uncomplicated, and although I had not intended to deal with any cases operated on beyond the period during which the 50 cases referred to in the title of my paper were under my care, yet my unpublished fatal cases show so forcibly the increased immediate danger of an ovariotomy when the operation is too long postponed that I am only following out one line of argument by shortly recording the fatal cases of ovariotomy that have occurred in my practice and which are not already published.

Fatal Cases not hitherto Published of Ovariotomy and of Operations undertaken when Ovarian Tumours were supposed to Exist.

In two of these cases the patients did not seek medical advice until forced to do so by their inability to go about their work any longer. The first was a case of a single woman, 53 years old, who had known for some years that she was growing very large in the abdomen, but she did not consult a medical man until 14 days before her operation, and she was admitted to the Samaritan Free Hospital as soon as this could be arranged for. I do not remember ever to have seen a patient look so ghastly as this one did. Her hair was dark; her face showed no blood anywhere; she could not breathe unless she was sitting absolutely upright in bed; and she maintained this posture day and night by supporting herself on her hands. Her face and neck and her shoulders had little but skin over the bones, and her enormous abdomen increased by contrast the appearance of her anæmia and emaciation. Her temperature varied between 98·4° and 100° F. Her pulse, which ranged from 130 to 140, was very feeble. She was too ill to answer questions, and as she had lived alone no satisfactory history of her case was obtained. The abdomen was immensely distended, had a glazed shining appearance over its whole surface, and was very tender. It evidently contained a cystic tumour which also distended the pelvis. Obviously the prognosis was very bad, but after a few days the abdomen seemed a little softer and I thought it right to operate. I opened the abdomen on Dec 30th, 1898, and found a large tumour with recent adhesions to all the surrounding parts. Layers of white lymph, from a quarter to half an inch thick, covered its upper surface and extended between the coils of small intestine, which were matted together in the upper part of the peritoneal cavity. I removed the tumour, which was a suppurating multilocular ovarian cystoma, and I secured a thick pedicle on the right side in several pieces. Much lymph was taken away and the abdomen was closed, a drainage-tube being left in Douglas's pouch. In the evening, after the operation, the patient expressed herself as very comfortable. She could lie down and breathe comparatively freely. Her temperature was 100·8° and her pulse was 136 In the night the bowels began to act and the patient collapsed and died rather suddenly between three and four o'clock on the next morning. After death it was found that the last six inches of the ileum were in a sloughing condition. It is quite possible, and I think likely, that a month before this operation was performed the patient had a very large ovarian tumour without inflammation, adhesion, or any complication, and that then an operation would have been fairly free from danger. Tapping the cyst would have been as certainly fatal as the operation which was performed.

In the second case the patient, who was 50 years of age, had suffered much pain and had known that her abdomen was very large for more than two years before she sought advice. I operated on March 17th, 1899. The right ovary consisted of a large suppurating tumour deeply embedded in the broad ligament and pressing the ribs firmly upwards. Its walls were so fragile that it was quite impossible to prevent the escape of its contents at the side of the tapping cannula. At the same time the walls were so thick and so little pliable that the cyst could not be drawn out partially until the adhesions behind were separated. I made a very long incision in the abdominal wall; but there were many strong adhesions high up in the peritoneal cavity, and fouling of the peritoneum by the pus from the tumour was unavoidable during the necessary manipulations. When the bulk of the cyst was removed from the abdominal cavity, a deep enucleation from the broad ligament was necessary. The uterus was so completely atrophied and was drawn up so high on the tumour that it was mistaken for the end of the Fallopian tube and was removed inadvertently. I noticed this at once, and the stump of the uterus was properly secured after tying the uterine arteries as in a case of hysterectomy. The left ovary consisted of a cystic tumour with a good pedicle quite free from the uterus. There were some slight adhesions, but this tumour was easily removed. I carefully cleansed the peritoneum and drained the pelvis by means of a glass tube. At first the patient seemed as if she would do well, but she died from septicæmia on the eighth day. Extensive purulent inflammation of the peritoneum was found after death; the intestines were much distended and seemed in places as if they had been about to give way. The septic mischief must have developed from the pus spilt at the operation, or possibly a fresh dose of the poison escaped through the intestinal walls. The original cause of suppuration in the tumour had probably come from some adherent bowel. There can be no doubt that if an operation had been performed on this patient at an earlier date she would have had a very good chance of doing well.

In the third case the patient was 44 years of age and her first trouble was a difficulty in passing urine two years before I operated. A catheter was required then and frequently afterwards, but the tumour did not seem to have been detected and the patient did not notice any swelling. Two weeks before admission to the Samaritan Free Hospital the patient was living in Croydon and was knocked down by a cab there. Mr. G. Wale of that town was called in and at once discovered a tumour. It extended from the pelvis as high as the umbilicus and dragged up the uterus so far that the tumour was much below the level of the os uteri. There was tenderness in the right groin after the accident, and the temperature was above normal, sometimes as high as 101° F. I operated on Oct. 10th, 1899, and removed a multilocular cystic tumour of the left ovary which filled the pelvis and was firmly held there by suction and by adhesions. On the right side there was a very much swollen ovary. The fimbriated extremity of the Fallopian tube was occluded and the tube itself was much distended. I removed the ovary and tube with great difficulty without opening the tube I could not find the vermiform appendix, but I suspected that it was buried in the adhesions from which I had removed the inflamed right tube and ovary. The parts removed seemed fairly clean, however, so I closed the abdomen, placing a drainage-tube in Douglas's pouch. This was removed after 24 hours, as the amount of fluid escaping through it was very slight and was quite sweet. Dr. Cuthbert Lockyer kindly examined the right Fallopian tube for me and got from it a pure culture of staphylococcus pyogenes aureus. For the first 10 days this patient seemed to do well, except that she was remarkably sleepless. On the second and third days her temperature rose to 103·2° and 102 6° respectively. It then gradually fell, and from the seventh day to the tenth the temperature was below 100° in the vagina. Up to the tenth day the condition of the abdomen seemed perfectly satisfactory, the bowels having been freely moved by enema on several occasions. The only difficulty was the persistent sleeplessness, for which it was necessary to give opiates. These secured the needed rest, but on the eleventh day the temperature again rose, the respiration became laboured, and there was slight expectoration. The weather was very cold and foggy, and I attributed the adverse symptoms to an inflammatory condition of the lungs. On the thirteenth day there was a suspicion of tenderness and fulness in the right groin; her temperature rose to 103 6°, and the patient died on the following day. At the post-mortem examination made by Dr. William C. Bosanquet it was found that the upper part of the abdomen was shut off from the lower part by adhesions. Below there was considerable peritonitis, with pockets of purulent lymph amongst the coils of intestine and along the ascending colon. The lungs were intensely congested and of a dark purple colour, the lower lobes being in a condition of nearly solid œdema. The heart was very soft and flabby, but the valves were normal and there was no naked-eye evidence of fatty change. The vermiform appendix was bound down by old adhesions but was itself reported as healthy

Probably in this case there was an inflammation in the situation from which I removed the right tube and ovary, and this was at first shut off by adhesions; the sleeplessness was, I presume, a result of absorption of poison; the enforced quiescence induced by opiates led to congestion of the lungs, and the peritonitis then made rapid progress. I think it is quite possible that until the lungs became congested there was no pus in the abdomen. The fact that there was no distinct sign of mischief in the abdomen for ten days is very unusual in my experience of ovariotomy, but an insidious onset of septic peritonitis in cases of inflammation of the vermiform appendix is not very unusual, and it is fairly certain either that I had not removed all the infected tissues or that fresh infection occurred later. During the operation I thought of making a small opening in the groin and passing a gauze drain down to the position from which I had removed the right ovary. Probably this would have saved the patient's life, but unfortunately I decided that I had removed all the infected parts. It is certain that if this patient had been operated upon before she was knocked down by the cab the conditions would have been much more favourable, but up to that time the presence of a tumour seems to have been overlooked.

In the case of a patient, aged 60 years, I explored the abdomen on Jan. 13th, 1897, and found that there were two malignant ovarian tumours with secondary deposits in the omentum. I closed the abdomen at once and sewed up the wound, without attempting to remove the tumours. On the next afternoon, at 3 30 o'clock, every sign was favourable, and the patient said that she was very comfortable. At about half past four, after a quiet sleep, she woke up in a state of extreme restlessness, with a quick pulse and much difficulty of breathing. In my absence Mr. Alban Doran and Mr. Corrie Keep kindly did all they could for the patient, but she did not rally and she died somewhat suddenly at 8 20 P.M. At the post-mortem examination it was found that the tumours were attached to and invaded the walls of the intestine in several places, there being a mass of the size of a bantam's egg in the cæcum. The omentum also contained much malignant deposit. Dr. W. H. Allchin made the post-mortem examination and reported that the heart was "much dilated, soft, and flabby, and exhibited fatty invasion to an extreme degree, the left ventricular wall at places being almost replaced by fat."

There is little doubt that the cardiac condition was the cause of death. It is not possible to ascertain exactly the relations of an abdominal tumour in such a case as this without opening the peritoneal cavity. Probably no good could have been done in this case by operation at any time, unless perhaps at a very early stage, but the fatal issue would not have been likely to occur if the exploration had been done earlier. I have only had one other fatal case at all comparable to this one, and that also was a case of advanced malignant disease[4]

In the following case I diagnosed an inflamed ovarian tumour. The patient, who was 30 years of age, had been married 11 years and had borne six children. She had a soft, indefinite swelling to the left of the pelvis, pushing the uterus over to the right and rising nearly to the level of the umbilicus. She had been delivered of a dead child seven months before I saw her, and she dated her illness from that confinement. Throughout the 10 days during which the patient was in hospital before the operation there was only a very slight rise of temperature, 99·6° F. being the highest recorded. I opened the abdomen on June 25th, 1897, and found the contents of the pelvis so matted together that I had great difficulty in making out the relations of the viscera. After separating much omentum and opening many cavities containing fluid I succeeded in removing both ovaries and Fallopian tubes which were very much inflamed. The pelvis was drained by a glass tube and by iodoform gauze. Although there was a high temperature early in this case the abdominal condition progressed favourably and the abdomen remained soft and flat. On the fourth day the left parotid gland swelled. It was incised on the fifth day and discharged unhealthy pus until the patient died on the tenth day. After death numerous abscesses were found in the lungs and the left parotid gland was in a sloughy c[illegible]ition. The peritoneum showed neither lymph nor pus formation except in the pelvis, the site of the operation being shut off from the rest of the peritoneal cavity by adhesions. So far as I am able to speak definitely this was not a case of ovariotomy for new growth, but the operation was begun on the assumption that a tumour existed. The disease appeared to be an intense septic inflammation beginning in the Fallopian tubes and the infection was not completely removed.

Another fatal case is recorded here because I thought before the post-mortem examination that the mischief probably began in the ovary. The patient was a single woman, 34 years of age, who was sent to see me about the middle of October, 1899, by Mr. Isaac Coalbank of Teddington. She had complained of increasing constipation for over a year, but she did not consult Mr. Coalbank until, by the advice of a friend, she had taken some liver pills and so had made herself very much worse. I found a very hard growth in the right loin about the level of the umbilicus and an equally hard mass pressing low down in the pelvis on the right side. There was considerable intestinal distension, which made it impossible for me to estimate the size of these masses and whether they were connected or separate. The intestinal distension increased, and I admitted the patient into the hospital on Oct. 31st A distended coil of intestine was then very obvious in the neighbourhood of the cæcum, and in spite of many lumps of fæces being removed from the lower bowel by enemata, this coil continued to increase in size rapidly until it was very tense and painful and stood out prominently from the rest of the abdomen, which was also distended but not to any great degree. I thought that the mischief depended on an ovarian new growth, and the existence of secondary deposits seemed probable. There was no prospect of my being able to do more than relieve the patient by the formation of an intestinal fistula, but surgical interference seemed necessary on account of the painful tension in the distended gut. On opening the abdomen in the right groin I found the omentum studded all over with new growth, and there were large masses in the pelvis. I opened the distended gut, which was the cæcum, and made a fistula. The obstruction was, however, only partially relieved; much fæces but very little flatus escaped; the general abdominal fulness did not go down, and the patient died early on the next morning. By post-mortem examination it was found that the malignant disease was much more extensive than I had thought. It appeared to have begun in the greater curvature of the stomach, where there was a considerable mass which had induced a malignant ulcer of the mucous membrane. The ovaries were normal, but large masses of secondary disease occupied the pelvis and were attached to the ovaries. The intestines and the peritoneum generally were affected at numerous points. It is remarkable that neither sickness nor vomiting was a prominent symptom in this case.

In one case there is room for doubt as to whether I removed an ovarian new growth or an abscess of the ovary. I was asked to see the patient in July, 1897, by Dr. J. W. Walker of Peckham Rye, and I diagnosed an inflamed left ovary and Fallopian tube At this time it was not possible to say definitely that there was an enlargement of the ovary. The patient's general condition was good and she had recently come home from India where she had been a semi-invalid for many months. As complete rest had not been taken, except in a very intermittent way, I suggested that the patient should lie on her back for a couple of months and be treated by counter-irritants and warm douches. The inflammation diminished and all went well for six weeks. The patient was then suddenly seized with acute symptoms. I was out of town and when I returned a fortnight later I found that there was a large mass in the left side of the pelvis. It was acutely inflamed and the patient had much fever of a hectic type. Without further delay, on Sept. 29th, I removed the left ovary, which was of the size of a large cocoanut and contained one large abscess cavity. The mass was very firmly adherent to several coils of intestine above it. For a few hours the patient seemed better, but she was already in a septic condition. Towards night she began to rave, and she died very early on the following morning. If I had operated on this patient soon after I first saw her I should probably have performed an easy and safe operation. I think the case was one of acute infection of a chronically inflamed ovary.

I must mention one other case to complete the list of my fatal cases of ovariotomy and of those other fatal cases in which an ovarian tumour was or might have been diagnosed. I removed this patient's ovaries for chronic pain due, I believe, to the presence of a small fibroid tumour pressing on the left Fallopian tube. There was a small cyst of the right ovary which I had not diagnosed but which makes it necessary for me to mention the case here. The patient died from hæmorrhage 12 hours after the operation. The case does not invalidate my argument that ovarian tumours should be operated on early. In cases of death from hæmorrhage after ovariotomy I should not like to say that the surgeon has always been to blame, but there can be no doubt that in most cases a somewhat different disposition of the ligatures, or a little more force used in tying them, would have saved the patients' lives. I have been responsible for the treatment of secondary hæmorrhage twice in my own practice and once in that of a colleague during his absence, and I have had the good fortune to save two of these patients. Both are ignorant of the danger they passed through.

In a fourth case, not one of ovariotomy, I arrested secondary hæmorrhage and saved the patient's life for a time, but the details of the case have no bearing on this paper and will be published elsewhere. There are a few causes of death after ovariotomy which, like hæmorrhage, may be described as accidental and which are mostly preventable. If such causes of death be set aside, the cases which I have recorded in this paper clearly prove that delay in operating is the chief cause of fatal results in ovariotomy and also of unsatisfactory conditions arising in patients who recover from this operation. I would urge, therefore, that it is the duty of medical men whenever these tumours are diagnosed to advise their removal without any unavoidable delay. In conditions such as the presence of a uterine fibroid tumour in which there may be a reasonable prospect that the patient will not require an operation at all, there is often room for a difference of opinion as to whether an operation should be performed, and there are also cases of ovarian tumour in which an operation appears so formidable that it may not be considered wise to undertake it; but an ovarian tumour is sure to give trouble sooner or later, and it should therefore be removed as soon as diagnosed if such treatment seems at all practicable. This is the only way in which patients can obtain the full benefit of the well-known advances which have been made in abdominal surgery.

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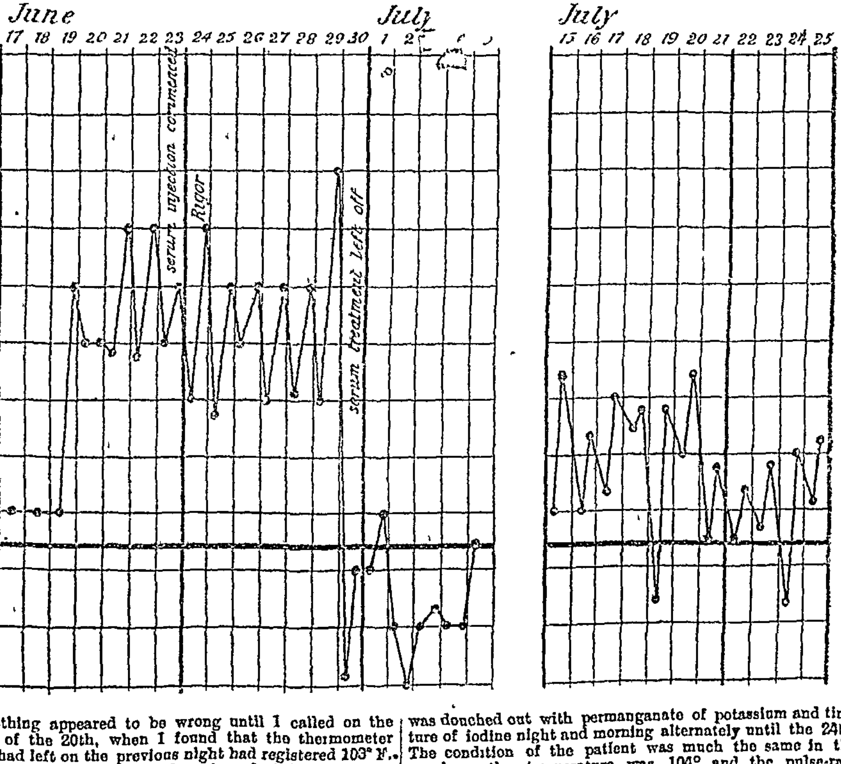
[4] Some Cases of Malignant Disease Associated with Ovarian Tumours (Case 7), THE LANCET, June 17th, 1899, p. 1626.

ADULTERATED GOLDEN SYRUP.—At the Newport County Petty Sessions held on Nov. 24th, a grocer of Pontymister, Monmouthshire, was summoned at the instance of the Monmouthshire County Council for selling golden syrup adulterated with glucose. Evidence showed that the "syrup" consisted of 20 per cent. of pure sucrose and 80 per cent. of glucose. The defendant was fined £20 and the costs of the court.

A CASE OF PUERPERAL SEPTICÆMIA TREATED BY ANTI-STREPTOCOCCIC SERUM,

COMPLICATED BY PULMONARY EMBOLISM, PERIMETRITIS, AND AXILLARY ABSCESS; RECOVERY.

BY B. T. READ, L.R.C.P. LOND., M.R.C.S. ENG.



THIS patient, a primipara, was confined on June 16th, 1900. The presentation was that of the first vertex position and the labour was not protracted. The placenta and membranes were complete and the perineum to all intents and purposes was intact. These points I wish to emphasise before going any further, as well as the fact that I did not examine the patient *per vaginam* to ascertain if there was any internal laceration, although the skin was untorn. Before leaving the room I told the patient, in her mother's presence, to keep her bed for ten days, not to sit up, and to use the bed pan which I had lent her. Nothing appeared to be wrong until I called on the morning of the 20th, when I found that the thermometer which I had left on the previous night had registered 103° F. There was, moreover, a nasty odour from foul discharge perceptible on going into the room. The patient had a flushed face and a septic smell about her breath, and there were slight dyspnœa, cough, headache, nausea, and a pulse-rate of 100. There were a few moist sounds to be heard over the base of the left lung; she had had a cough or "cold" before her labour commenced. On examination I found that the perineum was torn through to a fraction of an inch from the anal orifice. The accompanying chart shows the temperature throughout. The patient on cross-examination gave a history of having left her bed on the morning of the 19th and of having used the night-stool because she did not care to use the bed-pan. Shortly afterwards she had felt cold, but there had been no rigor. As her bowels had been well opened I gave her half an ounce of Warburg's tincture and repeated it after two hours and prescribed an expectorant mixture. The vagina was douched out night and morning with tincture of iodine and permanganate of potassium alternately and the wound was dressed with creolin powder and gauze, &c. I decided to keep the wound as aseptic as I could and to have the operation of restoration of the perineum done later. On the morning of the 21st the dyspnœa had increased, the face was flushed, the countenance showed anxiety, and there were headache and nausea. The temperature was 101·8°, the pulse was 120, and the respirations were 32. On auscultation there was a murmur over the pulmonary artery at the cardiac base and another distinct murmur which was systolic in rhythm at the apex. At times the patient panted and moved her head from side to side in urgent distress. For several days she had these urgent oppressive attacks, but they passed off. The evening temperature was 104° and the general condition of the patient was much the same. I douched out the uterus with permanganate of potassium. The morning visit of the 22nd showed no change; the discharge continued to be offensive, the temperature was 101·8°, the pulse was 120, and the respirations were 36. The uterus was douched out with permanganate of potassium and tincture of iodine night and morning alternately until the 24th. The condition of the patient was much the same in the evening; the temperature was 104° and the pulse-rate remained the same. As this condition was a serious one I decided to telegraph for anti-streptococcic serum on the next morning (the 23rd). The patient had undoubtedly contracted septicæmia and as far as I could judge there were embolic deposits on the pulmonary and mitral valves, for in no other way could I account for the signs and symptoms which I had observed in her. It appeared to me that the emboli must be minute, and I was afraid that fresh deposits would take place. On the morning of the 23rd the anxiety, the dyspnœa, the flushing of the face, and the foul discharge continued, together with headache and nausea; the pulse was 130, the respirations were 36, and the temperature was 102°. I injected 10 cubic centimetres of the serum at

5 P.M., taking the usual antiseptic precautions. Ten minutes after the injection the patient complained of her head whirling round and of a feeling of sinking through the bed. This lasted for about half an hour and then she felt better; the headache and nausea had entirely disappeared and they did not recur until 12 hours had elapsed On the following day I injected 10 cubic centimetres of serum at 7 A.M., 14 hours after the first injection. The aspect of the patient was much the same, the pulse was 140, the respirations were 40, and the temperature was 103°; 10 cubic centimetres of serum were injected at 7 P.M., and the injection was followed by the same sensations, with about the same interval as before and with the subsidence of the headache and the nausea. This happened each time after the injection of serum up to June 29th, when, unfortunately, I was disappointed in the serum not arriving as I had run short of it. On calling to see the patient on the 25th I learnt from her mother, who had been present at the time, that she had had a shivering fit on the previous night, when she shook from head to foot and her teeth chattered. The thermometer which I always left showed 104°. The temperature was 100·8° at 7 A.M., the respirations were 42, and the pulse was 133. I could find nothing to have caused this rigor. There were no additional signs in her chest, the murmurs remaining the same, and the abdominal symptoms of perimetritis were much the same. There was enteritis. The discharge had lost some of its fœtor. I now had the vagina douched out night and morning only. The noticeable good sign, if I may say so, was the descent of the temperature to 100·6° in the morning. The pulse-rate continued to be fast, but, as I observed afterwards, her pulse could not be relied upon alone as she was such a nervous woman and her ordinary pulse varied from 92 to 108. From the 26th to the 28th the patient went on as satisfactorily as could be expected until the serum supply failed me on the night of the 28th, when I used the last 10 cubic centimetres about 7 P.M and there remained none for the morning of the 29th. On calling to see the patient on that morning the mother informed me that her daughter became so ill in the previous night that she thought that she was going to die, unconsciousness and delirium setting in. On going upstairs to see the patient I found her suffering from a bad headache and from nausea which came on when the serum injection was due and which continued throughout the day until I injected the serum again at 6 P.M. soon after its arrival. The same result happened, the nausea and the headache disappearing at the same time. The temperature registered 105° at 9 P.M. and suddenly fell to 96·4° on the morning of the 30th when I stopped the serum treatment. Her pulse-rate had now decreased to 115 and the respirations to 30. The septic discharge had entirely disappeared. On vaginal examination there was still a great deal of tenderness and swelling both in Douglas's pouch and in the left side of the pelvis. About this time both the pulmonary murmur at the base of the heart and the systolic bruit at the apex had almost entirely disappeared. From the night of the 30th to that of July 6th the patient's temperature kept below 99° and her pulse varied from 96 to 106. Then a change set in, her temperature rising to 101°. From the 7th to the 14th her temperature did not show any variation, remaining at 99° in the morning and 102° at night. During this period an abscess formed in the left axilla. There had been a tender nodule on the outer edge of the left breast without any mammary abscess. It was now apparent that the patient had drifted into a state of chronic pyæmia Throughout this time she was taking nine ounces of brandy in 24 hours and champagne and fluid nourishment. I had her temperature taken every four hours from 9 P.M. on the 15th to 9 P.M. on the 24th. The abscess was opened on the 18th. The patient made a steady but slow recovery and her temperature remained normal on August 15th and I left off attending her on the 18th

As regards the treatment in this case the following details may be given. During the early stage of the acute septicæmia the patient had half an ounce of Warburg's tincture on an empty stomach after the bowels had been relieved and this was repeated in two hours. That had not the slightest effect on her temperature. I followed this up with six ounces of brandy in 24 hours and two grains of hydrochlorate of quinine in pill form together with beef-tea and milk. She had 25 grains of trional on June 30th for insomnia. I was obliged to give her five grains of calomel on July 7th. It was not till July 12th that I had to give her half a grain of opium three times a day, and to have her left hypogastric region painted with equal parts of liniment of iodine and tincture of iodine. When fresh symptoms of enteritis became more marked on July 14th I gave her opium pills which may have been the means of helping the absorption of all inflammatory products.

I take it that the serum treatment is conclusively proved to be good and trustworthy for the following reasons. The patient in this case had headache and nausea which entirely disappeared when the serum was used. If I was only a few minutes after my time in injecting the serum the head became worse and the feeling of nausea recurred. Then, again, as to the bad symptoms that set in at the time during which the patient was without the serum injection on June 29th from 7 A.M. to 6 P.M. (when the treatment was resumed), what was the result of this perseverance on that evening? It caused the sudden fall of the temperature from 105° to 96·4° on the following morning The pulse had slowed down to 115, the respirations to 30—instead of 42—and the foul discharge had disappeared. A correspondent in THE LANCET[1] has recently cast a slur on the usefulness of the serum treatment and I should like to know whether these notes of mine will convince him. I for my part consider that I would have lost my patient without the serum treatment. I have never heard or read of another case of a lying-in woman, in or out of a hospital, getting out of bed on the third day for any purpose, for defecation or otherwise, and recovering from such a severe attack of puerperal septicæmia complicated by pulmonary embolism.

Odiham, Hants.

MERCUROL AS AN ANTISEPTIC IN DISEASES OF THE NOSE AND EAR.

BY R. LAKE, F.R.C.S.ENG.,
SURGEON TO THE ROYAL EAR HOSPITAL AND TO THE METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, ETC.

MERCUROL, for the information of those who are not acquainted with it, is a brownish-white powder, soluble in water but insoluble in alcohol. It is a compound of mercury with nucleinic acid and contains about 10 per cent. of mercury; therefore, a 5 per cent. solution of mercurol contains one-half per cent. of mercury and this in a form which is non-corrosive and non-irritant. It is at the same time an organic compound and does not precipitate albumin; the general idea which mercurol gives being that at one and the same time it is an antiseptic in the usually understood sense of the word and will act indirectly on the protoplasm of the nuclei, more especially of the large white blood cells, as the phagocytes, and thereby enable them the more readily to overcome micro-organisms and destroy them in larger quantities. One disadvantage of solutions of mercurol is that one cannot make it up in large quantities, a week being probably the longest time in which it can be kept with safety; this, however, is equally true with that most useful antiseptic, formalin, but there is no doubt that in order to obtain the most efficient action of mercurol it requires to be employed, like chlorine, freshly made.

I have not kept regular statistical accounts of all the cases of chronic suppurative otitis which I have treated with mercurol; and even if I had the probability of mercurol being found largely superior to other antiseptics in this disease is very problematical, chiefly on account of the mechanical obstructions to the antiseptic reaching the parts affected. In acute suppurative otitis, however. the conditions are very different. I have used it in three cases immediately after incising the membrana tympani. It should, of course, be used to disinfect the canal previously to the operation where it is to be used afterwards as the antiseptic. The three cases were all cured within ten days, the most rapid cure being four days.

CASE 1.—The patient, aged 27 years, came to the Royal Ear Hospital suffering from keratosis obturans. This required a long and tedious process of removal, which, however, when effected, as it was somewhat suddenly, set up an acute otitis media. The membrane became red and bulging and there was at the same time a small anterior perforation through which pus extruded. An incision was made over the swelling and the middle ear was irrigated with 2½ per cent. of mercurol. This solution was used to irrigate the ear three times daily and a complete recovery was obtained in ten days.

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[1] "Puerperal Sepsis," by R. P. Ranken Lyle, M.D. Dub., THE LANCET, Sept. 29th, 1900, p. 925.

It must be said here that in neither of the acute cases was there left any impairment of the hearing. As a means of treating acute suppurative otitis media (after perforation has occurred) I can very highly recommend the injection into the cavity of the middle ear by means of the Eustachian canal of a small quantity of a 5 per cent. solution of mercurol. By such treatment a more rapid and effective cure is usually gained than by any other, its only disadvantage being that it almost of necessity should be left to the specialist to carry out. That one does obtain extremely good results from mercurol in chronic suppurative otitis media cannot be denied, but at the same time for my own part I would not, as before stated, consider this drug to be to any extent superior to, say, perchloride of mercury or carbolic acid. The following may be taken as an example of the treatment of chronic otitis media.

CASE 2.—A woman, aged 31 years, had suffered from discharge from both ears since, at the age of six years, she had had scarlet fever. The discharge was very offensive. On the right side there was a perforation in the posterior superior quadrant and one also in the anterior inferior, while on the left side there was a sinus leading into the antrum with a small posterior perforation on a level with the tip of the handle. 5 per cent. of mercurol was ordered three times daily as an injection. At the end of six weeks the discharge on the left side had entirely ceased and was reduced to an inodorous, clear, watery discharge on the right side. The mercurol solution was then reduced to 2½ per cent. and the patient was seen again in three weeks' time, when the discharge had entirely ceased on the right side.

As an example of the use of mercurol in diffuse inflammation of the external meatus the following case may be mentioned.

CASE 3.—A man, apparently of gouty habit, came to me complaining of discharge from one ear. The meatus was entirely occluded by diffuse swelling; the discharge was thin and very purulent—that is to say, there was acute gouty affection (eczema) of the ear. He was given mercurol in a 5 per cent. solution and immediately obtained the greatest relief from the irritation. The swelling in the canal disappeared extremely rapidly, and, what is much more important, the mercurol seemed in this instance to have effectually prevented contraction.

The following is an instance of the use of mercurol in chronic suppuration of the maxillary antrum.

CASE 4.—The patient was a man, aged 38 years, who was under the care of Mr. E. T. M. Tunnicliffe who brought him to me with the following history. The patient had had a nasal discharge for six months from the left side which had all along been offensive at times. On pressure within the nostril offensive pus could be evacuated by the patient. On examination of the left nose a large projection was seen below the inferior turbinated bone. This was soft and elastic, giving a feeling of a dense wall cyst, from which pus could be made to exude at the posterior part if firm pressure were applied. This was incised and some drachms of extremely offensive pus were evacuated, and on examination the abscess cavity was found to be continuous with the maxillary sinus, the lower part of the internal bony wall of the antrum being entirely absorbed. The cavity was irrigated with 5 per cent. of mercurol and was packed with iodoform gauze. In three weeks' time there was practically no discharge and absolutely no smell; the latter, I was informed, had never reappeared after the first washing with mercurol. The percentage of mercurol was now reduced to 2½, which was kept up as a matter of precaution for another three weeks, when the opening was allowed to close, perfect cure having been obtained.

CASE 5.—The patient, a female, had suffered from chronic suppuration of the maxillary antrum for at least 18 months. The antrum was opened through the alveolus on the right side at the side of the first molar which had been removed some time previously. There was a fair amount of pus in the antrum and the lining membrane was much thickened as detected by the probe. Irrigation with mercurol (1 per cent.) was carried out regularly twice daily with the result that there was a complete cure in six weeks.

I have used mercurol (2 per cent.) twice after operations, one being a double ossiculectomy and the other an operation for opening the frontal sinus. The wounds in both cases remained in an absolutely satisfactory and aseptic condition, though one would frequently find it necessary to change from so bland and unirritating an antiseptic to one having the strongly caustic properties of 5 per cent. of carbolic acid, especially where much ulceration remains, the tendency of which to secrete it is frequently desirable to overcome. I have also irrigated the frontal sinus with it *viâ* the infundibulum with satisfactory results, but as these cases have been amongst hospital patients and I have been unable to see them sufficiently often I cannot attribute a cure to mercurol in this respect, though the general impression I derived was that had I been able to use it sufficiently often, say daily, it would have given better results.

With regard to chronic suppuration of the middle ear I have only quoted one case. From the small number of cases in which the drug was systematically used the general results may be apparently slightly above the average obtained by other antiseptics. But, as before remarked, it is the anatomical and mechanical obstruction to the penetration of any particular remedy to the seat of disease that renders this ailment so intractable. So to claim for mercurol any peculiar and specific action in this disease would be, in my opinion, absurd. My general impression is that mercurol is the least irritating efficient antiseptic with which I am acquainted, being possessed of properties which commend it highly, especially as a lotion for the irrigation of cavities such as the maxillary sinus.

Harley-street, W.

A CASE OF MORPHIA-POISONING TREATED BY ATROPINE.

BY EDWARD GROUND, M.D. CANTAB.

As there is a certain difference of opinion among authorities on toxicology as to the value of atropine in morphia-poisoning I think the following case may possibly be of interest to readers of THE LANCET.

A few weeks ago, at about 2 P.M., I was summoned to see a man, aged 61 years. His wife told me that he had been in bed for two or three days suffering from an attack of influenza and that shortly before she sent for me he had been seized with faintness which alarmed her very much. I found him in bed, looking rather sleepy (he had had a good dinner); his face was flushed, his pulse was quick (about 100), and his pupils were contracted. On being questioned he strenuously denied having taken any opiate and his wife who had been with him while he was having his dinner said she was quite sure that he could not have taken any without her knowledge. I was sent for again in a hurry at 5 P.M., an empty one-ounce bottle, labeled "Liq morph. hydrochlor.," having been found in his room. When I arrived (at 5 30) I found him very drowsy and looking very pale, sweating profusely, and with very contracted pupils. He then admitted that he had taken one ounce of solution of hydrochlorate of morphia in his brandy-and-soda at dinner-time, under the impression that he was taking two grains of morphia. After a little difficulty I persuaded him to take an emetic, but he only brought up a little tea which he had taken shortly before. I then gave him a hypodermic injection of a thirty-third of a grain of sulphate of atropia and three grains of permanganate of potash in pill every three hours, with the idea of oxidising any unabsorbed morphia that might remain in the intestinal canal. At 7 P.M., although he could only be roused with difficulty, his general condition had undergone a marked improvement. The pallor had given place to a distinct flushing of the face, the profuse sweating had stopped and the skin was dry, the pupils were less contracted, and the pulse had improved in tone and in volume. The injection was repeated then, and again at 9 30 P.M., when he was quite insensible but otherwise about the same. At 11 P.M. another injection of atropine was given, with one-thirtieth of a grain of sulphate of strychnia, as his pulse was inclined to fail. He remained quite insensible, but his breathing never became stertorous, until about 12.30 A.M., when, after vigorous shaking, he began slightly to raise his eyelids and to show signs of returning consciousness. At 4.30 A.M., after constant shakings, moving of his arms and legs, with artificial respiration, he became conscious and gradually recovered.

A great many cases of opium- and morphia-poisoning successfully treated with atropine have been reported in which the dose of poison was very much larger than in this case. A case has been described by Dr. D. T. Playfair,[1] in which a woman, aged 37 years, took 30 grains of acetate of morphia, a fact which was not discovered until three hours afterwards. Four injections of atropine, each of one-fortieth of a grain, were given, but the recovery of the patient was attributed to the prolonged use of oxygen gas with artificial respiration, all natural respiratory movements having ceased for several hours. Mr. Percy Pope[2] records a case of recovery in a girl, aged 19 years, after a hypodermic injection of 12 grains of morphia. The treatment consisted in the administration of four grains of atropine in doses of one-twentieth of a grain at short intervals during 12 hours and in artificial respiration, strong coffee, and attempts to rouse the patient. Cruse describes the case of an infant, one week old, who was accidentally poisoned by a grain of morphine. The comatose condition that resulted remained unaffected by various treatments for several hours until a quarter of a grain of atropine was administered and the dose repeated after an interval of half an hour. Recovery was complete in 38 hours and no unpleasant symptoms attended the administration of such large doses of atropine. From the marked improvement in my patient I should be inclined to regard atropine as a valuable remedy in opium-poisoning; but there appears to be one difficulty, and that is to know when the limit of safety has been reached with regard to the amount of atropine to be used. The action of morphia and atropine is not exactly antagonistic, the former acting centrally and the latter peripherally. According to Dr. J. Dixon Mann, "Morphia slows the heart's action by excitation of the vagus at its origin in the brain; atropine quickens the heart by paralysing the terminations of the vagi and the inhibitory ganglia in the heart. ...... Opium acting centrally contracts the pupils; atropine paralyses the terminals of the oculo-motor nerves. Opium causes sweating by stimulating the central nerve apparatus concerned; atropine arrests it by paralysing the nerve terminals in the sweat glands." Ultimately, however, the effects of the two poisons become mutual, both paralysing the motor and sensory nerves, atropine especially paralysing the heart and opium the respiratory apparatus. Some caution, therefore, is required in using the antidote. Dr. A. P. Luff recommends that it be given in frequently repeated doses until half a grain has been given, and this should provide a fair margin of safety. My patient took about four and one-third grains of morphia which is not a very large dose, and one-eighth of a grain of atropine was given as an antidote, which, I believe, contributed largely to his recovery. There is one point that is rather impressed on the mind in considering this question and that is that however large the dose of opium or morphia may be there need be no despair, with the help of atropine, oxygen, and artificial respiration, of rescuing from death the person poisoned even after the poison has become thoroughly absorbed.

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[1] THE LANCET, August 27th, 1898, p. 545.

Maidstone.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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A CASE OF ARSENICAL BEER POISONING.

By J. HAROLD BAILEY, M.B. VICT.

ON Oct. 9th, 1900, I was called in to attend a married woman, aged 41 years, residing in Pendleton, she having slipped and sprained her left ankle. Rest and the application of lead and opium lotion to the injured joint were prescribed. The swelling around the joint subsided and the pain, which was severe, abated somewhat, but at the end of a week the patient began to complain of pains and tingling in the left foot, and she was unable to stand upright and was obliged to remain altogether in bed. Cramps in the calves of both legs were next complained of, and the feet and legs became exceedingly painful to pressure on any part of them; she also complained of the weight of the bed-clothes and of being unable to sleep at night owing to the intensity of the pains. After another week the patient noticed that her hands were becoming affected, saying that they felt numb to the touch, though painful sensations like "pins and needles" were present. She could not use her hands, moving the fingers with difficulty. Her appetite began to fail, the tongue became slightly coated, and vomiting of yellowish bile occasionally occurred. Before being confined to bed the patient had been accustomed to have beer for supper and she admitted having taken a glass or two since. Hearing late on Nov. 20th that Dr. E. S. Reynolds had detected arsenic in beer in Manchester I called at the patient's house on the morning of Nov. 21st and sent out for a jug of the beer which she was in the habit of drinking; this was obtained from the shop whence she had been getting her beer, and on its being analysed by Mr. William Kirkby, F.L.S., of Owens College, it was found to contain 0·14 grain per gallon of As_4O_6. A sample of urine from the patient failed to show the presence of arsenic, though in the case of another patient of mine who had drunk the same beer and was suffering from symptoms of arsenical poisoning the urine showed a faint trace of arsenic. The condition of the patient became gradually worse, the weakness of the limbs increasing, and there being in addition considerable general wasting. On making a detailed examination on Nov. 29th the following state of affairs was noticed. The patient lay on her right side in a drowsy, heavy condition, with the eyes half open and the knees drawn up. She opened her eyes slowly when asked to do so. She could recognise me, mentioning my name. She complained of her head, saying that it felt as though drums were playing in the street. Dark brownish pigmentation of the skin was present on the neck, the axillæ, the abdomen, the thighs, and the legs. There was flaky desquamation of the skin over the lower part of the abdomen. Over the calves of the legs the skin was roughened and desquamating. The legs and hands could be moved slightly without the patient being roused, but on making more extended movements she complained of pain. The left foot was dropped and the skin was thickened; on the right foot keratosis was well marked, especially over the heel. The patellar reflex was absent on both sides. The tongue was red and moist, the pupils reacted readily to light, the eyes were somewhat watery, but there was no nasal discharge. The heart sounds were regular but feeble, the first sound was hardly to be detected. The pulse was 100 per minute and exceedingly feeble. The respirations were 24 per minute; there was slight movement of the diaphragm. The chest moved as a whole without much lateral expansion. The temperature was normal. During the five days ending on Dec. 4th the patient's condition remained much the same though more nourishment was taken and the comatose state was not so well marked.

Pendleton.

SYMPTOMS OF ARSENICAL POISONING PRODUCED IN A YOUNG CHILD BY DRINKING BEER.

By JOHN BROWN, M.D. VICT., D.P.H.,

MEDICAL OFFICER OF HEALTH OF BACUP.

DURING the recent epidemic of peripheral neuritis, now proved to have arisen from the drinking of arsenicated beer, I have seen no reference to any cases observed in very young children. Such must be of very rare occurrence, as it is to be hoped that parents do not generally allow young children to drink beer. Moreover, if a case occurred in a child it would most probably not be easily detected, as it is a condition one would hardly expect in a young child. On Nov. 27th, however, whilst attending a patient affected with peripheral neuritis my suspicions were aroused to the case which I now record, and I was led to suspect that the child was suffering from arsenical beer poisoning by the fact that the father had peripheral neuritis. Dr. Kelynack, to whom, with Mr. Kirkby, is due the credit of being the first to announce to the profession the true source of the arsenic, very kindly came to Bacup to see the patient with me. He went over the case very thoroughly and expressed his opinion that it was undoubtedly a distinct but mild case of peripheral neuritis due to arsenical beer. The case being unique I have made a few notes briefly recording the more important features.

The patient was a bonny-looking little girl, aged two years. She had been unwell for some days, suffering from pains in the feet, legs, and arms which were thought to be rheumatic pains. Evidently her feet felt hot and uncomfortable, for she wanted her shoes always off. The child was too young to describe her subjective symptoms, so that it was necessary to rely on the objective ones. Her face was flushed, her eyes were watery, and there was a slight running from her nose. The cutaneous symptoms were as follows. There was no pigmentation of the face, neck, thorax, axillæ, abdomen, or groin. Erythematous areas existed over the arms and forearms in the region of the elbows, being most marked on the extensor surfaces. The palms of the hands were red, especially over the thenar and hypothenar eminences and about the tips of the fingers. In the lower extremities there was marked erythema over both knees, and on the right side above the patella there were several distinct, irregular, brownish patches, evidently due to pigmentation in the superficial layers of the skin and not arising from effusion of blood. There were similar pigmented spots above the left knee, but neither so well-marked nor so extensive. There was erythema of the soles of the feet and the toes, with a distinct border to the erythema along both sides of the feet and around the heels. As the child sat on the lap of a relative the feet looked "dropped" as if the extensors were paretic, but there was no distinct paralysis. There were no impairment of the tactile sensation, no muscular hyperæsthesia, no plantar reflex, and no dorsal extension of the toe; the knee-jerks were absent.

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[2] THE LANCET, March 17th, 1894, p. 669.

Remarks.—The child's father keeps a public-house, and although so young she was accustomed to get little "sups" of beer from the kindly disposed customers at the bar. I have carefully tested samples of the beer and have found arsenic present. In four distinct cases of peripheral neuritis occurring in Bacup I have examined the beer and have found arsenic in each case. Out of 14 different samples of beer no less than 11 showed distinct traces of arsenic No doubt many cases of peripheral neuritis due to arsenicated beer have been overlooked.

Bacup.

NOTES OF TWO CASES OF FOREIGN BODY IN THE AIR-PASSAGES.

By E. F. SYRETT, M.D. DURH., M.R.C.S. ENG.

THE following two cases occurring within a few months of one another are of interest on account of the entire absence of urgent symptoms, and the fact that in neither case was the presence of a foreign body suspected.

CASE 1.—On May 12th, 1900, I was called to see a boy, aged 13 years, who, I was told, had been ailing for three weeks. The symptoms complained of were cough, fever, and pain over the base of the right lung. His temperature was 103° F. and his cheeks were flushed. Examination of the chest showed a markedly impaired percussion note over the whole of the right lung. The vesicular murmur was deficient, and at the apex of the lung, both behind and in front, moist sounds were heard. The left lung showed nothing but increased breath sounds. The sputum was abundant and blood-stained. Cough was frequent, but there was nothing remarkable in its character. The patient was kept in bed for two weeks and was allowed to get up when the temperature fell to normal. The physical signs remained unaltered and the cough continued, but the patient seemed quite bright and well. I continued to see him about once a week during the next two months, his condition remaining unaltered. On July 26th, whilst trying to pull a stick away from a large dog he had a violent attack of coughing and he coughed up a small smooth pebble a little larger than a cherry-stone. On cross-examining the mother she said that at the time the cough, &c., commenced the boy while playing football had put the stone into his mouth "to keep his wind." On returning from the game he told her that he had swallowed the stone, but beyond an attack of coughing at the time he had felt no ill-effects. The symptoms which supervened she attributed to catching cold during the game. The stone was, therefore, retained in the right bronchus just 13 weeks.

CASE 2.—This patient, a married woman, aged 33 years, came to me on account of toothache on Sept. 12th, 1900. I sent her to a dentist and a lower wisdom tooth was extracted on the next day under gas. On the 14th she came to me with complaints of cough and hoarseness. She said that on recovery from the gas her lungs felt blocked up, and she had been coughing considerably all night. On examination of her chest I found universal rhonchus, with a few moist sounds, both lungs being equally affected. There was no dulness. She was expectorating blood-stained sputum. I advised her to go to bed and an elaborate treatment for bronchitis was carried out. In spite of everything the bad symptoms increased. On the 25th, 12 days after the extraction of the tooth I called to see the patient, and she told me that she was better. A violent fit of coughing had expelled the wisdom tooth, which I at once recognised as the old offender.

Nayland, Colchester.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK, E.

A CASE OF ABSCESS OF THE LIVER DIAGNOSED BY THE PRESENCE IN THE URINE OF CRYSTALS OF CHOLESTERIN, LEUCIN, AND TYROSIN.

(Under the care of Dr VINCENT DORMER HARRIS and Mr. J. F. C. H MACREADY.)

THE association in the following case of the presence of leucin, tyrosin, and cholesterin in the urine with impairment of the percussion note over the lower part of the right lung, was strongly suggestive of some active process in the liver. We are not aware that it has been noticed that abscess of the liver is often accompanied by the presence of these abnormal constituents in the urine. It is not improbable that they might be found in small quantities in many acute morbid conditions of the liver if they were specially sought for. For the notes of the case we are indebted to Dr. J. G. Emanuel and Dr. E. W. Martin.

A sailor, aged 48 years, was admitted into the City of London Hospital for Diseases of the Chest, Victoria-park, E., under the care of Dr. Vincent D. Harris on Jan. 15th, 1900, complaining of pain in the right side of the chest and of having lost flesh. The symptoms had started insidiously and without any obvious cause some three months previously and had been getting gradually worse up to the date of his admission. In October, 1899, the patient's weight was 12 st. 7 lb., whilst on his admission he only weighed 9 st. 10 lb.—i.e., the patient had lost nearly three stones in three months. The pain on the right side was not severe, but it was constantly present and of a gnawing character, and was evidently telling very seriously on the patient's general constitution. The pain was not affected in any way by eating, by respiratory movements, or by exertion. It was localised to the right side of the chest, over a somewhat indefinite area, corresponding to the lower part of the right axilla. There was no tenderness of the painful area even on deep pressure.

The previous history showed uninterrupted good health till the year 1896, when the patient was laid up in South America for four weeks with a severe attack of dysentery. Twelve months or so after this, when in England, he had another less severe attack, and again in 1898, whilst in South Africa, he was laid up this time for three weeks with dysentery. In each attack diarrhœa with blood in the stools was a prominent symptom; in the intervals between these attacks the patient's health had been excellent and he had enjoyed perfect health since the last attack in 1898, up till three months before his admission into hospital in 1900.

On examination the patient was found to be a middle-aged man, emaciated, and with a somewhat ashy-grey complexion, lying comfortably in bed in any posture. He had a rather cachectic appearance, suggestive of malignant disease, but otherwise he presented no obvious morbid appearance. The temperature, pulse, and respiration were normal. Examination of the heart revealed nothing abnormal, and he had no shortness of breath even on exertion. His lungs were free from abnormal signs, with the exception that the percussion note at the right base was impaired below the angle of the scapula, and over this area the breath sounds were weak (they were distinctly audible, however, as far as the extreme base), and tactile vocal fremitus and vocal resonance were diminished. The percussion note and entry of air over the right base in the axilla and anteriorly were good. He had an occasional slight cough, accompanied by a very little mucoid expectoration. His tongue was clean, the appetite was good, the bowels were regular, and he had no pain or discomfort of any kind with his food. The abdomen was readily palpable and there was no enlargement of the liver or spleen. The upper border of the liver dulness corresponded to the fifth rib in the right vertical nipple line and to the seventh rib in the right axilla. The lower border of the liver dulness corresponded to the costal margin in the right vertical nipple line. The urine was acid, of specific gravity 1020, contained a very faint trace of albumin, and gave the blood reaction with ozonic ether and guaiacum. On microscopic examination it was found to contain a number of red blood corpuscles and crystals of leucin, tyrosin, and cholesterin, the latter in considerable abundance. The patient slept well and exhibited no abnormal symptoms or physical signs suggestive of cerebral disease of any kind.

In picking out the salient features of this case for the purpose of diagnosis the following appeared to be the most important points: (1) the remarkable condition of the urine; (2) the signs of slight pressure on the lower lobe of the right lung; (3) the history of dysentery; and (4) the patient's general condition, indicative of some serious lesion. The condition of the urine did not seem to be associated with any actual disease of the kidney or bladder, as there were no signs of casts, no marked diminution in the elimination of urea, and no increased frequency of micturition. On the other hand, the condition of the urine immediately brought to mind the character of the urine in cases of acute yellow atrophy of the liver, and it suggested very forcibly some destructive process going on in the liver. This, taken together with the history of dysentery and the signs of pressure on the lower lobe of the right lung, suggested the possibility of the presence of a dysenteric abscess of the liver, and with this thought constantly in mind the patient was kept under careful observation for several weeks. His condition, however, did not seem to alter in any appreciable degree. His weight remained stationary and his temperature slightly subnormal, he ate and slept well, and he was able to walk about in the grounds of the hospital with the convalescent patients. He always, however, complained that the pain in his right side "got no better" and that he became easily tired. Moreover, his appearance did not change and he always gave the impression of having something seriously amiss. His physical signs remained absolutely unaltered and he was regularly examined at least once a week with a view to finding some change in the physical signs. The character of the urine also remained the same as on admission excepting that the trace of blood found on admission was often not detectable by the chemical tests, and the faint trace of albumin was not always present. Crystals, however, of leucin, tyrosin, and cholesterin were present at every examination, and for some weeks the urine was examined microscopically every other day.

Towards the end of March, ten weeks after the patient's admission, some slight œdema over the lower ribs in the right axilla was discovered, and then for the first time it was noticed that there was some bulging of the ribs at this slightly œdematous part. Accordingly, on March 27th into the centre of this area (in the seventh space in the mid-axillary line) an exploring needle was inserted and a syringeful of chocolate-coloured pus was withdrawn. The pus was quite odourless and microscopically consisted of pus cells, granular débris, and fatty globules; no amœbæ were found on the warm stage of the microscope. Three days later (March 30th) Dr. Martin anæsthetised the patient, while Dr. Emanuel resected part of the eighth rib in the right mid-axilla. After the rib was removed a thick membrane presented, and this was taken to be the pleura, diaphragm, and peritoneum fused together by chronic inflammation. Into this membrane an exploratory needle was inserted and chocolate-coloured pus was again withdrawn. The membrane was then incise and a little more than a pint of this odourle chocolate-coloured pus escaped. A finger inserted into th wound passed into a large abscess cavity in the liver, wit soft velvety walls, freely bleeding after any manipulation. drainage-tube was inserted and dressings were applie Subsequently the wound was dressed daily. The discharg rapidly diminished, the tube was gradually shortened, an the patient made an uneventful recovery, leaving the hospit on May 24th perfectly well in every respect and weighin 11 st. 5 lb. (being a gain of 1 st. 9 lb. in the seven wee following the operation). The patient reported himself tw months after his discharge and said he was perfectly we and about to sail for China. Very soon after the evacuati of the pus the leucin, tyrosin, and cholesterin crystals di appeared from the urine and the urine became quite normal

Remarks by Dr. EMANUEL *and* Dr. MARTIN.—We ventu to believe that this case is worthy of publication on accou of the following facts: 1. The presence of cholesterin i urine is rare and its association with leucin an tyrosin is still more uncommon. These three constituen were constantly present in the urine of the above case f ten weeks to our knowledge, but disappeared as soon as th hepatic abscess was drained. These facts evidently therefo justified our opinion in associating their presence with som destructive process going on in the liver. 2. The liver absce on the patient's admission was deeply situated an it gradually pointed to the thoracic wall, because o four different occasions during the ten weeks before th operation an exploring needle was inserted into the ches without result, two explorations being made in the back i the ninth space in the scapular line, and the other tw explorations being made in the right axilla in the sam space and at the same spot, where the exploration mad subsequently on March 27th discovered the pus. 3. The cas exemplifies the fact that a chronic abscess of the liver ma be associated with no fever—the temperature througho was subnormal. 4. There was an interval of two yea between the last attack of dysentery and the first sympto of the liver abscess

CONNAUGHT HOSPITAL, ALDERSHOT.

CASE OF ACUTE PNEUMONIA WITH HYPERPYREXIA; BENEFICIAL EFFECT OF OXYGEN.

(Under the care of Mr. A. ALISON BRADBURNE, Civil Surgeon Army Medical Service.)

THE exact value of oxygen in the treatment of pneumonia cannot be said to be fully determined. That it is useful for sudden and severe attacks of dyspnœa is now generally acknowledged, but that it is of any real value in cutting short the attack or reducing the temperature is more than doubtful. The ordinary methods of administering the gas are by no means satisfactory and it is not probable that the percentage of oxygen in the inspired air is very much increased.

A man, aged 24 years, was admitted into the Connaught Hospital at 12 noon on May 29th, 1900. The temperature was 106° F., the pulse was 112, and the respirations were 38. There were physical signs of pneumonia commencing in the right lung and crepitations were heard from the apex to the base; in front and behind. Slight mental excitement and tremors were present. An effervescing cough mixture was prescribed; also to endeavour to reduce the temperature powders containing a grain each of quinine and phenacetin were given every half-hour. He was also sponged every half-hour. When seen two hours after admission (2 P.M.) the temperature, despite the treatment, remained the same, and the patient had vomited as soon as he was given the medicine and powders; they were consequently discontinued and reliance was placed on cold sponging, which by 2 A.M. on the following morning had reduced the temperature to 101·4°. When seen at 10 A.M. on the 30th the temperature stood at 105·6° and rose, despite sponging, to 105·8° by 2 P.M., at which hour the patient was given a cold pack (made with tepid water), in which he was left for an hour. At 4 P.M., the temperature being still 105·6°, five grains of phenacetin were given in hot whisky and water. This was followed by a gradual decline to 101·4°, which was reached at 10 P.M., when the temperature again commenced to rise. On the 31st the temperature at 6 A.M. had reached 103·8°, for which five grains of phenacetin were given, but this time it was followed by a rise to 105·8°. It only seemed possible to keep the temperature stationary for about four hours at 103·8°, then another five grains caused a small drop which lasted exactly an hour, to be followed by a more intense rise to 106·2°, which was registered at 4 P.M. The thermometer was used every half-hour and when it was found to register this height another five grains of phenacetin were given, and this, combined with the steady sponging which all along had been used in conjunction with the antipyretic, effected a reduction in the temperature to 102·4°. The mental excitement noted on admission had passed into the stage of active delirium, necessitating careful watching. On June 1st the temperature at 6 A.M. stood at 104·2°. The pulse was 120 and the respirations were 48 An enema which acted well was given. The chest symptoms were following the usual course, but a roughened sound over the pulmonary area had developed, indicating some pleuro-pericarditis on the left side. This luckily cleared up as the disease progressed and caused no trouble. The pulse remained fairly strong, despite the numerous doses of phenacetin, to counteract which and to assist the heart 15 minims of tincture of digitalis with five minims of solution of strychnine and five minims of diluted nitro-hydrochloric acid had been given every four hours; four ounces of brandy were also given during the 24 hours. Another attempt to give quinine was tried in a mixture with 10 minims of tincture of opium, but, as on previous occasions, it was immediately rejected. On the 2nd at 2 A.M. the thermometer registered 105·8° which phenacetin successfully reduced to 101·8°, and as the stomach was beginning to be irritable all medicine by the mouth was stopped. The milk, which the patient was taking fairly well, was partially peptonised, and by these measures all vomiting ceased. To replace the medicine and to assist the respirations, though the signs of cyanosis were very slight, inhalations of oxygen for periods of ten minutes at intervals of half an hour were commenced, and when seen 24 hours later the improvement, especially in the state of the pulse, was most gratifying, even though for that period the patient had taken no medicine whatever. To assist liquefaction of the bronchial secretion poultices were applied along with the use of the steam kettle containing compound tincture of benzoin and turpentine. The bowels had acted once and the urine had been passed involuntarily. During the night of the 2nd and the morning of the 3rd the temperature stood steadily between 103° and 104° Unfortunately, the oxygen gave out about midday, after 24 hours' use, and the tubes which had been telegraphed for did not arrive until late in the afternoon, when it was again resumed. To make up for the absence of oxygen and to anticipate the effects of a hoped-for and expected crisis hypodermic injections of three minims of solution of strychnine every four hours alternated with five minims of ether were given. At 10 P.M. the crisis commenced, the temperature falling in one and a half hours to 99°. Naturally such a rapid fall necessitated strong stimulating remedies. The patient was given an enema containing brandy, digitalis, and strychnine, which was returned, but a second enema was retained; also hypodermic injections of ether and strychnine were administered. He passed a restless night, but the pulse, which had nearly failed, recovered itself by next morning. A source of trouble was the patient's refusal to take nourishment by the mouth, so rectal feeding was therefore resorted to and continued during the night until midnight, when he asked for something to drink, so enabling the nurse to give him some milk. On the 4th the patient was decidedly better and the hypodermic injections were stopped, being replaced by tincture of strophanthus. There was no vomiting and the bowels acted well. The oxygen was also stopped. He was still delirious, but was not troublesome. The temperature, instead of remaining down, as was hoped, rose to 101°, and by midday it had reached 103°, but from this point it steadily fell to normal, which it reached on the evening of the 6th. On the 5th 10 grains of sulphonal were given to enable the patient to get some rest and to quiet his delirium, and this was followed by a very satisfactory period of what looked like natural sleep. There was very little expectoration, a feature which marked the whole course of the disease, though at this stage moist râles could be heard all over his right chest. By the evening of the 6th the temperature had dropped to normal, and remained so until the 11th, when it rose to 99·8°, falling to 98·4° on the same day, which was caused most probably by the great heat experienced that week. After so much delirium and hyperpyrexia it was not to be wondered at that the patient should exhibit some signs of mental weakness for a few days, but all these cleared up satisfactorily and he made a complete recovery.

Remarks by Mr. BRADBURNE.—This case presents one or two points of interest, the chief being the great tendency the temperature showed to run up to a high reading along with the great difficulty experienced in endeavouring to reduce it; also worthy of note is the antipyretic action of phenacetin without any seemingly weakening or depressing action on the heart—true, it was always given in whisky. Yet another point of interest was the way the patient's system immediately rejected all forms of quinine. This antipathy to the drug was a drawback, for had we been enabled to use frequent small doses of phenacetin and quinine (as recommended by Yeo) there is little doubt but that we should have been enabled to keep the temperature within bounds. The final and most satisfactory incident in the whole case is the gratifying results which followed the use of oxygen, and it was the early and steady employment of it that acted as the main factor which led to the ultimate recovery of the patient. It was fortunate that a patient exhibiting such symptoms had youth and a good constitution to assist him and us, and it must not be forgotten that part, if not the greater part, of our success was due to the most excellent and painstaking nursing which the patient received.

By the kind permission of Lieutenant-Colonel J. Wilson, R.A.M.C., officer in command of the Connaught Hospital, I am permitted to record the above case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Parasitology, Etiology, and Prevention of Malaria.

A MEETING of this society was held on Dec. 11th, Dr. F. W. PAVY, the President, being in the chair.

Dr. PATRICK MANSON communicated a brief *résumé* of the recent advances in the Parasitology of Malaria. He began by remarking that when this subject had last been discussed, in 1896-97, the cycle through which the malarial parasite went in the human body had been recognised, but the cycle external to the body had not been studied. How it was introduced was not known, but since the organism was a blood parasite some blood-sucking animal was suspected as the means of infection, and there were epidemiological and geographical reasons which pointed to the mosquito. Surgeon-Major Ross was one of the earliest disciples of the mosquito-malarial hypothesis, and he then set to work and after two or three years' indomitable perseverance he conclusively proved the truth of this theory. Ross first studied the evolution of the coccidium Schubergii in bird malaria and found there was an endogenous and an exogenous phase. Then turning his attention to the hæmomenas præcox, the parasite of æstivo-autumnal fever, he found it to be strictly analogous. The evolution of this malarial parasite in the blood of man was asexual, it entered the red blood cells, developed, was liberated, and the new generation attacked other blood-cells Outside the human being, however, the parasite developed in the body of the mosquito as a bi-sexual organism. The place of the malaria parasite in zoology was then discussed, and recent observations on the evolution of eimeria and coccidium by Pfeiffers, Simond, and Schuberg were referred to. The eimeria was the endogenous phase of the coccidium. The nomenclature was very confusing; some bodies had several names, others had no names at all. Reform in this respect was urgently needed. Two things were required to complete their knowledge of the entire life-history of the malaria parasite—namely, first, what circumstances determined the distinction of the merozoites, and whether they proceeded to the mosquito phase (the bisexual cycle) or to the human phase (the Golgi cycle); and secondly, what became of the parasite during the long latent period which sometimes elapsed between exposure to infection and the development of attack. An explanation was also wanted as to why crescents were so frequently found in this country and (in the late autumn) in Italy, and so rarely in tropical Africa, and in Italy during the summer and early autumn. Turning next to the various kinds of mosquito concerned in the conveyance of infection, hitherto only anopheles had been implicated in malarial infection and of this there were 46 known species. Of these the parasite had been found in anopheles funestus, costalis, claviger, pseudopictus, superpictus bifurcatus, and the as yet unidentified species of Ross. There were 250 species of culex known, none of which was known to be an efficient carrier of the malaria parasite, though very few had been tested—namely, culex mimeticus, pipiens, tæniatus, nemorosus malariæ, and three unidentified culices experimented with by Daniels in British Central Africa. Much attention had been bestowed of late on what was supposed to be a phase of malarial intoxication—namely, blackwater fever. One German and two English expeditions had been sent to investigate it. Results as regard the etiology of the disease had been *nil*, although much useful information had been gathered bearing on blackwater fever and also on malaria. The geographical range was found to be more extensive than was generally supposed. As regards malaria, children were found to be specially susceptible to the disease, as many as 70 or 80 per cent. of native children under one year of age contracting the disease. The proportion infected became gradually smaller as age advanced until 10 or 12 years old. An immunity seemed to be obtained in some way among the native population. Reference was made to the post-mortem findings of Hill and Daniels in Demerara. The former observer showed that out of 45 deaths from malaria in Georgetown Hospital between June, 1893, and June, 1895, in persons born in the colony 31 were under 13 years of age and only three over 21 years. Practically all deaths from malaria occurred in children. Daniels in a series of 1289 post-mortem examinations from 1893 to 1895 found malarial pigment in none under a month old. It was present in 25 per cent. of those over one month and under 12 months, in 54 per cent. in those over one year and under two years, in 81 per cent. in those over two years and under five years, whilst in those above 30 years of age it was only found in 18 per cent. and in gradually diminishing proportions in each ascending decade. The conclusion drawn by Daniels was that immunity was acquired by the young in that district probably by previous attack. Turning once more to blackwater fever the theory that it was caused by quinine was untenable, for many persons had the disease who had not had quinine. Nor was it an intense form of malaria, for the evidences of malarial infections were commonly absent and the fever was not always found in intensely malarial places; nor was it a malarial cachexia, because it might occur within a few weeks of arrival in a malarial country. The suggestions that blackwater fever might be due to a special type of malaria parasite, or it might be due to a malaria parasite the virulence of which was increased by being transmitted through a particular species of mosquito; or it might be a disease *sui generis*, were tenable but they lacked confirmation. As to the prophylaxis of malaria there were four means available—to avoid natives, to take quinine, to destroy mosquitoes, and to protect from mosquitoes. These measures were efficient but were not always applicable. Complete protection was perhaps impracticable, but relative protection was always possible and was of immense value.

Dr. L Sambon and Dr. G. C. Low gave an account of the experiments conducted on behalf of the Colonial Office and the London School of Tropical Medicine in the Campagna and in London. It was pointed out that the hypothetical connexion between mosquitoes and ague was a very old belief amongst the ancients and had long existed amongst the savage inhabitants of certain malarial areas in the tropics (in East Africa, for instance), where the word *mbù* indicated both the fever and the gnat. The discovery by Dr. Patrick Manson 20 years ago that the mosquito was the intermediate host of filaria Bancrofti, and the more recent discovery by Smith and Kilborne that pirosoma bigeminum was propagated by a common tick of cattle, supported the theory by analogy. The experiment about to be described was decided upon by the Colonial Office on the recommendation of their medical officer, Dr. Manson, who himself planned the experiment so that it might prove in a most convincing manner the truth or error of the mosquito malarial theory and in order to ascertain how far the necessary protection might be consistent with the ordinary avocations of life. It consisted of two tests—one to prove the theory in a positive manner, the other by negative interference (should they both succeed) In the first test it was provided that a man should allow himself to be bitten by mosquitoes reared and infected in a malarious region and then sent home. In the second test two men who had never suffered from malaria were to go into one of the regions known to be undoubtedly malarious and live there throughout the fever season with no other protection than such as might prevent the bites of mosquitoes, for which purpose they would be provided with a mosquito-proof hut. For the first part of the experiment a supply of insects which had fed on a patient suffering from benign tertian fever was sent out in batches. Considerable difficulty was experienced in packing them successfully, but at last all the difficulties were overcome and an ample supply of anopheles was sent home from Italy. Mr. P. Thurburn Manson, Dr. Patrick Manson's son, was bitten by these insects and developed the typical symptoms of double tertian ague. Some little time after this Mr. Warren, an attendant in the laboratory at the London School of Tropical Medicine, subjected himself to the bites of the third batch of mosquitoes. He likewise underwent a severe attack of benign tertian fever. The notes of both of these cases were read. As regards the second part of the experiment Dr. Sambon and Dr. Low were sent out to the Roman Campagna where they lived in a mosquito-proof hut during the whole of the fever season, extending from July 19th to Oct. 19th. Two other persons also lived with them in the house. The place chosen was Ostia, a part of the Campagna known to be the most intensely malarial. All the inhabitants around suffered from malaria, and out of 14 or 15 healthy police who were sent down into the district all contracted the malady. The four inhabitants of the hut, however, remained perfectly well all the time and afterwards up to date. The hut was fully described. It was built by Messrs. Humphreys and contained six rooms. The windows and all the crevices were protected by wire netting having meshes of 17 millimetres. The windows were left wide open day and night. The occupants all went out daily for long excursions into the Campagna. At first they took care not to go out before one hour after sunrise and after one hour before sunset. They found that the risk of being bitten during the day was infinitesimal. At first they wore veils but found them to be unnecessary. The flies were very troublesome but they were never bitten by mosquitoes. They studied the habits of the anopheles claviger and the anopheles pseudopictus. The habits of these animals were then described. Finally, Dr. Sambon and Dr. Low gave as their conclusion that these experiments proved beyond a doubt that mosquitoes, and only mosquitoes, were capable of transmitting malarial fever, that protection from their bite implied absolute immunity, that the protection was easily obtained, and did not in any way interfere with the ordinary avocations of life.

Mr. D C. Rees exhibited various phases in the Mosquito Cycle of the Malarial Parasite and specimens of the Anatomy of the Mosquito.

MEDICAL SOCIETY OF LONDON.

The Diagnosis and Treatment of Thoracic Aneurysm

A meeting of this society was held on Dec. 10th, Mr. John H. Morgan, the President, being in the chair.

Dr. J. Kingston Fowler resumed the discussion on the Diagnosis and Treatment of Thoracic Aneurysm[1] He remarked that the diastolic thud was a sign of the greatest diagnostic value, since it was present in no other condition Tracheal tugging also, when present, invariably indicated aortic aneurysm. He had lately seen a case in which the absence of tracheal tugging helped to exclude aneurysm The only fallacy of this sign was when there was a new growth almost surrounding the aorta and attached to the trachea; movement might thus be communicated. He had not had very much experience with the Roentgen rays, but he had not seen a case which could not be diagnosed otherwise. A 10 inch spark and first-class apparatus were necessary to elicit the outline of an intra-thoracic aneurysm. As regards Tufnell's treatment it was difficult to lay down general rules. Seven ounces of solids and eight of fluids were the quantities he had adopted. The longest time he had seen it carried out faithfully was three months. He referred to a case which he had seen some years ago of abdominal aneurysm in which the patient had died from rupture of the tumour. At the necropsy it was found that no clot had formed in the sac. The presence of aortic regurgitation, he thought, was certainly a contra-indication to this treatment, and he referred to a patient in whom the left ventricular compensation began to fail as a consequence of the treatment; intra-cardiac thrombi formed and, becoming dislodged, caused death from embolism. The presence of a distinct to-and-fro murmur, combined with hypertrophy of the left ventricle, might be regarded as certain evidences of aortic regurgitation. Uncomplicated aneurysm very rarely led to hypertrophy of the left ventricle or to a double aortic murmur such as that of regurgitation. The treatment of aneurysm very often consisted of several factors and it was difficult to decide which was the most important. Rest and iodide of potassium were very efficacious in the relief of pain. If no improvement took place by these means he then added a modified Tufnell diet. Turning to Lancereaux's method he had seen three cases treated on this plan. The first was a male, aged 44 years, with aneurysm of the ascending aorta of sudden onset and six months' duration without a history of syphilis. The patient was a road-scraper who attributed the disease to a blow on the sternum. There were aortic regurgitation and tracheal tugging. The injections were used on seven occasions. On June 2nd 150 cubic centimetres of a 2 per cent. solution and on the 6th 150 cubic centimetres of the same strength were injected. The temperature went up to 102° F. and he was restless for two days. The injections were repeated on the 21st. On June 25th and August 1st 60 cubic centimetres of a 5 per cent. solution were injected. On August 10th and 22nd 200 cubic centimetres of a 5 per cent. solution were injected. The patient left the hospital on Nov. 1st and attended as an out-patient. There was nothing particularly interesting in his case. Seven injections were a very small number. Another case was that of a female, aged 48 years, with aneurysm of the transverse aorta, the duration of which was two years. There was no aortic regurgitation She had injections on May 24th and June 11th of 150 cubic centimetres of a 2 per cent. solution into the buttock. On June 16th she had a good deal of neuralgic pain and on the 17th she was taken suddenly ill with vomiting and shortly after with profuse sweating at 4 P.M At 6 30 P.M. she became unconscious, was blanched and cold. There was no alteration in the physical signs. There were no convulsions. In the evening she became less unconscious. On the 18th consciousness returned and she complained of severe pain at the back of the head and down the neck. Next day (the 19th) there were constant yawning and sighing, with persistent pain in the back of the head. These symptoms pointed to blocking of the internal carotid and subsequent re-establishment of the circulation. There was no evidence of embolism of either the middle or the anterior cerebral artery. The third patient, a carman, aged 52 years, was under the care of Dr. W. Cayley. There was an aneurysm of the transverse aorta forming a large tumour projecting between the first and fifth costal cartilages There was no history of syphilis. He had had rheumatic fever in 1891. The symptoms of aneurysm had first begun in 1895, the swelling having appeared in 1898. He had been submitted to a restricted diet with benefit and had returned to work, but the symptoms came on again, and finally he went into the Middlesex Hospital, where in July he had 15 injections, gradually increasing in strength, beginning with 220 cubic centimetres of a 2 per cent. solution at a temperature of 99° and increased up to a 20 per cent solution. There was pain after all of the injections with a rise of temperature after some. The pulsation appeared to be somewhat less, but the tumour was not diminished in size and the skin over it was so thin that it threatened to burst. Dr. Cayley had informed him that in his opinion no benefit had resulted from the injections. His (Dr. Kingston Fowler's) experience was not very favourable to the treatment. The first of the three patients had probably been benefited and he thought that when there was an aneurysm of the ascending part of the arch with a small orifice of entrance it might be useful. But, on the other hand, where there was a very large sac containing no clot, with a large orifice of entrance, neither restricted diet nor Lancereaux's method would be of much benefit. As regards tracheotomy it was of course no use when there was direct pressure on the trachea. He referred to a case under the care of the late Sir George Johnson when a bilateral spasm of the adductors had existed due to pressure on one pneumogastric nerve. The patient had severe attacks of dyspnœa and tracheotomy was performed by the late Sir William Ferguson with considerable benefit Inhalations of oxygen and the injection of morphia were useful in those cases where spasm existed. The prognosis of aneurysm, he believed, was better than was generally thought, and he referred to several cases which had lived for years—one for 13 years, another for six years, and another for nine years.

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[1] Vide The Lancet Dec. 1st, 1900, p. 1575.

Dr. Robert Maguire wished to emphasise the importance of the apparatus employed in transfusion, for it was of the greatest importance to introduce the gelatin solution as rapidly as possible

Dr. T. Gilbart Smith had seen the patient referred to by Dr. de Havilland Hall At first he had suspected aneurysm but subsequently had been doubtful about it There was no paralysis of the left vocal cord. The larynx was twisted over and the symptoms pointed to laryngeal trouble from some other cause It appeared to him like a case of shrunken lung which had retracted from the front of the heart and the accentuated second sound had appeared to him to be of pulmonary origin He referred to a patient with a dilated pulmonary artery due to a retraction of the lung presenting many [illegible] the symptoms of aneurysm which had made him suspect that condition in this case. But when he saw the case two years ago he then came to the conclusion that after all it must be one of aneurysm. Referring to the Roentgen rays he had seen several cases in which undoubtedly that method was of considerable help and by its means malignant disease had been diagnosed which was previously unsuspected. He had seen several cases treated by gelatin injections, but on the whole they were not distinctly benefited by them. He had long ago given up Tufnell's treatment, for there was not sufficient benefit in return for the misery which it entailed. He thought that the rigid rest and starvation reduced the resisting power of a patient's vitality. He referred to a case in which aneurysm was complicated by locomotor ataxy. Tracheotomy was no use unless the obstruction existed in the larynx and the real question was whether the surgeon could dilate the constriction below.

Dr. Seymour Taylor thought that it would have been useful if the question of the diagnosis between aneurysm and intra-thoracic growths had been discussed. The cardinal symptoms of aneurysm were really only four or five in number. All the others were common to aneurysm and new growths in the thorax. Thrill was a very valuable sign in the diagnosis of aneurysm, and it generally meant that there was little or no laminated clot This and the diastolic shock were conclusive signs to his mind. The "whiffing" sign, which could be heard with every pulsation of the heart when the trachea was pressed upon, was another sign of value. He did not attach very great importance to tracheal tugging. It might occur with cardiac hypertrophy and it was by no means constant in aneurysm. As to treatment, he had not seen the slightest benefit from Tufnell's treatment. He believed that it lowered the tone and the resisting power of the patient Tracheotomy was no use unless the dyspnœa was due to spasm of the vocal cords.

Dr. Kingston Fowler explained that he did not intend to imply that tracheal tugging was present in all cases It could only be elicited when the aneurysm was in contact with the trachea or the main bronchus.

Dr. Edmund Cautley thought that the reason why Tufnell's treatment was not generally successful was because it had been employed in unsuitable cases If cases among the lower orders, especially with a history of alcoholism, were submitted to it they failed, but in cases of simple sacculated aneurysm occurring among the better classes who would cooperate intelligently it was successful, and he referred to a case in which the patient after 10 weeks' treatment had made great improvement, and after 21 further weeks of modified diet had recovered sufficiently to ride and to shoot; the only thing he could not do was to walk fast. Insomnia and a difficulty in passing his concentrated urine were the only troubles of which this patient had complained. He referred to another case which had greatly improved under the diet and calcium chloride.

Dr. F. de Havilland Hall, in reply, laid stress upon the fact that the absence of tracheal tugging was, in his opinion, of value in showing absence of aneurysm. He did not believe that iodide of potassium alone was as successful as when combined with a restricted diet. He would like to see the effect of iodide of potassium tried while the patients were up and about. As regards the length of time during which Tufnell's treatment could be carried out seven months was the longest that he had seen in a patient who had then been sufficiently well to return to his work on the Stock Exchange. Shortly afterwards he exerted himself violently and died suddenly. He had not been impressed with the value of Lancereaux's treatment, but he thought it was too early to judge in the matter because cases of aneurysm went on for years.

OBSTETRICAL SOCIETY OF LONDON.

The Treatment of Retroflexion of the Gravid Uterus.—A New Theory of the Causation of Sex.—Exhibition of Specimens.

A MEETING of this society was held at 20, Hanover-square, W., on Dec. 5th, Mr. ALBAN DORAN, the President, being in the chair.

Dr. W. J. SINCLAIR read a paper on a Contribution to the Diagnosis and Treatment of Retroflexion of the Gravid Uterus. He pointed out that in a typical case of retroflexion of the gravid uterus the symptoms produced a *tout ensemble* which was quite characteristic and made diagnosis easy and certain. The striking constant feature was irritability of the bladder with more or less retention of urine. The contributions to the journals on the diagnosis and treatment of the condition had a tendency to exaggerate the frequency of complications, and the literature of the subject seemed to indicate a too ready resort to operative treatment. The special method of treatment which Dr. Sinclair advocated was extremely simple. It consisted essentially in the introduction of a watch-spring pessary, care having previously been taken to empty the bowel and bladder. After the introduction of the pessary, if the patient were made to rest on her side, lying over with her face downward as far as she could with comfort, it would be found that the action of the pessary alone would restore the uterus to its normal position in a few hours. Illustrative cases were given. The whole number of cases in which the method of treatment had been tried by Dr. Sinclair was 15. These had been consecutive and in all the method of treatment had been successful. One case was mentioned in which the watch-spring pessary treatment was adopted owing to a misunderstanding in a case of fibroid tumour attached to the fundus uteri, which had fallen back into Douglas's space and produced the bladder symptoms of retroflexion of the gravid uterus. In this case the action of the pessary raised the tumour into the abdominal cavity. The question of retroflexion of the uterus as a cause of abortion was incidentally mentioned. Abdominal section or any severe method of treatment of retroflexion of the gravid uterus was deprecated. Ventrofixation after abortion and involution was recommended in cases of adherent retroflexed uterus.—The PRESIDENT agreed that retention of urine and irritability of the bladder were very important symptoms for diagnostic purposes. Of recent cases, Konrad's, of Budapest was interesting. Relief came too late. Sloughing of the mucous membrane of the bladder and death followed abortion which occurred three days after reduction of the uterus. He had referred at the meeting of the society in April to Unterberger's case, where the displaced pregnant uterus obstructed the bladder and forced open the urachus. Lastly, he dwelt on Gemmell's case at Liverpool, where a woman was seized with abdominal pain and retention of urine at the third month and backward displacement of the gravid uterus was suspected. The mass in the pelvis, however, was found to be a fibroid, which was enucleated through an abdominal incision. The pregnancy continued to term. As to difficulty in keeping the reduced uterus in its place, the President referred to Szanto's case where the displacement was attributed to relaxation of the supports of the uterus caused by typhoid fever; the uterus was replaced manually. Under such circumstances recurrence of the displacement was no doubt very probable.—Dr. J. INGLIS PARSONS had found that the air-ball pessary answered very well. He preferred that gradual method to the more rapid method of manual reposition because it was less likely to produce abortion. Cases of retroversion bound down by adhesions were not at all common; he had never come across a case of this kind in which pregnancy had occurred. If confronted with this complication he would prefer to open the abdomen, free the adhesions, and entertain the hope that the pregnancy would go to term.—Dr. A. L. GALABIN said that he thought that Dr. Sinclair's paper was valuable in calling attention to a mode of treatment the value of which would seem not to have been duly appreciated provided that it proved as successful in the hands of others as in those of Dr. Sinclair. He did not think, however, that this treatment ought to supersede the even simpler one of immediate taxis. He was accustomed to place the patient in the knee-elbow position and apply pressure to the fundus, first from the vagina, then, if that failed, from the rectum. His experience was that an anæsthetic was not required in one case out of 20. He had been accustomed 25 years ago to restore retroversions of the gravid uterus in the out-patient room without even admitting the patients to the hospital. In some cases, however, an anæsthetic alone rendered the taxis practicable. He had never finally failed to reduce a uterus nor had he found it necessary to induce abortion, and for many years he had employed nothing but immediate taxis. His experience therefore strongly confirmed Dr. Sinclair's view that firm adhesions in connexion with retroversions of the gravid uterus were very rare. He had not found abortion follow immediate taxis, but he had known it occur during the use of elastic pressure. He had not employed the watch-spring pessaries as a primary treatment but had always employed them both for keeping up the uterus when restored and in cases in which the restoration at first did not appear to be quite perfect. In future he should certainly try the plan when restoration could not be effected without an anæsthetic. As regarded the mechanism of the pessary he attached even more importance to a leverage which Dr. Sinclair had not mentioned than to the one which he did mention. This resulted from the traction on the cervix produced by stretching backward the posterior vaginal fornix. In this case the uterus itself was the lever, the fulcrum was the position of the internal os, where the uterus was most fixed by its ligaments, and the dragging of the cervix backward tended to tilt the fundus forward.—After some remarks by Dr. HERBERT R. SPENCER, Dr. G. H. DRUMMOND ROBINSON referred to a case of incarcerated, retroverted gravid uterus which he had seen when he was clinical clerk to the late Dr. Matthews Duncan. The patient, who was aged 24 years, was pregnant for the first time. She had retention of urine on Nov. 6th, which was soon followed by constant dribbling of urine. On the 28th nine pints of ammoniacal urine were drawn off by catheter. On Dec. 6th, after many unsuccessful attempts to replace the retroverted gravid uterus, Dr. Duncan induced abortion. On the 5th protrusion and redness of the umbilicus were noticed and a few hours afterwards offensive urine began to ooze from it and this continued until the patient's death on the 20th. The mucous membrane of the bladder began to slough and to be passed per urethram soon after the patient's admission to the hospital. At the post-mortem examination the mucous membrane of the bladder was almost completely absent and the bladder communicated with a fistula at the umbilicus. The uterus was not adherent in Douglas's pouch. The right broad ligment contained an abscess. Dr. Duncan stated that he had never previously been obliged to induce abortion for this condition.—Dr. R. BOXALL thought that they were much indebted to Dr. Sinclair for drawing attention to the fact that abdominal section or any severe method of treatment was rarely called for. For his part, he had never met with a case which would not yield to well-directed pressure and he doubted if anyone present had met with a case which necessitated even puncture before the uterus would be replaced. He regarded chloroform as useful in enabling the reduction to be effected with less force and consequently with less danger of producing abortion than when no anæsthetic was given.—Dr. EWEN J. MACLEAN cited a case of Retroverted Gravid Uterus at the fourth month in a primipara. The symptoms were urgent and, the usual manipulations failing, the patient was admitted into the hospital with a view to the administration of an anæsthetic. After left decubitus, however, for several hours the uterus suddenly reduced itself into its normal position.—Dr. SINCLAIR briefly replied.

Mr. E. RUMLEY DAWSON read a paper on the Essential Factor in the Causation of Sex: a New Theory of Sex. The ovaries, he said, normally discharged ova independently of each other, probably working alternately. The proof was that the number of cicatricial depressions, the result of ruptured Graafian follicles, were nearly equal in each ovary, and together they equalled the number of menstrual periods passed. Normal single pregnancy was the result of the fertilisation of an ovum from one ovary only, by the combined secretion of both testicles; therefore, the male parent did not influence the sex of the coming child. The sex of the child depended upon which ovary supplied the ovum fertilised; if the right a male and if the left a female. He quoted cases of ovariotomy where one ovary only was removed, the subsequent pregnancy giving a child corresponding in sex to the ovary which was not removed. He also gave cases of tubal pregnancy where by operation a male fœtus was removed from the right tube, the corpus luteum being in the right ovary; and *vice versâ* where a female fœtus occupied the left tube, the corpus being in the left ovary. Cases were quoted to show that the affected tube in tubal pregnancy and in tubal moles was generally on the same side as the corpus-luteum-bearing ovary. Cases where either tubal or cornual pregnancy occurred on the opposite side to the corpus-luteum-bearing ovary were unusual and were explained by two theories—viz.: (1) the grasping by the tube of one side of the ovary of the opposite side; and (2) the transmigration of ova. The production of twins and plural births was also considered. Here the ovaries must act at or about the same time when the sex of the twins was different, while when twins were the same sex it was shown that the ovary of one side might provide two ova. Unilateral sterility was shown to account for those cases where the children were all of the same sex or where, after a child of one sex was born, the remainder were of the opposite sex. The usual mixture of children as regards sex which most parents had was due to both ovaries usually being active, and thus supplying children of each sex There were two ovaries only and two sexes only.—The PRESIDENT remarked that discussion on sex problems had been popular from time immemorial, but, however interesting they might be, they seemed ever barren of useful results. Mr. Dawson had taken great pains to collect what must certainly be called clinical evidence and had thus avoided *a priori* arguments founded on one or two cases of unilateral ovariotomy. Did he seriously believe that where a male heir was a matter of national importance the removal of a queen's left ovary would at least avoid disappointment?—Dr G. F. BLACKER was surprised to find Mr. Dawson claiming originality for a thing which dated back to 500 B C. In view of the large number of observations collected by various observers and the numerous experiments carried out upon animals he found it impossible to believe that the male parent played no part in the determination of sex and that the sex of the ovum was settled at the time of its expulsion from the ovary. Mr. Dawson's theory did not explain any of the known facts with regard to the relative proportion of the sexes. Even if they accepted it it did not advance their knowledge as to the real cause of sex. He felt sure that many of the Fellows could instance cases of unilateral ovariotomy and subsequent pregnancy which were in direct opposition to Mr. Dawson's assumption. He could relate two such cases. If the time ever came when they would be able to explain the exact causation of sex he felt sure that it would be found to be, not in one theory or in any one factor, but in a number of factors interacting under varying conditions. Any theory of sex put forward for acceptance must apply to the whole of the vertebrata. Birds had only one ovary. The common fowl had only one, the left ovary. Would Mr. Dawson kindly explain where, according to his view, cocks came from?—After some remarks by Dr. PARSONS and Dr. MAURICE DEE, Dr. SPENCER said that the paper was supported by what appeared at first sight to be an imposing array of facts and contained some statements of opinion which were not facts. It was a pity that more inquiry had not been made as to the sex of the children who were born after unilateral ovariotomy. He had himself removed a left-sided ovarian tumour completely and the patient had in a subsequent pregnancy borne twins of different sexes. There was no doubt whatever that the tumours had been completely removed. Cases of this kind absolutely disproved the theory of Mr. Dawson.—Mr. DAWSON, in his reply, stated that pregnancy, after the removal by operation of the tube of one side and of the ovary of the opposite side, was to be explained by trans-peritoneal migration of the ovum. He did not consider that the male parent had anything to do with sex causation, nor did he consider it necessary to argue from causation of sex in the lower animals, but confined his arguments to the human species. Cases where, for instance, male children were born years after the removal of a right ovary might be explained by a small portion of the right ovary having been left behind, and he quoted two cases to show that this had not infrequently occurred. In one such case both ovaries had been removed, yet a male child was subsequently born on two occasions.

Dr. SPENCER showed two specimens of Parovarian Cyst with Twisted Pedicle, in which the ovary only was congested and inflamed.—These specimens were discussed by the PRESIDENT, Dr. BOXALL, and Dr. MACLEAN.

LIVERPOOL MEDICAL INSTITUTION.

Lupus of the Face.—X-Ray Photograph of an Aneurysm.—Uterine Fibroids.—Peripheral Neuritis.—Medical Weights and Measures.

THE fifth ordinary meeting of the session was held on Dec. 6th, Mr. EDGAR BROWNE, the President, being in the chair.

Mr. C. THURSTAN HOLLAND showed Two Cases of Lupus of the Face treated by x rays. One patient was shown in 1898, and except for a very slight relapse necessitating six more exposures this year had remained cured and was now practically well. The other, a girl, eight years of age, was treated this year for a patch of lupus on the left cheek five inches in diameter. Ten exposures of ten minutes each had resulted in complete cure, the scar tissue being quite soft, non-adherent, and non-contractile—Mr. HOLLAND also showed an x Ray Photograph of an Aneurysm.—Dr. LLEWELLYN MORGAN thought that the case of aneurysm was of interest because the patient had sought relief for hoarseness of the voice rather than for any symptoms directly referred to the aneurysm, and diagnosis was based primarily upon the laryngoscopic examination and pressure symptoms upon the left recurrent laryngeal nerve.—Dr F. H. BARENDT considered the treatment of the cases of lupus to be most satisfactory, and in the case of the girl he thought that the resultant scar was superior to the after-treatment (even when successful) of lupus by scarification, cauterisation, and decorticating medicaments.

Dr. H. BRIGGS read notes of two cases of Uterine Fibroids of Large Size (the growth and uterus weighed 8¼ lb. and 10 lb. respectively). The lower uterine segment was involved and the pelvis was blocked. In cases of this kind the advantage of first getting rid of the growth by enucleation and then of completing the hysterectomy by Baer's method was obvious. In some cases of large tumours enucleation, apparently safe, was tedious or difficult by reason of the dense fibro-myomatous trabeculæ intersecting the tumour and reaching its capsule

Dr. NATHAN RAW briefly described the main clinical features of a recent epidemic of Peripheral Neuritis associated with symptoms of Arsenical Poisoning and showed photographs and lantern slides illustrating the skin lesions and motor paralysis. He described the differential diagnosis between alcoholic neuritis, beri beri, and arsenical poisoning, and gave it as his opinion that the present epidemic was entirely due to the presence of arsenic in beer and stout.—Time did not permit of any discussion on this subject, and the matter being of public importance the discussion was unanimously adjourned to the next meeting, to be held on Dec. 20th.

Brigade-Surgeon-Lieutenant-Colonel E. NICHOLSON read a paper on Medical Weights and Measures. He said that members of the medical profession should form an opinion on the British system of weights and measures and on the alleged superiority of the metric system. He showed the evolution of the imperial weight from the Egyptian royal cubit through the Alexandrian talent and the Roman *libra*, and how the British Pharmacopœia ounce differed by only half a grain from the Roman weight. The history of this and of the rival weights of bygone times, especially Troy weight, was detailed in printed tables. He regretted that the Pharmacopœia Committee had not resisted the permissive use of Troy weight by druggists and showed that the adop- tion of imperial weight in the British Pharmacopœia was ignored by the Board of Trade; he urged the use of "oz." instead of ℥ in the prescription of solid drugs to insure British Pharmacopœia weights being used. An account of the metric system and its fallacies was given; it was being vigorously pushed by advocates whose representation of the alleged irrationality and difficulty of the British system was due to ignorance of it. He pleaded for a better teaching of their weights and measures and of their concordance in schools. If every trade or profession spoke for itself little dissatisfaction would be found with the system which had grown with their civilisation; any trade or any person could decimalise the weights and measures for calculation or industrial purposes. The medical profession were warned against being lured into consent to the metric system by the plausible use of the word "scientific." Examples were given of how the metric system even in France, after more than a century of official pressure and police action, was disliked by the people; they only submitted to the system, without accepting it, and they evaded it whenever possible. The metric system, if made compulsory in this country, would be really a revolutionary system, uprooting a great deal more than their weights and measures.—Dr. KARL GROSSMANN differed from Brigade-Surgeon-Lieutenant-Colonel Nicholson entirely in regard to his conclusions and thought that the paper was an apology for the survival of the system rather than a claim for its persistence. The ancient Egyptians had done many things which they should never attempt and others which the most brilliant intellects had failed to explain, but their mode of measuring and weighing did not suit the present time with its altered conditions of communication as well as the decimal system. The relationship between the metre, the gramme, and the litre was simple and easily intelligible, and the adoption of the metric system would do away with the useless i[illegible]ous of the weights and measures in the old multiplication-table and so far would relieve the brains of their already overburdened school children. The present English system did not show the survival of the fittest but the persistence of the "unfittest," and its proper place was beside the "cubit" in the museum amongst the relics of the past. —The PRESIDENT also made some remarks and Brigade-Surgeon-Lieutenant-Colonel NICHOLSON replied.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Patients and Specimens.—Experiences in South Africa.

THE second meeting of this society was held on Dec. 5th, Mr. A. G. MILLER, the President, being in the chair.

Dr. BYROM BRAMWELL exhibited a man showing an exceptional form of Tabes in which the toe reflex was extension instead of flexion. The usual reflex on tickling the sole of the foot was a flexion of the toes, as was first pointed out by a French physician named Babinski some three years ago. In certain conditions of disease in which the pyramidal tracts of the cord are affected, as in spastic paralysis, extension of the great toe resulted. In locomotor ataxia this phenomenon was not present. The case shown was that of a labourer, aged 42 years, who had suffered from tabes for about 10 years. He was markedly ataxic, balanced himself with difficulty, and had trouble with micturition and defecation; there was thoracic analgesia. The knee-jerk was abolished and the Argyll-Robertson sign was present. He walked with his feet wide apart and dragged his legs. On tickling the sole an exception to the ordinary rule was found in that he showed a double extension. The case, however, was not a real exception for the patient had had two attacks of hemiplegia 11 years ago and again two years ago. There was a lesion in his crossed pyramidal tracts as well as tabes dorsalis and this explained the apparent anomaly. The deep reflexes in the upper extremity were feebly marked, but the jaw reflex took the form of a clonus. The lesion had extended up to the cervical region and so had abolished the arm reflexes, but the jaw reflex was still intact.

Dr. MCKENZIE JOHNSTON showed (for Mr. ALEXIS THOMSON) a patient, aged 24 years, after Complete Excision of the Larynx for Epithelioma. In August, 1899, the patient began to suffer from hoarseness, shortness of breath, and dysphagia. These symptoms increased in severity and tracheotomy had to be performed by his own medical attendant on short notice, and later thyrotomy was performed. At this time a piece of the growth was removed and was pronounced by Professor W. S. Greenfield to be a malignant papilloma. On examination on Oct. 4th the whole larynx was found to be filled with a fungoid mass which pressed on the epiglottis. A further thyrotomy was done as the growth did not appear to be malignant, as much pus escaped, and the cartilages were found to be bare. After a week's delay, and on the pathologist's report that it was a squamous-celled epithelioma, the whole larynx was removed. The patient was in excellent condition both before and after the operation, and the remarkable fact was his early age. His power of speech was feeble but distinct. Part of the anterior pharyngeal wall was removed at the same time. The patient was out of bed a week after the operation and in three weeks was able to swallow anything.

Mr. HAROLD STILES showed: 1. A boy, aged six years, after Excision of a large Simple Lymphoma of the Neck. The glands had been enlarging for two years and at the operation they extended from below the jaw to the clavicle as a large lobulated mass. The interest lay in the size of the growth and in its pathology. Many surgeons thought that it was a multiple cystic hygroma, but Mr. Stiles thought it was glandular because it had a doughy, false fluctuating feeling, as if a bunch of grapes were under the skin. The operation was not difficult as the glands were not adherent. The spinal accessory nerve went through the mass and had to be sacrificed. There was no recurrence in the region of the operation but there were one or two enlarged glands in the parotid region. The glands on section had a sarcomatous appearance, but they had really undergone a simple hypertrophy. Such glands must be developed after birth and they might result from a change of the fat cells into lymphoid tissue. 2. A girl, aged eight years, six months after Amputation at the Hip and the removal of the greater part of the innominate bone for tuberculosis. Previously to this major operation she had been subjected to several operations for the removal of tuberculous disease. The disease, however, recurred in the hip, and as the patient was dying from hectic this operation was performed. A skiagram taken six months after the operation by Dr. H. Rainy showed that re-formation of some bone had taken place. The liver, which was enlarged and waxy, had also undergone diminution in size.

Dr. GEORGE ELDER exhibited (1) four Brains showing four different Seats of Cerebral Hæmorrhage, and briefly described the clinical history of each; and (2) a Tumour of the Dorsal Vertebræ pressing on the Spinal Cord from a case of paraplegia.

Dr. BYROM BRAMWELL showed: 1. A Horizontal Section through the Brain with a large Tumour of the Motor Centres and Centrum Ovale (infiltrating glioma). The specimen was from a man, aged 24 years, who had had frequent attacks of Jacksonian epilepsy, beginning in the left hand and on the left side of the face. He had no other general symptoms of cerebral tumour. Under iodide of potassium and bromide of potassium he improved, but returned later with the same attacks and some loss of power in the arm and leg. The diagnosis was a small glioma in the motor area. Mr. J. M. Cotterill trephined over the face centre, but the brain appeared to be normal. Faradaisation over the motor area failed to produce muscular contraction even with strong currents. The patient soon recovered from this operation and was discharged. Later he returned with left-sided hemiplegia, double optic neuritis, and hernia cerebri. His headache suddenly became very severe and he died. The points to note were that there may be a brain tumour with merely localising symptoms but no general symptoms, and that faradaisation may fail to cause muscular contraction. 2. A Skull-cap from a patient who died three months after the operation of Trephining in a case of Cerebral Tumour.

Professor J. CHIENE, in bringing before the society his paper on Experiences in South Africa, said that he had divided the account of his stay in South Africa into two periods—viz., the period from the beginning of April until the end of June, and the period from the end of June until the end of August; from Cape Town to Norval's Pont in the first instance and from Norval's Pont back to Cape Town in the second. Whatever might be the verdict of the Hospitals Commission everyone must allow that the question of army medical reform was only a sub-section of the wider question of army reform. The four great hospitals in the neighbourhood of Cape Town were Wynberg No. 1, Wynberg No. 2, Rondebosch No. 3, and Woodstock No. 4. Much had been said about Woodstock. It was an old building near Cape Town, lying on the shore, and, like all old buildings in South Africa, it was infected with animal parasites at one time. On his second visit great improvement in this particular had taken place. He never noticed any smell from the town drains which opened into the bay near the hospital. The drain for sewerage opened 300 yards from the shore and the current carried the dejecta away from the hospital, and, judging from the excellent results of the surgical cases which he saw there, he could not look upon the hospital as an unhealthy one. The dejecta from the hospital, after being mixed with izal, were buried in a trench on the shore. Professor Chiene's time was principally spent in the Wynberg and Rondebosch hospitals and both hospitals were on excellent sites. Regarding the conveyance of the soldiers from the trains and the hospitals, he said that being at Wynberg he saw them arrive by train and again saw them immediately after admission to the hospital. The difference between hospital trains and ordinary trains carrying invalids must be clearly understood. In the former the soldiers were most comfortable, while in the latter the reverse was often true. In future, Professor Chiene urged, some form of portable cooking stove must be carried in these ordinary trains by means of which simple food may be cooked. A supply of food at the stopping places could not be depended upon. It was often very sad to see how worn and weary the poor fellows were on their arrival. As regards their conveyance from the trains to the hospital at Wynberg, this was done in ambulance carts. On a smooth road such a cart was fairly comfortable, but in his opinion the ambulance litters were certainly more comfortable, and he thought it would be a question for the future if these litters should not replace carts in the conveyance of patients from trains to hospitals. These litters were on rickshaw wheels with rubber tyres and they worked most smoothly. A question for the future would also be, Could any improvement be made in ambulance wagons for the removal of patients from the battlefield to the nearest hospital? The Boers used, as a rule, wagonettes and Cape carts. The essentials of such an ambulance wagon were strength, easy turning, easy motion, and easy access to the patient by the attendant. The stage coaches in South Africa were hung on leather, but in ambulance carts care would be necessary to prevent too great a swing of the carriage for fear of sickness which was analogous to sea-sickness. Professor Chiene then stated his experience under the following headings: 1. Anæsthesia.—Chloroform was the favourite anæsthetic, but he had never seen any trouble with any anæsthetic and very little subsequent sickness. The condition of the wounded soldier reminded him of the state of a patient suffering from shock, not taking much interest in his own case, and this long after the receipt of his injuries (for these cases were seen at the base). They seemed to be suffering from "chronic shock," if the term might be used. He could recall only one case of a soldier who refused to be operated upon. 2. X rays.—Great difficulty was often experienced in localising bullets in the spine and pelvis, but in the limbs little difficulty arose. In the pelvis a rectal examination would sometimes localise a bullet when the x rays had been found wanting. He was satisfied that the efficient use of the x ray apparatus depended very much on the experience of the man who used it. The method of McKenzie Davidson gained most acceptance. 3 Hospital trains and ships.—In Natal the absence of corridor carriages rendered the Princess Christian's hospital train of much value, and fortunately it was ready just in time to cross the Tugela after the relief of Ladysmith. In Cape Colony there were four trains with every comfort. The good that these trains did was incalculable. Kipling had written about them and Professor Chiene wished that his article might be reprinted separately. As regards hospital ships, he had no experience of those fitted up at home, but he saw two of the sick ships fitted up in Durban, the *Lismore Castle* and the *Simla*, and nothing could be better, with every comfort and convenience. Colonel Gallwey looked upon these ships as base hospitals. They contained 1660 beds. It had to be remembered that the problem in Natal was a much easier one than was that in Cape Colony—50,000 men as compared with 150,000; 200 miles of railway as compared with 1000. 4. Bullet wounds.—When a soldier was struck at near range the wound was worse than when the charge was received from a distance. When struck at a distance of between 200 and 400 yards a more ragged wound resulted than when struck at 1000 or 1500 yards. Possibly the bullet was like a top, at first it spun round a centre and then after a time settled down into its true course. The cases of severe brain injury must be divided into two groups: first, those in which the bone and brain were severely injured and torn; and, secondly, those in which, with a comparatively small bone wound, the brain was much torn. In the first the injury was probably due to expanding or explosive bullets; in the second the Mauser bullet might be the cause when fired at short range. Dr. Hugh Marshall had examined the green coating of some bullets and had found that it was due merely to the action of fatty acids on the copper. 5. Head injuries.—The cases of cerebral hernia which Professor Chiene saw in South Africa seemed generally to be on a fair way to recovery, and in some this was complete. Dr. Louis Irvine, a civil surgeon at Port Napier, Pietermaritzburg, spoke of the good results of formalin in cases of hernia cerebri. Professor Chiene saw several cases of severe brain injury followed by recovery. He related several remarkable cases of such injury in which recovery took place. 6. Injuries of blood-vessels.—He had seen several cases of arterio-venous aneurysm. They occurred in the neck and in the extremities. Much improvement resulted from proximal ligature of the main artery when the communication was between the carotid artery and the internal jugular vein. In the thigh ligature of the femoral artery did good and in the leg the aneurysm was generally laid open and the artery and vein were ligatured above and below the opening. The improvement which took place after proximal ligature of the main artery with the absence of any venous dilatation made him wonder if the condition could be due to bruising of the artery and vein and subsequent matting with constriction. The number of cases of painful neuritis from bruising of the nerve, those due to adhesion of the nerve to bone after fracture, and those due to splinters of bullets lodging in the nerve made him think that the same might have occurred to arteries and veins lying side by side. 7. Injuries of the thorax.—It was exceedingly rare to find a patient who said that he had spat blood at the time of the wound to the lung. Apparently the Mauser and Lee-Metford bullet passed through the lung searing it and preventing hæmorrhage. On the other hand, in many cases there was hæmothorax, probably from the intercostal vessels. Empyema as a result of lung injury rarely occurred and he saw only four cases. He had seen several cases of penetrating thoracic wounds in which after careful examination of the entrance and exit wounds he could not but conclude that the bullet had traversed the heart. 8. Abdominal injuries.—He had no opportunity of forming an opinion on the question of immediate operation in penetrating wounds of the abdomen. It was currently believed that the hungrier a man was the less was his risk in an abdominal wound. As in the lung, so in the intestine, apparently the Mauser bullet made so small a wound that neither bleeding nor extravasation occurred. He could explain the recoveries after penetrating wounds in no other way. In speaking of enteric fever Professor Chiene said that hospital huts and tents were better than houses in which to place the patients. He with many others looked with apprehension to the coming year for fear of an outbreak of enteric fever and especially amongst the new immigrants. The dejecta of typhoid and dysenteric patients had been thrown out all along the railway lines. He thought that there should be no delay in sending out the best incinerators and compelling the authorities to burn the dejecta. There was much difference of opinion as to the merits of typhoid inoculation. Many thought that what was called in the army "simple continued fever" was aborted typhoid fever and at Estcourt Hospital he was informed that five out of six such cases reacted to the Widal test. Had these patients been inoculated for typhoid fever and was the reaction due to the inoculation? The Widal test was not in use, as a rule, in the military hospitals and it was from the civil hospitals that its value as a diagnostic would be heard of. As regarded dysentery he was struck with the general depression of spirits of the patients. The treatment by the free use of magnesium sulphate followed by ipecacuanha was the favourite remedy. In conclusion, Professor Chiene expressed the hope that the medical history of this war would be fully described in the form and with the thoroughness that the great Civil War in America had been dealt with by the Government of the United States. From such a history many most valuable lessons would be learnt which would be of the greatest use to all members of the medical profession, but especially to the members of the Royal Army Medical Corps, and to those civil surgeons who in the future might be called upon to serve Her Majesty in times of war.

Dr. ROBERT STIRLING (Perth) also very briefly described some of his experiences as a surgeon in South Africa.

Society of Medical Officers of Health.—A meeting of this society was held on Nov. 9th, Dr. A. Newsholme, the President, being in the chair.—Mr. J. Cantlie read a paper on Plague, its Symptoms and Spread, in which he insisted on the insidious character of the disease at the commencement of an outbreak, the early cases being, as a rule, difficult of diagnosis and appearing for the most part as a non-fatal bubonic fever. Thus in 1893, the year preceding the virulent epidemic at Hong-Kong, numerous cases of non-syphilitic buboes were operated on among the seamen of the British Navy, and the same thing had been observed elsewhere. It was important to distinguish between these cases, which he called cases of "pestis minor," and the mild cases occurring during an epidemic of the typical and virulent disease, to which he would give the name of "pestis ambulans." All the cases of pestis minor that he had seen were among seamen. After a few days of febrile disturbance a gland in the groin became swollen, pus escaped through openings in the skin, and on cutting down the gland was found to be suppurating and separated from its surroundings except at one point. The treatment consisted in excision of the gland with perhaps *those in the vicinity that were at all inflamed and packing* with iodoform gauze. The wound usually healed in three weeks, and by the end of the month the patient was convalescent. In the true or virulent type of plague the suddenness of the fatal termination was most striking. When he first took charge of the plague hospital at Hong-Kong he was surprised to see the patients sitting up, talking, and smoking, some eating and a few sleeping, but still more so to find that during his round of 20 minutes four of the 25 patients in the ward had died, as did the whole of his first 50 patients within a few days. After discussing the incubation period, the mode of invasion, and the chief types he said that bubonic cases constituted 70 per cent. of the whole number, but that the septicæmic cases (in which there were no buboes though the whole of the glands were enlarged) and the pneumonic cases (in which they were unaffected, the lungs alone being manifestly involved) were far the more fatal. Mr. Cantlie described fully and in order the signs and symptoms common to all cases, which at first and apart from those connected with the lymphatic system were not characteristic, being such as were met with in all fevers of a severe or malignant type. Vomiting if persisting beyond the third day was an unfavourable sign. The vomit might have a coffee ground appearance, not, however, indicative of hæmatemesis, though blood occasionally appeared in the stools. Diarrhœa was almost always present, but might be preceded by constipation. The enlargement of the spleen was very marked, often to the extent of three or four times its natural size, but that of the liver was less evident. The right heart was usually dilated, the apex beat was diffused, the sounds were short and feeble, a præcordial thrill was felt, and perhaps a systolic murmur was audible. In bubonic cases there were rarely any pulmonary symptoms, at any rate, prior to the fourth or fifth day, or till immediately before death. The urine was scanty and acid, typically febrile, but blood might be present, and albumin was frequently present in some epidemics though absent in others. Apathy and listlessness were the rule, but there might be delirium or sleeplessness or even a tendency to a purposeless wandering from the bed and perhaps from the house. Petechiæ and extensive subcutaneous hæmorrhages with sloughing of the skin over the buboes were frequent, but boils were rare, and so was a rash which, when present, resembled that of typhus. The poison of the plague seemed to expend its action especially on the lymphatic system. There might be only a single bubo, but the glands might be enlarged throughout the body. On the other hand, buboes might be numerous, those in the axilla and neck being attended by much œdema, even so great as to press on the larynx. Axillary and cervical buboes were very grave symptoms. The enlarged glands were always tender and might be extremely painful In the septicæmic form the prostration was extreme, with delirium passing into coma, hyperpyrexia, and other symptoms of intense toxæmia, and general enlargement of the glands, though no buboes were formed. In the pneumonic form the glands were in no way affected, but the lungs showed irregular patches of consolidation with frothy mucous expectoration frequently stained with blood. A bacteriological examination of the sputa revealed the true nature of what could not otherwise be distinguished from a severe catarrhal pneumonia. In all cases of plague the fever ran high, but the typical curve showed a double rise with an intervening fall to, or near, the normal on the third and fourth days. It was usually fatal on the fifth and sixth days, but might be so within 24 hours, or death might be delayed till the tenth or even the twelfth days. The diagnosis of a typical bubonic case was easy, but in the absence or before the appearance of these lesions certainty could only be attained by a bacteriological examination, especially in tropical countries where malarial, filarial, and relapsing fevers of severe types were met with. The plague was less fatal to Europeans than to Asiatics, and most so to the Mongolian race. Among Europeans in India and in the epidemic at Sydney it was from 30 *to* 40 per *cent*., among Hindoos *from* 60 *to* 70 per cent., and among Chinese from 85 to 95 per cent., or even higher. The prognosis in individual cases was well-nigh impossible, apparently mild cases often ending fatally and hopeless ones occasionally recovering. The worst symptoms were sleeplessness, delirium, coma, persistent vomiting or diarrhœa, renal or intestinal hæmorrhages, petechiæ, *extravasations*, and *cervical or multiple* buboes, while the septicæmic and pneumonic forms were very fatal. A return of the fever after the second fall, or the tenth day, was indicative of pyæmia and of fatal significance, whereas if a patient lived to the tenth day, was clear in intellect, and free from actively suppurating buboes his recovery might fairly be expected.

Glasgow Obstetrical and Gynæcological Society.—A meeting of this society was held on Nov. 28th.—Dr. Robert Jardine, the President, delivered an address on the Glasgow Maternity Hospital, Past and Present. He gave an account of the midwifery work carried on in Glasgow before the first maternity hospital was started. In the sixteenth and seventeenth centuries the work was largely in the hands of midwives. In those early days the Kirk looked after the morals of the midwives. From Dr. Duncan's Memorials of the Faculty of Physicians and Surgeons of Glasgow he quoted that one Kate Freeland was summoned before the Presbytery on April 4th, 1589, "to assr. for her professioun to be ane midwyfe qlk has not been knawin win ye toun and citie of Glasgow to ye inhabitatis yair, and to underly ye (censure ?) of ye Kirk according to her demerites." Dr. Jardine then pointed out that in 1740 the faculty had instituted an examination for midwives which was continued throughout the century. It was enacted that "after the 1st of January, 1741, any midwife who shall pretend as such to practise within the shyres of Lanark, Renfrew, Ayr, and Dumbarton without a licence shall be fined in the sum of forty pounds." Two-and-sixpence was the only charge made for the licence. It would thus be seen that the registration of midwives which has become such a burning question south of the Tweed was no new thing in Scotland. The first maternity hospital of which records could be found was a small private one started in 1791 by James Towers, surgeon. Mr. Towers afterwards became the first Professor of Midwifery in the University in 1815. In 1805 an attempt was made to found a public lying-in hospital, but it failed. In 1834 the Glasgow Lying in Hospital and Dispensary was founded by Dr. James Wilson. Dr. Jardine described the progress of this hospital and showed how it was being hampered for want of funds and by unsuitable accommodation. Epidemics of puerperal fever were common, but in spite of opposition the hospital struggled on until at length the present building was opened in 1881. He pointed out that the present hospital, although it might have been quite up-to-date 20 years ago, was now far from an ideal place in which to do the work which they were called on to perform. Not only was it too small, but there was neither an operating theatre nor an isolation ward in it, and the labour rooms were no larger than ordinary bedrooms. The operative work, he pointed out, had increased tremendously, quite tenfold, especially within the last decade. From 1834 to 1841, in the first hospital, 445 cases were treated. Of these, six were forceps cases (one in 74), two were cases of version (one in 222), and one was a craniotomy case (one in 445)—nine operations in all; while during the 10 years from 1889 to 1898 inclusive there were 4322 cases: forceps 650 (one in seven), version 154 (one in 28), craniotomies 112 (one in 39), inductions of labour 90 (one in 48), Cæsarean sections 56 (one in 77), post-mortem Cæsarean sections two (one in 2161)—1064 operations in all (one in four). In conclusion Dr. Jardine made a strong appeal to the Fellows of the society to make known the wants of the institution and he felt confident that if they did so and if the public realised that the work was hampered for the want of proper accommodation funds would soon be provided for a hospital worthy of the great city of Glasgow. He closed his address with a short history of the different men who had held the appointment of chief physician in the past. The founder, Dr. James Wilson, and his son, Dr. J. G. Wilson, had been on the staff for nearly 50 years. Dr. Jardine also showed to the society a large number of interesting specimens and also all the newest instruments and apparatus employed in midwifery work.—On the motion of Dr. W. L. Reid a hearty vote of thanks was accorded to Dr. Jardine for his interesting address.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—At the annual meeting of this society held on Dec. 3rd, Sir William Dalby, the President, being in the chair, certain alterations were made in the existing rules of the society. The election of office-bearers for the ensuing year then took place.—Mr. A. H. Cheatle showed a patient suffering from Deafness, Perversion of Taste, and Facial Paralysis associated with Herpes.—Dr. W. Milligan considered the case to be one of peripheral neuritis probably of post-influenzal origin.—Mr. C. A. Ballance concurred with this expression of opinion.—Mr. C. H. Fagge showed a patient suffering from Bilateral Auditory Nerve Paralysis and suggested the diagnosis of intracranial tumour.—Mr. Cheatle asked as to the characteristics of the vertigo from which the patient suffered.—Dr. Milligan asked whether puncture of the lumbar theca had been performed and the fluid analysed. He considered that the symptoms, as detailed, did not warrant the diagnosis of intracranial tumour, but pointed rather to the existence of a chronic basic meningitis, possibly of syphilitic origin.—Mr. Fagge, in reply, said that no lumbar puncture had been performed and added that no history of either congenital or acquired syphilis could be ascertained—Mr. Richard Lake showed a patient upon whom a Double Ossiculectomy for Chronic Suppurative Middle-ear Disease had been performed.—Mr. Cheatle asked how long the discharge had lasted and what was the original cause of the disease.—The President remarked that it was not always possible to foretell what the condition of the hearing power would be after the removal of the ossicles. The case shown appeared to be very satisfactory.—Mr. G. W. Hill asked whether Mr. Lake only practised ossiculectomy or whether he also curetted the attic, also whether Mr. Lake removed the outer wall of the attic under a general anæsthetic.—Dr. A. Bronner suggested the frequent insufflation of iodoform powder in such cases.—Mr. Fagge asked whether operation had been performed under local anæsthesia.—Dr. Milligan inquired as to whether any preliminary antiseptic treatment had been adopted.—Mr. W. O. Bull said that the case was not an instance of pure ossiculectomy, as in this particular case the outer wall of the attic had also been removed.—Mr. Lake, in reply, said that the discharge had lasted for 30 years and that the original cause was scarlet fever. In such cases he not only removed the outer attic wall but also curetted everything which he could. Preliminary antiseptic treatment had been tried for three months.—Mr. Herbert Tilley showed a patient upon whom the mastoid operation had been completed by multiple epithelial grafts.—Mr. Ballance pointed out that the patient could hardly be regarded as completely cured, as a considerable perforation still existed in the situation of the original membrane and as discharge was still present. He did not think that either tympanum or attic had taken the graft, as should be the case. He also considered it essential that all soft parts should be removed from the tympanum at the first operation in order to secure subsequent successful grafting.—Mr. F. C. Abbott related the history of a patient suffering from Primary Sarcoma of the Base of the Skull in the position of the Eustachian tube.—Mr. Ballance and Dr. Milligan demonstrated a new Portable Motor for surgical purposes especially designed for operation on the mastoid region. The motor was of about one-twelfth horse-power and ran quietly and steadily. The speed was regulated by a foot arrangement. The burr was attached to a steel flexible arm which enabled it to be used at a considerable distance from the motor. The hand-piece was detachable and in construction was simple, and was made so as to enable it to be thoroughly boiled for disinfection purposes.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held in the library of the Medical School, Leopold-street, Sheffield, on Nov. 16th, Dr. J. B. Hellier, the President, being in the chair.—The following specimens were shown:—Dr. J. W. Martin: Pyosalpinx removed by Abdominal Section.—Mr. Richard Favell: (1) A Ruptured Fallopian Tube from a case of Ectopic Gestation; (2) Double Pyosalpinx; and (3) Cast of Bladder from a case of Exfoliative Cystitis.—Mr. S. Rumboll: Epithelioma of the Clitoris.—Dr. Martin related a case of Acute Inversion of the Uterus in a primipara which had occurred spontaneously an hour after normal labour and was accompanied by great pain, hæmorrhage, and shock. Under chloroform 10 hours later the uterus was completely reduced by taxis, though not without considerable difficulty. The patient made an uneventful recovery.—Dr. T. B. Grimsdale related a case of Vesico-vaginal Fistula with Destruction of the Posterior Wall of the Bladder and Urethra which had occurred as the result of sloughing after labour in a primipara, aged 21 years, with contracted pelvis. A simple cloaca existed between the bladder and the vagina and the urethra had entirely disappeared. In the treatment two objects were to be obtained: (1) closure of the bladder, and (2) restoration of control over the urine. The bladder was first dissected away from the uterus up to the peritoneal reflexion. This fold was then brought down which materially reduced the size of the opening. At a later period the uterus was pulled down and fixed to the perineal muscles, so that by their contraction the cervix could be pressed against the symphysis and pubic arch, forming an obstruction to the escape of urine. The patient was now quite dry if she kept quiet, but urine escaped on exertion to any extent. No trace of urethra could be discovered. Dr. Grimsdale wished to elicit the views of members with regard to future treatment.—Remarks upon the case were made by Dr. W. J. Sinclair and Dr. A. Donald.—Dr. Hellier read a note on the Occurrence of Abortion. He had analysed the histories of 1800 married women who were out-patients at the Hospital for Women and Children at Leeds. These women had given birth to 6974 children, an average of 3·87 children each. They had had 1288 abortions—that is, one to every five and a half children. 1616 of the women had become pregnant; 184 were sterile. Of the 1616 58 only had had one or more abortions, but had never gone to term. Thus it followed that amongst a group of women in whom the frequency of abortion might be supposed to reach its maximum 96·5 per cent. of those who became pregnant, sooner or later, bore one or more children at term.—Dr. Sinclair read a paper on a Series of 10 Successful Cases of Cæsarean Section.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Dec. 5th, Dr. T. C. Railton, the President, being in the chair.—Mr. E. Stanmore Bishop showed a patient from whom an Adenoma of the Sigmoid Flexure with the Intussusceptum which it had produced had been removed by Maunsell's operation after a preliminary colotomy. He remarked that the condition itself was not very rare, but that operators frequently attacked it through the dilated rectum. This was practicable enough if the growth was well within reach, but there were two definite risks in this method which became greater the higher the situation of the neoplasm. One was the possibility during the reduction of the reunited intestine—if the intussusceptum regained removal—of the tearing out or giving way of one of the sutures, which, when once the bowel had regained its normal position, would be out of range of either sight or touch, and septic peritonitis might be set up without much or any warning. Another was the necessity for fæcal matters to pass over the wound during the period of reunion and the consequent possibility of septic absorption. Both these risks were avoided by a preliminary colotomy which permitted a perfectly aseptic operation upon the bowel itself, whilst Maunsell's operation which he described gave a more perfect means of excision and reunion of the intussuscepted gut. The patient, specimen, and a microscopical section of the growth were shown.—Dr. R. T. Williamson briefly described a case of Melanotic Sarcoma of the Liver following a primary growth in the right eye. The patient was 16 years of age. The liver was uniformly enlarged and it extended from the fourth rib to the anterior iliac spine on the right side; there was no ascites. The urine gave the reactions for melanin. At the necropsy the liver weighed 13¼ pounds and was infiltrated with melanotic sarcoma at all parts. The kidneys and other abdominal and thoracic organs were unaffected. Remarks were added on the diagnosis of melanotic tumours of the internal organs and two other cases (previously recorded) were referred to.—Mr. J. W. Smith read a paper on Clinical Experiences in South Africa which was illustrated by lantern photographs of a military hospital.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held on Nov. 29th, Dr. William Watson, the President, being in the chair.—Dr. Ebenezer Duncan showed: (1) A case of Spinal Apoplexy; (2) a case of Acute Nephritis which had developed uræmic convulsions treated with benefit by blood-letting; (3) two Cardiac Cases with well-marked murmurs and no history of any previous rheumatic affection; (4) a case of Phthisis Pulmonalis in a soldier in whom the disease had developed in South Africa; and (5) a case of Diabetes Mellitus. In this patient benefit had been observed following the use of nitrate of uranium.—Dr. Alexander Napier showed: (1) A number of cases of Lupus Vulgaris in which very good results had been obtained by curetting and then cauterisation with the thermo-cautery; (2) a case of Jacksonian Epilepsy in a girl; (3) a case of Hemicrania in a boy; he read (4) a description of a fatal case of Glioma of the Brain; and further showed (5) a case of Peripheral Neuritis; (6) a case of Arthritis in a girl, running a rapid course; (7) several well-marked examples of Graves's Disease —in some the kidneys were freely moveable; and (8) some cases of Diabetes treated with Nitrate of Uranium.

Reviews and Notices of Books.

Indian and Colonial Addendum to the British Pharmacopœia, 1898. London: Printed and published for the Medical Council by Spottiswoode and Co. 1900. Pp. 59.

FOR many years it has been obvious that, whatever merits the British Pharmacopœia possessed, some of the preparations were not of universal applicability. Some would not bear exportation to India and the colonies, others which might be prepared locally would not yield satisfaction if compounded in strict accordance with the directions given in the British Pharmacopœia, and many could not with advantage be so prepared owing to the difficulty of obtaining some of the ingredients. Moreover, it was frequently felt that there were many local drugs which were used with greater facility, and although they could not be termed substitutes, since they did not possess precisely the same properties, yet in many of their more important actions they corresponded closely with drugs recommended for employment in Great Britain and Ireland. Although, therefore, in general the British Pharmacopœia could be followed in India and the colonies, there were many exceptions which indicated the need of some modifications for local requirements before the Pharmacopœia could be regarded as an authority, a standard, and a guide throughout the British empire.

In 1898 official recognition was extended to a small number of alternative substances and preparations, but many suggestions received from Indian and colonial authorities were held over for further investigation. The small volume at present under consideration is stated in the preface to be to a certain extent provisional. It is the first step in a new direction, and therefore it is introduced with becoming modesty, and it is frankly admitted that with regard to the sources, preparations, and properties of some of these drugs further research, especially in the countries in which they are found, is much to be desired.

The Indian and Colonial Addendum to the British Pharmacopœia, 1898, contains 54 drugs and 66 preparations. The names of eight or ten of the former are familiar; they are representatives of former pharmacopœias which still have a local reputation outside the British Isles and it is quite possible, or even probable, that in the fresh condition they may possess properties which they lose when dried for transportation. The remainder of the drugs present us with new names, and it is interesting to see that the divisions of the empire within which each new drug now acquires official sanction are indicated. It is, perhaps, natural that numerically tinctures head the list of the new official preparations; there are, however, representatives of most groups with the exception of suppositories. Considering that the British Pharmacopœia, 1898, contains only three decoctions, it is somewhat remarkable to find no less than seven included in the Addendum. These can, of course, be only intended for local employment, but possibly some of the group of liquid extracts will find their way to this country and may be destined to play an important part; the liquid extract of bael will probably be welcomed by many practitioners, since the exclusion of bael from the British Pharmacopœia has often been regretted. It will be noted that bael is only official in the fresh state and that the liquid extract is prepared from the fresh half-ripe fruit, it can therefore be relied upon to produce results analogous to those observed in India. The influence of the last revision of the Pharmacopœia is further shown in the presence of several concentrated liquors, the relatively new process by which the time and labour of the dispenser have been saved. Those responsible for this compilation have been careful to follow the British Pharmacopœia in dosage, most of the official preparations having been prepared so as to permit of great harmony of dose.

The primary idea of this Addendum is to produce a standard authority adapted to Indian and colonial requirements, and it may be interesting to indicate some of the directions in which these remedies may be employed in the special places in which they now become official. In their actions and properties many of the plants are regarded as the local equivalents of drugs which are, or have been, official in the British Pharmacopœia, but it is, however, distinctly laid down that, with some few exceptions, they are not to be substituted by the dispenser or pharmacist; they must be prescribed by the medical practitioner on his own judgment. The list includes several astringents, some of the preparations being intended for local application—for example, acacia bark in place of oak bark (which is no longer official), butea gum in place of kino, black catechu in place of the official pale variety, myrobalans in place of galls, and sappan instead of logwood. The re-introduction of bael fruit, which possesses a great reputation for the treatment of diarrhœa and dysentery, has already been mentioned. The purgatives are relatively few, the chief being kaladana and turpeth, which resemble jalap in their action, and Indian podophyllum derived from Podophyllum Emodi. The anthelmintics include butea seeds which are used as the equivalent of santonin, and embelia which possesses some of the properties of kousso and of male fern. Although the bitter oil of the seeds of Indian azadirach is much used in India as an anthelmintic, the bark and the preparations owe their position in the Addendum to their tonic and antiperiodic properties, which have sometimes been considered to equal those of cinchona and arsenic. Other tonic remedies which are reported to possess antiperiodic properties are alstonia and tinospora; the latter, however, probably only acts as a bitter tonic like calumba, and the same may be said of coscinium; toddalia is thought to be the Indian representative of cusparia and andrographis that of chiretta. In the possession of emetic, diaphoretic and expectorant properties tylophora leaves have been ranked with ipecacuanha, and calotropis appears only to differ from the same drug in having greater action as an alterative. Cotton-root bark, which now becomes official over a very extended area, has been used largely in place of ergot. Grindelia and kava may be employed as anti-spasmodics, diuretics, and expectorants, while viburnum is not only an anti-spasmodic but also an astringent and a diuretic. One of the most important additions is the recognition of mylabris, a dried beetle which is now official in India, in the African, and in the Eastern colonies. Mylabris yields a large proportion of cantharidin, and it will be noted that the new official preparations closely correspond with those in the British Pharmacopœia derived from cantharides.

In the foregoing notice we have only touched upon the more striking features of this Addendum, in which it will be obvious that a difficult task has been approached with caution and with tact. Doubtless many of the formulæ will require further adjustment before they are wholly satisfactory, but it is to be hoped that this will be effected by modifications of composition rather than by alteration of dose Nothing has been said of the very full descriptions of the botanical characters; so far as it is possible to test these they appear to be extremely well done. Many of the descriptions, however, apply to fresh specimens and as the specimens of the dried plants sent to England often differ widely in character it will, perhaps, be safer to leave this subject to Indian and colonial criticism.

LIST OF SUBSTANCES AND PREPARATIONS IN THE INDIAN AND COLONIAL ADDENDUM TO THE BRITISH PHARMACOPŒIA, 1898.

Acaciæ Cortex
Acalypha
Acetum Mylabridis
Acetum Urgineæ
Adhatoda
Agropyrum
Alstonia
Andrographis
Aristolochia
Arnicæ Flores
Aurantii Cortex Indicus
Azadirachta Indica

Belæ Fructus
Berberis
Betel
Buteæ Gummi
Buteæ Semina

Calotropis
Cambogia Indica
Catechu Nigrum
Cissampelos
Coscinium
Cucurbitæ Semina Præparata

Daturæ Folia
Daturæ Semina
Decoctum Acaciæ Corticis
Decoctum Agropyri
Decoctum Cissampeli
Decoctum Gossypii Radicis Corticis
Decoctum Hygrophilæ
Decoctum Isphagulæ
Decoctum Sappan

Embelia
Emplastrum Calefaciens Mylabridis
Emplastrum Mylabridis
Extractum Acalyphæ Liquidum
Extractum Adhatodæ Liquidum
Extractum Agropyri Liquidum
Extractum Belæ Liquidum
Extractum Cissampeli Liquidum
Extractum Glycyrrhizæ Spirituosum
Extractum Gossypii Radicis Corticis Liquidum
Extractum Grindeliæ Liquidum
Extractum Kavæ Liquidum
Extractum Picrorhiza Liquidum
Extractum Viburni Prunifolii Liquidum

Gossypii Radicis Cortex
Grindelia
Gummi Indicum

Hirudo Australis
Hygrophila

Infusum Alstoniæ
Infusum Andrographidis
Infusum Azadirachtæ Indicæ
Infusum Coscinii
Infusum Tinosporæ
Infusum Toddaliæ
Isphagula

Kaladana

Kaladanæ Resina
Kavæ Rhizoma
Kino Eucalypti

Liquor Andrographidis Concentratus
Liquor Aristolochiæ Concentratus
Liquor Berberidis Concentratus
Liquor Coscinii Concentratus
Liquor Epispasticus Mylabridis
Liquor Tinosporæ Concentratus
Liquor Toddaliæ Concentratus

Mucilago Gummi Indici
Mylabris
Myrobalanum

Oleum Ajowan
Oleum Arachis
Oleum Gaultheriæ
Oleum Graminis Citrati
Oleum Gynocardiæ
Oleum Sesami
Oliveri Cortex
Oxymel Urgineæ

Picrorhiza
Pilula Ipecacuanhæ cum Urginea
Pilula Urgineæ Composita
Podophylli Indici Resina
Podophylli Indici Rhizoma
Pulvis Buteæ Seminum
Pulvis Kaladanæ Compositus

Sappan
Succus Acalyphæ
Succus Adhatodæ
Syrupus Urgineæ

Tinctura Adhatodæ
Tinctura Alstoniæ
Tinctura Andrographidis
Tinctura Aristolochiæ
Tinctura Arnicæ Florum
Tinctura Azadirachta Indicæ
Tinctura Berberidis
Tinctura Calotropis
Tinctura Coscinii
Tinctura Daturæ Seminum
Tinctura Jalapæ Composita
Tinctura Kaladanæ
Tinctura Oliveri Corticis
Tinctura Picrorhizæ
Tinctura Podophylli Indici
Tinctura Tinosporæ
Tinctura Urgineæ
Tinctura Valerianæ Indicæ Ammoniata
Tinospora
Toddalia
Turpethum
Tylophoræ Folia

Unguentum Gynocardiæ
Unguentum Mylabridis
Unguentum Myrobalani
Unguentum Myrobalani cum Opio
Urginea

Valerianæ Indicæ Rhizoma
Viburnum

Defects in Plumbing and Drainage Work. By FRANCIS VACHER, Medical Officer of Health of Cheshire. London and Manchester: John Heywood. 1900. 8vo Price 1s net.

IN all technical subjects the student has to acquire not only an exact knowledge of what to do, but also what it is desirable to avoid doing, and the book before us deals with this aspect of the plumbing question. The book is an enlarged edition of a work published some 10 or 11 years since, and describes various defects in plumbing and drainage work which came under the author's notice in his professional capacity since 1885, and is now brought up to the present time The book is augmented with over 100 illustrations, but the bulk of the defects was chronicled in the first edition. The whole forms a most depressing record; in fact, it is in the nature of a gallery of horrors, which we would fain hope are rapidly being relegated to the limbo of ancient history. These defects may be mainly classed under four heads—viz, (1) defective planning of the sanitary system, arising from ignorance or total disregard of sanitary laws; (2) from practical incompetence on the part of the operative, leading to faulty pipe-joints and bad work generally; (3) from the sanitary appliances used being either faulty in design or construction; and (4) from a combination of two or more of the above.

The author points out that these defects have a tendency to repetition, yet we cannot but cherish the hope that the improvement in local by-laws and in the machinery for their administration, together with the great advance made in technical and general education both by the sanitary inspector and the operative plumber, will render any frequent repetition of the worst form of these horrors impossible. That this is so in the vicinity of London we feel sure, though in numbers of the older houses scattered throughout the country such defects are frequently to be found The defects due to ignorance will doubtless disappear, though the process of evolution may be slow. With those due to disregard of sanitary laws it is different. The demand for cheapness, combined with cupidity on the part of those who cater to satisfy this demand, leads to systematic deception most difficult to combat, and some form of legislation to render those responsible for such fraudulent acts amenable to the law would seem to be desirable

The book is to be commended as emphasising the enormous importance of the careful supervision of all such work and the great responsibility that rests upon those deputed to act as supervisors, whose posts are frequently inadequately remunerated, thus failing to secure the services of the best qualified men.

CHRISTMAS BOOKS.

MESSRS. BLACKIE AND SON send us (1) *With Rifle and Bayonet.* By Captain F. S Brereton, R A.M.C. With eight Illustrations by Wal Paget 1901 Pp 352 Price 5s. Captain Brereton, who is now at the front, has found time among very arduous labours to write an admirable book. The story deals with the events of the Boer War up to the occupation of Bloemfontein, and Jack Somerton, the hero, certainly does his share of fighting Captain Brereton's style is easy and vivid and the book is an excellent present for a boy. (2) *In Far Bolivia* By Gordon Stables, M.D, C.M. Aberd., R N. With six Illustrations by J. Finnemore, R.I. Pp 287. Price 3s 6d. The author takes his reader, to that little known land, Bolivia The story would make a good Adelphi melodrama, for we find a suffering heroine who is abducted by savages, a wicked uncle and his still wickeder solicitor, the hero, and his faithful savage attendant. All the bad people come to grief and all the good people are made happy, just as it should be but very rarely is. (3) *With Buller in Natal.* By G A. Henty. Pp. 384. Price 6s.—In this volume Mr. Henty has given us a most thrilling story, of which the relief of Ladysmith forms the theme. It will be read by young and old with much pleasure, for a brief account is given of every important action, from the battle of Glencoe to the series of operations that culminated in the rescue of Sir George White and his gallant force. The tale forms one of the most powerful stories from Mr. Henty's pen. The hero and his friends are British subjects resident in Johannesburg. When the war breaks out they escape to Natal and band themselves together under the title of "Maritzburg Scouts," and from first to last these "boy scouts" are constantly engaged in perilous and exciting enterprises, from which they always emerge triumphant. The book is well illustrated and is sure to give pleasure to boys all over the empire and cause them to anticipate the next war story already promised by the author.

MR. GEORGE ALLEN sends us *The Child's Picture Grammar.* By S. Rosamund Praeger. Price 3*s.* 6*d.* Grammar in general is a weary study, but Miss Praeger's delightful illustrations should make the way of learning a very primrose path. The illustrations are capital, especially those of the proper noun and of the preposition. The kitten in the latter is a gem of expression.

DIARIES.

MESSRS. RUDALL, CARTE, AND CO. again send us their admirable *Professional Pocket book or Daily and Hourly Engagement Diary.* The diary is divided into three parts containing four months each, and although primarily intended for the musical profession will be found no less useful for busy persons of other callings. The four-monthly parts have paper covers and the whole is enclosed in a neat leather case.

MESSRS. JOHN WRIGHT AND CO. of Bristol forward to us two issues of their *Visiting Lists.* One is marked A and the other B. Form A has fixed dates, while form B, called perpetual, has not, so that the list may be begun to be kept at any time of the year. The price of either is 5*s.* 6*d.* and they are strongly bound in morocco.

Analytical Records

FROM

THE LANCET LABORATORY.

TOBACCO (CRAVEN MIXTURE).

(J. J. CARERRAS, 7, WARDOUR-STREET, LONDON, W.)

THIS is a somewhat coarsely cut tobacco containing cavendish in association with pure bright Virginia leaf. The result is a blend which is quite cool-smoking in the pipe. On analysis the ash yielded normal results, there being no excess of chlorides which interfere with the convenient combustion of the leaf. We could trace no objectionable flavouring agents or added sticky substances which are so often present in order to give "substance," as it is called, to the leaf. The mixture is a blend of pure tobacco leaf, the proportion being such as to render it free from acridity and heat when smoked in a pipe.

(1) FORMIC SULPHUGATORS; AND (2) FORMITAS.

(THE SANITAS CO., LIMITED, BETHNAL GREEN, LONDON, E.)

The "Sulphugator" is designed to utilise the disinfectant properties of both sulphur dioxide and formaldehyde. In one form of the appliance a sulphur candle occupies a central space surrounded by a porous material containing formalin. As the sulphur candle burns the heat evolved drives formaldehyde from the porous jacket and thus both formaldehyde and sulphurous acid gas are evolved. In another form the "sulphugator" consists of three containers, the inner one being charged with formalin and surrounded by a sulphur candle. Outside the sulphur candle is a space for containing water or a solution of formaldehyde. Thus, steam, sulphurous acid gas, and formaldehyde vapour are simultaneously produced. These appliances seem admirably adapted for disinfectant and fumigating purposes. They should act also very effectually in destroying insect pests and other objectionable creeping things in stables, kennels, railway-trucks, &c. We have also examined a preparation known as "Formitas," a mixture of sanitas fluid and formaldehyde. It is a very pleasant combination of antiseptics in which the agreeable smell of sanitas predominates over the much less agreeable smell of formaldehyde. The mixture is doubtless an efficient disinfectant.

TIT-BITS BAKING-POWDER EXTRACT.

(A. BROWNING, 25, FINCHLEY-TERRACE, MURCHISON-ROAD, LEYTON.)

We found nothing novel in the composition of this so-called "extract." It contained the usual ingredients of an ordinary baking-powder, which interact when moistened with the production amongst other things of carbonic acid gas. A little starch is added to keep the powder dry. The materials employed are pure and we could find no objectionable reagents present, such as alum.

NARGOL.

(PARKE, DAVIS, AND CO., 111, QUEEN VICTORIA-STREET, LONDON, E.C.)

Nargol would appear to be the newest chemical compound of silver and nucleinic acid. It is a fine, perfectly dry, brownish-white powder, easily soluble in water. It combines the bactericidal properties of an ordinary silver salt with at the same time the quality of not being rendered inert on coming into contact with albuminous substances. It is employed in genito-urinary diseases, it is stated, with decided advantage over silver nitrate, and is said to be free from irritating properties. It has also been used in ophthalmic, laryngological, and gynæcological practice. It may be regarded as a definite and soluble silver albuminoid.

New Inventions.

A SUBSTITUTE FOR BEER-BOTTLES.

WE have received from the Kannenbeer Company, Limited, of London, a specimen of a jug which they propose should be adopted instead of the ordinary bottle. It is made of stone ware and provided with a hinged lid fitted with an india-rubber washer. The lid when shut down is kept firmly closed by a metal clamp. The jug is glazed within and without and is obviously very easy to clean. The company claim that the exclusion of light will keep the beer in better condition than is possible in the ordinary bottle-glass bottle. The lid also being air-tight will, it is alleged, enable only a portion of a jugful to be used at one time, while the remainder can be sealed up and used later in good condition.

A BENEFICENT GIFT.—Lord Mount-Stephen has intimated to Lord Provost Fleming of Aberdeen that he is about to remit a cheque for £25,000 to discharge the debt on the Aberdeen Royal Infirmary. In 1846 his lordship was a patient of the infirmary.

COLD ASH CHILDREN'S HOSPITAL, SOUTH BERKSHIRE.—On Dec. 8th the foundation-stone of additional buildings, to be erected in connexion with this institution, was laid by Mrs. Palmer, wife of Mr. G. W. Palmer, M.P. for Reading. For some years the hospital has been successfully conducted under the direction of Miss Bowditch, at Cold Ash, where many crippled London children have been treated. Towards the outlay for the new works Mr. Palmer has contributed £200.

THE LANCET.

LONDON: SATURDAY, DECEMBER 15, 1900.

THE General Medical Council sat for eight days at its recent autumn session, three of which were mainly occupied with penal cases. Among the other important subjects which occupied the time of the Council were the new rules for obtaining diplomas in public health, the question in dispute between the Royal Colleges of Physicians of London and Surgeons of England and the General Medical Council, and the financial position of the Council. Besides these there were 30 or 40 other questions upon which the Council had to deliberate, so that even while we think that the Council occasionally spends too much time over its discussions, we admit that the discussions have to cover a great deal of ground. Sir CHRISTOPHER NIXON in the debate on the issues between the Royal Colleges of Physicians of London and Surgeons of England and the Council displayed a natural dissatisfaction with the powers of the Council. "The profession," he said, "look to this Council to secure uniformity of action among the medical authorities of the United Kingdom, and it should not be shown to them that after all the Council had only the power to express pious opinions." Sir CHRISTOPHER NIXON was well supported in his view by the majority of the Council who were resolved to adhere to their resolution on this subject. Members of the Council who spoke in this sense must have known that by adhering to a resolution which they have no means of enforcing, they were not advancing by one hair's breadth the adjustment of this unhappy difference. We ask the Council to be strong, but it must recognise that occasionally agreement to a compromise is the only way out of an *impasse*. It is a serious thing for the Council to demonstrate, not its power of securing uniformity, but its helplessness—which is what may be done by overstating its authority.

If the determination of the Council to adhere to its resolution means no more than to exclude from the Students Register of the Medical Council all who satisfy the two Colleges as to the efficiency of their education in the fundamental sciences, it is difficult to understand who is to get any satisfaction out of so barren a result. It is not pretended that registration on the Students Register can be enforced on students, or that it is necessary as a preliminary to medical education or to the acquisition of a medical qualification from any of the bodies. To compel applicants for registration on the Students Register, who have already satisfied the two Colleges, to encounter trouble and delay is only likely to irritate the students and the Colleges, to place the Council in an unenviable position, and to deprive the Students Register of a large number of students. The Council must, in our opinion, either go further and promote a large scheme for insuring uniformity of education or it will have to agree to some *modus vivendi*. We do not admire the unbending attitude of the Colleges, or the tone and style in which the case between them and the Council is stated. Their own representatives in the Council voted against the proposal to try to find an amicable settlement of the points in dispute, though this was the very suggestion of their legal adviser. It is easy to see that the recognition of schools as medical schools may be open to abuses. But, on the other hand, the Royal Colleges of Physicians of London and Surgeons of England appear to have taken much trouble to ascertain the equipment of the schools which they have recognised, and to have reason to believe that many of them are more efficiently provided with the means of teaching chemistry, biology, and physics than are some of the medical schools. The General Medical Council has not the means or the time to satisfy itself on this subject It is difficult to understand how it can proceed to approve or to disapprove of institutions which it has no means of inspecting properly. Though counsel on both sides may agree, it is still doubtful if the Council can compel the licensing bodies to comply with the requirements and recommendations contained in its resolutions with reference to the course of preliminary study to be gone through by students. Under these circumstances we can only impress on both parties the obligation to give and to take a little. Both sides should attempt, and attempt quickly, to find some means of upholding the influence of the General Medical Council without detracting from the individual responsibility of separate medical authorities.

We cannot help feeling that the General Medical Council in its individual capacities loses sight somewhat of its responsibility as a whole, which is towards the public and the medical profession, and not towards a group of universities and corporations. We think our feeling must be shared by Dr. PYE-SMITH. Dr. PYE-SMITH, who is always listened to with much respect in the General Medical Council, expressed the opinion at the late meeting that the Council would never do its best until it was reduced in size to one-half of its present number and until the reporters were excluded. The first part of Dr. PYE-SMITH'S forecast is flattering to us, for we have always held that the Council is too large; the second part is not flattering to his colleagues in whichever way it is regarded. There is, however, no chance of the Council being diminished in numbers at present, for as the direct representatives require to be increased, and not diminished, in numbers the only way that diminution could be effected would be by depriving certain universities and corporations of a separate voice. In some directions this might be a reform, but there is no tendency towards it. In spite of the conjunction of the Royal Colleges in the three divisions of the Kingdom each body likes to assert distinctness and individuality at the General Medical Council. There is unhappily no sign of conjunction of universities in any division of the kingdom even for examination purposes. Each body requires its separate mouthpiece and Parliament is not likely to alter the privileges that are now enjoyed by any of them. And we should oppose the exclusion of the reporters as a backward step There may be members of the Council who speak for the sake of being reported, but the utility of the Council should not be made to suffer for the vanity of a few. The Council is a public body. It has the enormous power of erasure from the Register and it is of the utmost importance that proceedings attending such erasure should take place openly, for the instruction of the public on the one hand and to give fair play to the accused on the other. The Council has great duties in relation to education and must express opinions on measures of legislation having medical bearings, in regard to all of which publicity of statement may be of the greatest importance. The members of the medical profession are entitled to know the views and the proceedings of a Council which they support with their fees and which orders their education and conduct. The public have at least an equal right to know what measures are being taken to keep medical education up to a proper standard and to supply an accurate register of qualified medical men.

THE epidemic of peripheral neuritis which was traced to the consumption of beer containing arsenic is, we hope, in process of being arrested. Its causes, so far as they may depend on the use in brewing of glucose or "invert" sugar prepared with impure sulphuric acid, have been traced, and in all parts of the kingdom medical men are on the alert to detect and deal with new foci, while the publicity given by the press to the matter as one of widespread interest and obvious emergency has helped to avert the danger. Fresh cases have, however, been announced since our last issue, whilst several inquiries held by coroners have brought into prominence a question which may come before any of our readers in the near future—Who, if anyone, is liable to compensate those who have lost relatives by death? This is a most important point where those affected are from the nature of the case largely drawn from the wage-earning class. It will be well that medical men should make themselves to some extent familiar with the law in relation to the occurrences.

Some persons have apparently lost their lives through drinking beer containing arsenic, and it need hardly be said that where a person's death is caused by the wrongful act, neglect, or default of another, and the injured person, if he had lived, could have maintained an action, Lord CAMPBELL'S Act enables relatives within certain limitations to recover compensation for their loss. The recent epidemic seems likely, therefore, to produce a large number of such claims; but the alleged facts upon which they will be founded are without any close parallel, and if the liability is seriously disputed by those whom it is sought to make responsible, some time may elapse before it is fully established. Yet, if we may hazard an opinion on so debateable a topic, it seems reasonable to suppose that someone will be found liable to pay compensation in some cases, while those seeking it will direct their efforts against the brewers with the best chance of success. Possibly some difference may arise between publicans selling in "tied houses" and those who do not, but we may assume that the public-houses for the most part will be found to have been "tied," a circumstance which needs no definition, but which results in the publican being virtually the agent of the brewer, or in any case in his selling a beer the source of which is well known to the consumer.

The brewers have hitherto met the emergency with every effort to abate the evil, and it is probable that they will also show a conciliatory spirit if threatened with litigation, but the door to unfair or mistaken claims is a very large one, so that the brewers must not be blamed if they take every step to protect themselves and to sift the statements of those who may proceed against them. It will be seen at once that the purely medical evidence may be of enormous value to persons making a claim upon the brewers, while the evidence of medical officers of health, public analysts, and borough chemists may be of equal importance. The claimants will, presumably, have to show that the person affected died from, or exhibited symptoms clearly indicating, arsenical poisoning; that such person drank beer from a certain public-house; and that samples of beer from that public house contained arsenic in quantities sufficient to account for the symptoms complained of. It will hardly be necessary to go through his dietary to show that he *did not get the arsenic in any other way*; that will be a matter for the defendants to prove if they allege it. The kind of scientific evidence that plaintiffs will require is shown by the communications that have appeared in our columns, and every medical man who finds himself confronted with what he believes to be a case of arsenical poisoning from beer-drinking must be prepared to give in a court of law similar information concerning his patient.

The report by Professor SHERIDAN DELÉPINE and Mr. C. H. TATTERSALL[1] says: "Every case we have followed up (about 100) can be traced to beer in the brewing of which glucose or sugar from one manufactory was used." If the arsenic can be traced as far back as the brewer it will scarcely be necessary to follow it further, although the brewer may ultimately have a remedy against the person who supplied him with glucose, while the manufacturer of glucose may in his turn some day maintain a claim against the person from whom he bought his sulphuric acid. Much will presumably turn in all such cases on the amount of knowledge on the part of the vendor of the purposes for which the thing sold was to be used. If anyone is sued for damages in consequence of the epidemic which we are now considering, whether he be publican, brewer, manufacturer of glucose, or manufacturer of sulphuric acid, he will be sued on one of two grounds—either because he sold something with a warranty, express or implied, that it was fit for its purpose (in which case should it prove unfit he would be liable whether negligent or not), or because having a duty towards his purchaser he neglected that duty. Let us take first the case of the publican. It appears from decided cases, the principal ones[2] arising out of the sale of diseased meat, that there would be no implied warranty at common law by him that the beer was wholesome, and the 14th section of the Sale of Goods Act, sub-section 1, does not seem to affect the ordinary sale of beer to a customer in a public-house. It apparently imports a warranty only where the buyer relies on the skill and judgment of the seller—a relation which does not seem to exist where a customer calls for a pot of beer in a public-house. Nor can a publican be reasonably held to be negligent because he does not know that the beer which he retails, but does not make, contains a minute but injurious quantity of arsenic. There can hardly be a duty incumbent upon him to make the inquiry or to have the knowledge necessary for such a discovery. With regard, however, to the brewer the case is different. Like the publican, he knows that the beer is going to be drunk by human beings Like the publican, he may not be held to warrant it wholesome, which would make him civilly liable if some murderous assistant were to poison it wholesale. But it is at least arguable that he should know the chemistry of his trade and that the chemist whom he employs should have his mind directed to all possible, as well as obvious, dangers. The use of glucose and "invert" sugar is of comparatively modern date. The employment of these substitutes has provoked much comment and remonstrance. The brewers who have introduced these ingredients into beer have done so for their own convenience, and it may well be urged against them that it was their duty to see that the chemically obtained sugars which they bought were pure. The danger of arsenical poisoning may not have been pointed out to them in terms by their critics, but it was they themselves who maintained that the new system of brewing was wholesome, and it was their business to see that it was so.

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[1] THE LANCET, Dec 1st, 1900, p. 1603

[2] Emmerton *v.* Mathews, 7, Hurlstone and Norman's Reports, 586; Ward *v.* Hobbs, 4, Appeal Cases, 13.

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IT was recently decided by the board of management of the National Hospital for the Paralysed and Epileptic, acting upon the advice of the Lord Chancellor, one of their body, that an inquiry into the management of the hospital should be held by the Right Hon. Sir FORD NORTH, a retired judge of the High Court We announced this last week.[1] Sir FORD NORTH's inquiry was to be directed towards obtaining information for a report upon the allegations made by the medical staff concerning (to quote the terms of reference): "(*a*) the diet of the patients; (*b*) the condition, care, and treatment of the patients; and (*c*) the nursing of the hospital—brought forward, under the headings above quoted in the statement, dated May, 1900, issued by the medical staff to the governors on or about June 16th, 1900." As soon as the terms of reference of Sir FORD NORTH's proposed inquiry were made known, the medical staff of the hospital decided that they could not recognise the court. Sir FORD NORTH, they pointed out, had been invited to make his investigations solely by one of the parties to the controversy—namely, the board of management; and, secondly, the scope of the inquiry was limited to the domestic conditions of the hospital and appeared to exclude from consideration the all-important topic of the constitution of its management. The attitude thus taken up by the medical staff was absolutely consistent with the position that they have occupied throughout They have asked for inquiry, but for inquiry into all the matters at issue between themselves and the board of management. An investigation of certain charges which they considered it their duty to make many months ago will form part of such an inquiry, and not the least important part. But when the board proposed, instead of a thorough investigation of the whole situation between the two parties, a limited inquiry, to be conducted by a court of their own appointment into one side issue, the medical staff very properly refused to have anything to do with the matter. We now learn that Sir FORD NORTH'S proposed inquiry has been adjourned *sine die*, and we may be permitted to wonder what the board of management ever expected to take by such an inquiry We have every desire to credit both sides of this unfortunate controversy with good faith, therefore we must suppose that the request to Sir FORD NORTH to obtain information for a report upon the accuracy of the statements placed before the governors of the hospital last May by the medical staff was made with the belief that such a partial inquiry would meet the case But while we credit the board of management with an honest attempt at reform we cannot compliment them upon their sagacity. They had before them the clear and reiterated statement of the medical staff that they would have nothing to do with a partial inquiry, so that the refusal of the medical staff to recognise Sir FORD NORTH'S court was only to be expected. And if in spite of this refusal the inquiry had been held, in what way would the report have been conclusive? Quite apart from the fact that the most important witnesses would have been absent, Sir FORD NORTH, a learned lawyer, is not an expert on hospital feeding, on nursing, or on sanitation; he was provided with no medical assessor; and he was invited to discharge his unenviable duty by one party—the accused party—to a controversy No practical purpose whatever could have been served by such an inquiry. To put it bluntly, if the report of Sir FORD NORTH had been a favourable one it would have been regarded as a whitewash. The only satisfactory mode of settlement is the appointment of a perfectly independent committee with a free hand to inquire into all the points at issue between the medical staff and the board of management, together with the admission of representatives of the staff to the board.

Annotations.

"Ne quid nimis."

THE SANITATION OF BARGES.

THE last issued half-yearly report of the medical officer of health of the Port of London, a valuable if somewhat belated document, deals in some detail with the sanitary conditions which obtain on the "dumb craft" which do so much of the carrying trade in the lower Thames. These craft are said not to be inhabited because the men who navigate them do not, or at any rate are not supposed to, sleep on board. The owners of the vessels plead that it is unreasonable to expect that they should be fitted up with sleeping accommodation, because they do not wish the men to sleep during a voyage, and if the crew remain on board when the vessel is moored it is for the purpose of keeping watch over the cargo, and therefore facilities for sleep are distinctly contra-indicated The owners state also that as the men who work these craft are constantly being changed it would be practically impossible for them to exercise due supervision over a sleeping cabin and that they would therefore be constantly put to great expense in the cleansing and repair of the place There is perhaps less in this contention than in the former one, although Dr. W. Collingridge, the writer of the report, who is intimately acquainted with the practical working of all river craft, considers that it is not unreasonable that the barge owners should altogether object to provide sleeping accommodation on board. He insists, however, that "a clean, weather-tight, well-ventilated cabin, provided with a stove suitable for warming and cooking purposes," ought to be provided in all cases. With this recommendation we cordially agree. It is part of the duty of the Port Sanitary Authority to keep all river craft under constant supervision, and when it is found that one is in so insanitary a condition that it can be classed as a nuisance an order under the Public Health Act is served and measures are usually taken at once by the owner to abate the nuisance. This method of proceeding, however, is found not to be adequate, for there are many cases in which cabins are undoubtedly unfit for their purpose and yet fail perhaps to reach the point of being "nuisances" within the meaning of the Act. As everyone who has sailed much on the lower Thames is fully aware, a large number of barges are used for carrying offensive cargoes, such as manure and house and manufacturing refuse, and the river is undoubtedly the best channel by which the refuse of London can be removed, and as the prolonged retention of such offensive matter would be injurious to the community the more rapidly it can be got rid of the better it is. It follows that no unnecessary restrictions should be put upon this trade, but it is necessary that the process of removal should be done as far as possible in such a way as to be injurious neither to the general public nor to those engaged in the work. It is well that the efficient by-laws which have been made for the protection of the public are generally obeyed. During the half-year under review, however, the owners of 11 barges were summoned for neglect in carrying out the by-laws and in each case a fine was imposed. The by-laws at present in force have, unfortunately, no reference to the health of the inhabitants of the barges. The craft which carry refuse are constructed without any attempt being made to prevent the foul gases which arise from the cargo from passing into the cabin, and, as a rule, old barges are used for the trade. Dr. Collingridge points out that to ensure the purity of the air in the cabin it is necessary that the barges should be constructed with a double bulkhead, that there should be a space between the bulkheads, that this space should be freely open to the air, and that a pump should be provided to free it from foul fluids. These precautions, he urges, are inexpensive and easily practicable. They should be made compulsory. We entirely agree with this recommendation, which would do no more than enforce a necessary sanitary provision which is already enforced in the case of all canal boats.[2] There can be no reasonable doubt that the unhygienic conditions which exist on barges have a deleterious effect on the crews. The Thames bargee is not generally considered to be a delicate person, nor is his appearance usually that of an invalid—it might, indeed, be difficult to convince an intelligent English jury that men of the physique of the bargee are living under insanitary conditions. As a fact, however, the state of the barges has been so noxious in some cases that death has undoubtedly resulted from a neglect of the structural conditions which have been indicated as necessary in the case of vessels carrying foul cargoes. Dr. Collingridge quotes two cases which are absolutely convincing on this point These cases are briefly as follows: On Jan. 30th, 1900, a ketch was found off Silvertown. On examining the cabin the inspector found the master and his wife both dead They had been suffocated by the fumes of the cargo. which was "saccharine scum," a substance which gives off large quantities of carbonic acid gas, the inhalation of which was proved by the medical evidence to have caused the deaths. The second case occurred on July 30th, 1900, when two men were found dead in the cabin of a sailing barge. The cargo consisted of market and dustbin refuse in a state of decomposition. At the inquest the medical evidence proved that death was caused by asphyxia due to gases given off from the cargo. An examination of the barge showed that there was a free passage through which the foul air could pass from the hold to the cabin. In this case the jury recommended that "barges conveying manure and other impure cargoes should be specially constructed." Dr. Collingridge advises that a by-law should be framed similar to the regulations in force in the case of canal boats. We entirely agree with the importance of this recommendation and see no reason for delay. We therefore earnestly commend the matter to the consideration of the Port of London Sanitary Committee and to the President of the Local Government Board

ARSENIC IN WHISKY?

IT was certain that there would be a tendency to exaggerate the possibilities of evil arising from the recent revelation of arsenic being found in the sugar used for brewing beer. After all, it is but natural to wonder whether arsenic might possibly gain entrance into preparations other than beer, which either contain glucose or are a product of its fermentation. Thus sweetmeats, golden syrup, honey, jam, and, lastly, whisky have fallen under suspicion. It is gratifying to know that so far, although a great number of analyses have recently been made, arsenic, at any rate in London, has not been found in the first four. It is fairly certain that artificially derived sugar is employed in the production of spirits and the question remains to be answered whether if there were arsenic in the sugar it would pass into the spirit on distillation. All spirits, of course, are distilled. We have this week conducted a simple experiment which shows that arsenious acid does not pass over with spirit in the still. Indeed, if a spirit contained arsenic in the form of arsenious acid the latter could be easily separated in this way. We placed a few ounces of whisky in a small still with about 20 grains of white arsenic or arsenious acid and then proceeded to distil the mixture. In spite of the very large poisonous quantity of arsenic in the still not a trace of arsenic passed over or could be detected in the rectified spirit. The whole of the arsenic was left behind. According to this experiment, therefore, no fear need be entertained of arsenic occurring in whisky, though the poison may be present in the sugar substitute employed. This experiment was undertaken because it had been reported that some of the cases at Manchester and Shoreditch occurred in regard to patients who had not been beer-drinkers but whisky-drinkers. We have neither received nor heard of any confirmation of these cases. In regard to the epidemic of arsenical poisoning by means of beer we are glad to note that the Local Government Board is addressing a circular letter to local authorities recommending them to cause samples to be analysed both of beer and of other articles of food in which glucose and similar substances are used. Last week in an annotation upon the subject we wrote: "We venture to suggest that a special Government order should be issued instructing all county authorities to institute an analytical inquiry in their districts." We are glad that the action herein intimated is to be definitely taken.

ALLEGED "CONSUMPTION CURES."

SOME prominence has recently been given in the lay press to another alleged cure for consumption. We regret that the correspondence was taken part in by a medical practitioner who wrote that he had used the "remedy" in a large number of cases with great success. Such a statement in a daily newspaper cannot be too strongly deprecated, as it amounts to advertisement pure and simple. If any form of treatment for any disease has given satisfactory results it is only just that such therapeutic measures should be made known, either through one of the medical societies or in the columns of the medical press, but when published in the daily press it can only tend to bring discredit both upon the treatment itself and upon the practitioner who seeks such channels to make his name known. The drug, which is claimed in this instance as a "new remedy," is arsenic or one of its derivatives. Two names are associated with the drug through no fault of their owners—namely, Professor Armand Gautier and Dr. Hoff of Vienna. Arsenic has been used in the treatment of pulmonary tuberculosis in this country for a number of years, consequently there is nothing "new" in its employment Different authorities use varying doses, and it is well known that tolerance of the drug is generally speedily established—witness its use in chorea and children can without inconvenience take 15 minims of Fowler's solution three times a day if the dose is slowly increased and the patient is carefully watched. One preparation of arsenic is comparatively new—namely, cacodylic acid, and it is claimed that the drug can be pushed to its full action more conveniently by this means than by employing the preparations in ordinary use. Cacodylic acid is arsenic acid in which two hydroxyl groups are replaced by two molecules of the methyl group. Our object, however, is to protest against its use being exploited in the lay press, although, as already stated, the two authorities whom we have mentioned are not in any way to blame for the prominence which has been given to their names. Frequent references have been made to the drug in previous issues and a list of references will be found in another column.

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[2] Regulations of the Local Government Board under Canal Boats Act, 1877 (47 & 48 Vict c 75), March 20th, 1878.

A RECENT DEVELOPMENT IN ADVERTISING.

So far as its own members are concerned the medical profession in this country remains true to its ideals and abhors the practice or permission of advertisement It needs no deep thought to discern the degradation into which a learned profession must inevitably sink if once success in its ranks comes to depend less upon the merits than upon the advertising powers, the immodesty, and the assurance of its members. Yet while medical men thus refuse to be active participators in advertisement there is no class, we suppose, more persistently victimised by advertisers of all kinds. What practitioner's waste-paper basket is spared for a day even from elaborate circulars describing the particular merits of some outrageously-named drug or from presentation copies of periodicals whose pages present articles that are but the thinly disguised advertisement of a patent medicine or a proprietary hygiene establishment? We mention the waste-paper basket, but no man's basket alone can cope with the advertisements that reach him through the post. He must have, in addition, some repository for the more substantial waste that is showered upon him. Bottles of mineral waters from all corners of Europe and America, little boxes of substances that represent the latest enterprise in making medicines palatable, ointments, lotions, biscuits, and extracts, all alike reach the medical man who neither requests nor desires this bewildering accumulation. It may be urged that beyond some domestic inconvenience this prolific advertisement does the medical man no harm and occasionally perhaps even leads him to notice a useful preparation that he might otherwise have missed. Unfortunately, however, advertisement even without encouragement will not stop short at the comparatively harmless methods we have alluded to. The success of advertisement from the commercial point of view is undoubted. Consequently, advertisers are ever on the alert for some new means by which to catch the eye or to arrest the attention of probable customers until, without ever actually transgressing the laws of bribery and corruption, methods are practised that cannot fail to damage the self-respect of any who may allow themselves to be practised upon. We have no fear that such a bait as the "Craigside Hydro, Llandudno," holds out to the medical profession will be readily swallowed, but as an example of an evil and perhaps new method of "pushing a concern" we are glad of the opportunity of alluding to these matters that a correspondent puts in our way. This gentleman, as well as no doubt many others, received together with a brochure relating to the Craigside Hydropathic Establishment a coupon the presentation of which will be accepted in payment of account for three days' stay at the "hydro." Such benevolence on the part of the institution has only one significance It says in effect, "We will pay you for a three days' holiday here, afterwards send your patients who will pay us" We know nothing of the establishment in question; it may be, and very likely is, in every other way admirable, but of this we are quite certain, that such a means of advertisement as we have described, so far from recommending its object to medical men, will only arouse their suspicions and delay them from seeking its benefits either for themselves or for their patients.

ATROPHY OF THE MUSCLES OF THE SHOULDER AS AN EARLY SIGN OF PHTHISIS.

AT the meeting of the Société Médicale des Hôpitaux of Paris on Oct 26th M Emile Boix called attention to an early sign of phthisis which has not received much attention—atrophy of the scapulo-thoracic muscles on the affected side. In advanced cases, of course, such atrophy is well recognised. M. Boix relies on inspection and palpation rather than on measurement to detect slight differences between the two sides. Inspection of the shoulders both from the front and the back must be carefully carried out in a good light. If necessary it may also be performed with the patient lying down, both on his abdomen and on his back; or better still, the patient may be seated. Palpation will corroborate the evidence derived from inspection. With the tips of the fingers the thickness, consistency, and elasticity of the muscles are appreciated and at the same time the habitual tenderness—a sign of the first importance—is discovered. The difference between the two sides can also be appreciated by pinching between the fingers the fleshy mass above the clavicle and spine of the scapula M. Boix finds that in phthisis muscular atrophy is more marked on the side in which the lesions are more advanced and is unilateral if the lesions are unilateral Even when the subject is very emaciated a difference between the two sides will be found in the volume and consistency of the supra-spinatus, trapezius, and pectoral muscles, and sometimes of the deltoids. Muscular atrophy is an early sign, but is not a primary sign, of phthisis Its value consists in that it draws attention to the affected apex and confirms the diagnosis at a time when only modified respiratory sounds without adventitious sounds are present and the disease can only be suspected The atrophy in advanced cases affects more or less generally the muscles of the shoulder; in the beginning, on the contrary, it is partial. Sometimes the supra-clavicular hollow is more pronounced on the affected side, sometimes the sub-clavicular plane is retracted, and sometimes the supra-spinous mass is less full than on the other side. A source of fallacy is that the muscles of the left shoulder are generally less developed than are those of the right; but a perceptible difference, especially in the form of the "partial" atrophy described above, constitutes a presumption in favour of phthisis The fact that the right side is generally first affected or most affected in phthisis increases the value of the symptom of muscular atrophy. As to the

Scotland" which should have the attention of all intelligent and religious people. In the year 1899 176,000 persons were apprehended or cited for these offences; and the numbers constitute a record. The following are the five towns which have the worst record: South Queensferry has 1424 cases of drunkenness and disorder per 10,000 population; Falkirk, 1066 cases; Linlithgow, 830; Cumnock, 770; and Clydebank, 756. We venture to suggest that the medical profession of Scotland, apart from all extreme theories and practices, should take this subject into its consideration with a view to some public statement of the medical and pathological bearing of such statistics.

A NEW MUZZLING ORDER.

AN order of the Board of Agriculture in the *London Gazette* of Dec. 8th provides that every dog brought to Great Britain from any other country except the Channel Islands and the Isle of Man shall, unless accompanied by a properly issued licence authorising its landing, be chained and muzzled in some inclosed portion of the ship, while the latter is lying at any port in Great Britain. In case of default the owner of the dog, the person for the time being in charge thereof, and the master of the vessel may be proceeded against under the Diseases of Animals Act, 1894.

INDIAN AND COLONIAL ADDENDUM TO THE BRITISH PHARMACOPŒIA, 1898.

BY the courtesy of the General Medical Council we have received for review an early copy of the above. The copy is avowedly imperfect and subject to slight verbal and typographical alterations, and it cannot yet be obtained from the publishers, since the price has not been determined by the Treasury. We understand that it is impossible to give any idea of the precise date of publication, but that meanwhile copies similar to that supplied to us may be consulted at the offices of the General Medical Council, in London, Edinburgh, and Dublin.

THE REGENT'S CANAL AND THE PUBLIC WEAL.

THE Regent's Canal was intended to be, and originally was, an attractive water-way. The general design of the canal and the details of the work alike show that it was arranged with a view to be beautiful as well as useful. Its primary object was, of course, to transport heavy goods. The work was projected in the early part of the present century at a time when food was scarce, and it was said that such a canal would diminish the cost of carting and lessen the number of draught-horses, "whereby," urged the promoters, "much land now applied in the growth of provender for them may be more beneficially used in the culture of food for mankind." The project took statutory form in the year 1812 (52 Geo. III., c. 195), and the work, begun on Oct. 14th of that year, was completed and opened for traffic in 1820. The company obtained from the Consolidated Fund the use of a sum of £200,000, and later another sum of £100,000 was advanced on the security of the undertaking (1 & 2 Geo. IV., c. 43). From these facts it will be seen that the Regent's Canal was projected nominally in the public interest and that to assist in carrying out the work the use of the public credit was granted. It follows from this that the business ought to be carried on in a way to serve, and not to interfere with, the public weal. It cannot be said that these conditions have been, or are, fulfilled. For many years past the accessories which made the canal banks attractive and beautiful have been neglected, the towing-path has fallen into a state of bad repair, and, worse than all, the water in the canal, instead of being clear and bright, has been allowed to become filthy and putrid. Every summer lately during the warm weather the stench from the canal has been most offensive. A report recently presented to the Public Health Committee of the London County Council has called attention to the foulness of the water, and some rather curious suggestions were made as to what ought to be done in the matter. One councillor gave it as his opinion that the canal should be done away with—a proposition which would, of course, require an Act of Parliament to give it statutory force. Another councillor thought that the Thames Conservancy should have power to prevent the canal water from passing into the Thames. This proposal also could only be carried out under a special Act passed for the purpose, and if then it could be enforced it would necessarily render the state of the canal more foul than it is at present. The report of the Health Committee of the London County Council is, however, more worthy of consideration. The Regent's Canal Company, it is said, are authorised to sell water from the higher levels outside the county and they exercise this right, the proceeds of the sale forming part of their revenue. For the purposes of navigation the water, instead of being allowed to flow down from the higher levels, is pumped back from the lower levels. The committee point out that the good effects of flushing the canal with water from the upper levels has been practically proved. Some years ago several of the vestries complained of the foulness of the canal and the company allowed nearly 16,000,000 gallons of water to pass down, whereupon the nuisance was quickly abated. In December, 1893, the Health Committee conferred with representatives of the sanitary authorities through whose districts the canal passed, and in February, 1894, the London County Council took counsel's opinion as to whether the Attorney-General could, if called upon by the Council, proceed by public indictment against the canal company for creating a public nuisance by neglect in the management of their business. The Council were advised that the case was not one in which the Attorney-General would be likely to take proceedings until every effort had been made to stop the nuisance under the Public Health London Act (1891). It does not appear from the report that the Council have made every, or indeed any, effort to avail themselves of the Act of 1891, nor is any explanation given as to why they have neglected to use so ready and effective a weapon, which appears to be the more curious inasmuch as the counsel who advised them pointed out that in his opinion the Council were not empowered to pay the expenses of an action by indictment. The Public Health London Act (1891) was passed for the very purpose of giving the local authorities power in all matters relating to nuisances. It is an excellent Act and if use were made of its provisions London would be a very much cleaner, a much more beautiful, and a much more healthy place than it is at present. We have every confidence that the new metropolitan boroughs will effectively carry out the great duties committed to their care and will abolish nuisances which have eluded both the apathy of the vestries and, if it may be so called, the vigilance of the London County Council.

PLUMBING AND THE NEW CORPORATIONS.

THE annual Livery dinner of the Worshipful Company of Plumbers, held on Nov. 27th at the Fishmongers' Hall was a gathering of more than usual interest. It afforded the Lord Mayor of London, and many of the mayors of the oldest municipalities in the country, the opportunity of meeting their more recently created brethren of the municipal world, including the 28 mayors so recently enrolled in Greater London. In fact, as one of the speakers (Mr. Robert Crawford of Glasgow) said: "The Plumbers' Company had succeeded in creating, in a way impossible for any other body, a federation of all the municipal and county authorities of the United Kingdom and of those interested in the sanitary question from almost every standpoint." The speakers generally insisted on the importance and necessity of legislation in some form in order to give to the public a measure of protection from the evil effects of ignorance or malpractice on the part of those undertaking plumbing work. A meeting was held at the Guildhall, London, during the week between representatives of district councils and the Worshipful Company of Plumbers, in furtherance of some form of legislation.

CHRISTMAS SHOPPING AND PUBLIC HEALTH.

WITH the approach of Christmas an increased stress of work presses heavily on shopkeepers and their assistants. In these days of intensified competition it is not surprising that shops are kept open late at night, but such overwork is not healthy and anything that can help to give all classes sufficient leisure to recoup from the exhaustion of their daily avocations is of public benefit. In America some ladies have taken a generous initiative in this respect and have formed what they term the Consumers' League. The members of this organisation point out the inconsistency of subscribing to hospitals while at the same time the subscriber will go late to a store and "badger a saleswoman into a fit of nervous prostration." Consequently the members of this league are expected to refrain from making any purchases after 5 o'clock in the afternoon and not to allow parcels to be sent to their homes later than 6 o'clock. Nothing can be more simple than this suggestion. If it could be carried out there would be an end to the shop assistant's grievances, and this without any sort of legislation or police interference or the expense of maintaining an army of inspectors to see that the law is enforced. Unfortunately a league of this sort is only likely to be supported by a thoughtful and unselfish minority of altruistic humanitarians. There is also a material obstacle in the fact that many persons are at work till after 5 o'clock and therefore have not time to do any shopping before that hour. Nevertheless, only good can result from calling attention to this question, and this is, more than any other time of the year, the season for doing so. If only those who have the leisure to do their shopping before 5 o'clock made it a firm rule never to purchase anything after that hour this alone would suffice very materially to relieve the strain on tradesmen and their assistants. Then a great deal might be done by taking time by the forelock instead of leaving purchases, especially Christmas purchases, to the very last moment. In a word, and in defence of the health and happiness of a large section of the community, we appeal to all intending purchasers to think not only of themselves and their purchases but also of the interests of those tradesmen with whom they intend to deal. It will not cost more to buy earlier in the day and somewhat sooner in the season, but it will distribute more evenly the work that has to be done in satisfying the demands of the consumer and thus will mitigate the unhappy and unhealthy strain that weighs so heavily on shop assistants at Christmas time.

WOMEN HEALTH OFFICERS.

THE Vestry of St George-the-Martyr, Southwark, shortly before its existence terminated published the fact that out of a total of 1331 deaths which occurred during a certain period, 765, or nearly 60 per cent., had been among children under five years of age. To those intimately associated with the study of disease amongst the inhabitants of the poorer parts of London this will occasion no surprise. The out-patient rooms in the children's department at our general hospitals and in the special hospitals devoted to the treatment of the diseases of children are crowded with the results of maternal ignorance and neglect. The want of knowledge displayed by the mothers as regards the diet of infants and young children is astounding and can only be fully appreciated by those who are brought frequently and intimately into contact with the results of defective feeding. The general want of hygiene in the dwellings of the uneducated classes is also astonishing and greatly adds to the general death-rate. In several of the large provincial towns, including Birmingham and Sheffield, officers have been appointed to attempt to instruct the women as to the way in which their children should be fed and their rooms kept clean. The Limehouse Vestry applied for permission to appoint a similar officer last year, but were refused. The Vestry of St. George-the-Martyr, Southwark, which published the figures already referred to, appointed a lady under the somewhat cumbrous but significant title of "Lady Sanitary Officer and Health Inspector." She will be expected to visit the homes of the poor and to instruct them how to get rid of bad smells and vermin, to point out to the mothers the prejudicial effect of insanitary conditions of health, especially as regards children, and where sickness exists to advise as to the nursing of the patient, the preparation of the food, and the administration of remedies, also to advise as to the management of the house where a patient suffering from pulmonary tuberculosis is resident, both in the interests of the patient and of the others living in the house. She is also to instruct the women in various domestic details, such as the cleaning of the rooms, passages, and yards, and in the cooking and preparation of the family meals. In theory the idea of such an officer is excellent, and the late Vestry of St. George-the-Martyr, Southwark, deserves the warmest praise for appointing one. No doubt a large amount of good will result. The lady in question will require an immense amount of tact and perseverance, and we wish her every success, but whether she will succeed in the Herculean task of cleansing the Augean stables of slum ignorance and prejudice remains to be seen. The effort, however, is certainly worthy of a trial, and it is to be hoped that the newly-formed municipal bodies will imitate the example of Southwark and appoint similar officers throughout London.

NEALE TESTIMONIAL FUND.

WE are requested to state that the Committee have decided that the testimonial to the late Dr. R. Neale shall consist of (1) a life-size portrait in oils by Mr. T. B. Kennington, the painter of the excellent memorial portrait of the late Professor Hopkinson; and (2) four silver bowls, suitably inscribed, to be presented to the four members of Dr. Neale's family. As soon as possible a list of subscribers and a balance sheet will be published.

AT a meeting of the council of the Hospital Sunday Fund, held under the presidency of the Lord Mayor, at the Mansion House, on Dec. 7th, on the motion of Dr. J. G. Glover, seconded by Sir Henry Burdett, the following motion was unanimously adopted: "That in regard to the grant to the National Hospital for the Paralysed and Epileptic, Queen-square, W.C., the basis of which has been already arranged by the distribution committee for the current year, the distribution committee be empowered to pay, out of funds in hand, the award, on being satisfied of the settlement of the existing differences before May 1st next."

LORD ROBERTS will honour the Irish Medical Schools' and Graduates' Association by his presence at a banquet to be given by the members to their distinguished fellow-countryman on his return from South Africa Lady Roberts and her daughters have also accepted an invitation to be present on this occasion.

THE death is announced of Mr. R. G. Glenn, the Recorder of Croydon. He was born in 1844 and was a "Grecian" of Christ's Hospital. His name should be widely known to medical men, for he was the author of "A Manual of the Laws affecting Medical Men" and of the Legal Abstract published in Churchill's "Medical Directory."

DR D. E. ANDERSON of Paris, a graduate of the London and Paris Universities and former physician's and obstetric assistant at University College Hospital, has been elected to the post of visiting physician to the Hertford British Hospital, Paris.

AT a general monthly meeting of the Members of the Royal Institution held on Dec. 3rd Dr. Allan Macfadyen was announced to have been appointed Fullerian Professor of Physiology for three years, the appointment dating from Jan. 14th, 1901.

IT is announced that the Queen has granted to the Royal Society, for the purposes of a national physical science laboratory, Bushey House, Bushey Park, formerly the residence of the Duc de Nemours.

DURING the week ending Dec. 6th 46 fresh cases of plague were registered at Mauritius, 26 of which were fatal. The total deaths from plague during the week numbered 33.

THE *London Gazette* of Dec. 11th contains new rules made by the Home Secretary for retreats licensed under the Inebriates Act.

MR. W. H. BATTLE, F.R.C.S. Eng., has been elected surgeon to St. Thomas's Hospital in the room of the late Mr. W. Anderson.

REPORT TO THE

HOSPITALS SUB-COMMITTEE OF THE MANCHESTER SANITARY COMMITTEE ON THE OUTBREAK OF ARSENICAL POISONING NOW IN PROGRESS IN MANCHESTER.

DR. JAMES NIVEN, Medical Officer of Health of Manchester, has presented the following report to the Hospitals Sub-committee of the city on the outbreak of arsenical poisoning in Manchester:—

The medical officer of health begs to present to this sub-committee a report on the outbreak of arsenical poisoning now running its course. On Nov. 20th Dr. Reynolds called at the Health Office and informed the medical officer of health that he had obtained well-marked reactions of arsenic in a sample of beer which he had examined. For some months there had been a large number of patients coming into the Union Infirmary with well-marked and fairly uniform symptoms, and there were at present a very large number of these cases in the wards. They were all beer-drinkers and drank the cheaper kinds of beer and stout. For some time he had suspected the presence of some deleterious agent in the beer and latterly the symptoms had suggested arsenic. He had therefore procured a sample of a beer which was pointed to by many of the cases, tested it, and found arsenic. He also informed your medical officer of health that another sample of beer submitted to Professor Dixon Mann had been found to contain arsenic, thus confirming his observation. Previous to Dr. Reynolds's intimation on Nov. 20th your medical officer of health was aware of nothing indicating either an outbreak of a fresh form of disease or the existence of impurities in the beer. The medical officer of health made an appointment with Dr. Reynolds to see the cases next day at Crumpsall. On visiting the Crumpsall Workhouse on Nov. 21st he saw, in company with Dr. Reynolds and Dr. H. G. Brooke, a large number of cases presenting special and fairly uniform symptoms. Dr. Brooke stated that he had seen for some time a number of cases with eruptions of a peculiar nature and such as to give rise ultimately to a suspicion of arsenical poisoning. The medical officer of health at once saw Mr. Rook, the superintendent of the Sanitary Department, and they arranged that 12 samples of beer (sixpenny and fourpenny from each) should be obtained from six tied houses. These samples were accordingly obtained and submitted to the public analyst. Meanwhile, Dr. Tattersall, the medical officer of health for Salford, had submitted samples of beer to Professor Delépine, who, in the absence of Professor Dixon Mann, undertook an investigation into the nature of these samples which had apparently given rise to symptoms of poisoning in Salford. Your medical officer of health could not move further in the matter until on Nov. 23rd Dr. Kelynack called to inform him that he and Dr. Kirkby had that day discovered the arsenic present in the beer to arise from glucose. On the same day Professor Delépine informed your medical officer of health that on Nov. 22nd he had discovered the presence of a considerable amount of arsenic in particular saccharine matters used in brewing, and that he at once communicated with Dr. Tattersall.

Dr. Tattersall on Nov. 23rd went down to Liverpool (as your medical officer of health was informed by a reporter) to procure a sample of the sulphuric acid used in making the incriminated glucoses and inverts. It did not appear to your medical officer of health necessary to obtain samples of the materials at that time from the glucose manufacturers, as these had already been procured by Dr. Tattersall at the earliest possible time, and the results of the investigation which he knew was being conducted by Dr. Tattersall with equal energy and skill would be available at an early date for our own procedures. It did, however, seem necessary to act with all possible speed administratively. On Nov. 23rd, therefore, samples of the saccharine materials employed were obtained from two breweries implicated by the patients. On Nov. 24th your medical officer of health improvised a laboratory in his room, aided by the assistant medical officers of health, Dr. Coates and Dr. McCleary, and by Mr. R. M. Rowe of the Sanitary Department, a gentleman of considerable chemical experience, whose services have been most valuable. Two samples of beer and one of stout were procured and examined on Nov. 24th. A trace of arsenic was believed to be found in a sample of beer, and the same material was believed to have been found in one of the saccharine matters. Your medical officer of health then consulted Professor Delépine who, with his usual courtesy and kindness, showed him the methods which he had employed and the quantities of the materials used in the analyses. On Nov. 26th the examinations were renewed at the office, and, being fortunate in the methods which we adopted for the Marsh test, on the 27th we were in a position to proceed. Samples of the saccharine matters stated to have been used by the brewers were rapidly obtained by the medical officers and we commenced an examination of all the saccharine matters furnished to us as being those in use by 23 Manchester breweries visited, as well as of three glucoses used in the manufacture of cheap sweets and jams. As regards the latter it may at once be said that not a trace of arsenic was found in them. As regards the saccharine matters which were furnished to us by the brewers as being used by them, and which included Home and American glucoses and inverts, we examined them all to the number of 46 specimens from 20 breweries. In not one did we find a trace of arsenic except in the glucoses and inverts emanating from one firm, in which it was present apparently in considerable amount. Unfortunately, five out of the 20 breweries were using this material to our knowledge, or had just discontinued it, while in another instance its use had been discontinued for two months. It is possible that there are other breweries in which it has been used where we have not been informed of the fact. As soon as we knew that the examination of a saccharine material revealed the presence of arsenic, information was sent to the manager of the brewery concerned with a request that all beer now on the market in which the incriminated sugar had been used should be immediately recalled.

Meantime on Nov. 27th a circular letter was sent to all the practitioners in the city asking for certain information, based on the symptoms of the cases at Crumpsall. The replies to these are most valuable and instructive. Basing our action on these reports and on the information which they afforded, and in pursuance of an instruction from the meeting of the Sanitary Committee of Nov. 27th, we have obtained samples from a number of public-houses. Instructions were given by the Sanitary Committee on Nov. 28th that this course should be pursued, and it is considered that ample opportunity has been given to get rid of any poisonous beer or stout. Some samples since taken from public-houses and examined unofficially have been found to contain an appreciable amount of arsenic. The number of samples of beer and stout examined unofficially since the instruction of the committee has been 45, of which 11 have been found to contain arsenic. Subsequent samples from the same houses have been sent to the public analyst.

City of Manchester Deaths from :

Week ending	Peripheral Neuritis.	Neuritis (other).	Alcoholism.	Cirrhosis of the liver.	Liver diseases (other).	Gastritis (in adults).	Total.
1899							
Jan. 7th	—	—	5	3	—	—	8
,, 14th	1	1	1	—	—	—	3
,, 21st	—	—	2	—	—	—	2
,, 28th	2	—	1	1	1	—	5
Feb. 4th	—	—	—	4	—	—	4
,, 11th	—	—	2	—	—	—	2
,, 18th	—	—	1	2	—	1	4
,, 25th	1	1	2	—	—	—	4
March 4th	—	—	1	1	2	—	4
,, 11th	—	—	1	—	2	—	3
,, 18th	1	—	1	1	1	—	4
,, 25th	—	—	3	3	—	—	6
April 1st	—	—	3	—	—	—	3
,, 8th	—	—	—	1	—	—	1
,, 15th	—	—	2	3	1	—	6
,, 22nd	—	—	—	2	—	1	3
,, 29th	2	—	2	—	1	—	5
May 6th	1	—	1	3	1	—	6
,, 13th	—	—	3	1	—	1	5
,, 20th	—	—	1	—	1	—	2
,, 27th	—	—	3	3	—	—	6
June 3rd	—	—	1	2	—	—	3
10th	1	—	2	—	—	—	3
17th	—	—	—	4	1	—	5
,, 24th	—	—	1	1	—	—	2
July 1st	—	—	2	5	—	1	8
,, 8th	1	—	2	1	—	—	4
,, 15th	—	1	3	4	1	—	9
,, 22nd	1	—	5	4	—	—	10
,, 29th	—	—	2	3	—	—	5
August 5th	—	—	—	5	—	1	6
,, 12th	1	—	2	4	—	—	7
,, 19th	—	—	—	4	1	—	5
,, 26th	—	—	—	1	1	—	2
Sept. 2nd	1	—	3	5	—	1	10
,, 9th	1	—	1	—	—	—	2
,, 16th	—	—	—	—	—	—	—
,, 23rd	—	—	1	1	1	—	3
,, 30th	1	—	4	1	—	—	6
Oct. 7th	2	1	2	1	—	—	6
,, 14th	—	—	3	—	—	1	4
,, 21st	—	—	2	1	—	—	3
,, 28th	—	1	3	4	1	—	9
Nov. 4th	—	—	2	1	—	—	3
,, 11th	1	—	1	2	—	1	5
,, 18th	—	—	—	2	—	—	2
,, 25th	—	—	—	2	—	1	3
Dec. 2nd	—	—	—	2	1	—	3
Total	18	5	77	83	17	9	214

Week ending	Peripheral neuritis.	Neuritis (other).	Alcoholism.	Cirrhosis of the liver.	Liver diseases (other).	Gastritis (in adults).	Total.
1900							
Jan. 6th .	1	—	2	—	—	1	4
,, 13th	—	—	—	1	1	—	2
,, 20th .. .	—	—	1	1	1	—	3
,, 27th ...	—	—	2	—	—	—	2
Feb. 3rd .	—	—	1	1	—	—	2
,, 10th	—	1	3	2	—	—	6
,, 17th ..	—	—	2	3	1	—	6
,, 24th	1	—	—	2	1	—	4
March 3rd . .	1	—	2	1	—	1	5
,, 10th ..	—	1	—	5	—	—	6
,, 17th .	1	—	—	3	1	—	5
,, 24th ..	—	—	1	4	—	—	5
,, 31st .	1	—	1	2	—	1	5
April 7th ..	—	—	1	—	—	1	2
,, 14th	—	—	1	2	—	—	3
,, 21st	—	—	1	1	—	—	2
,, 28th	—	—	2	3	—	—	5
May 5th	—	—	—	2	1	2	5
,, 12th	—	1	3	1	—	—	5
,, 19th .	1	—	2	1	—	1	5
,, 26th	—	1	2	4	2	1	10
June 2nd	1	—	2	4	—	1	8
,, 9th	2	—	2	2	2	—	8
,, 16th	—	—	6	2	1	1	10
,, 23rd	1	—	4	2	—	1	8
,, 30th	1	1	2	2	—	—	6
July 7th	1	—	3	4	—	—	8
,, 14th	—	—	3	5	1	—	9
,, 21st	1	—	2	1	1	—	5
,, 28th .	—	—	3	—	—	—	3
August 4th . ..	1	1	4	4	2	—	12
,, 11th . ..	1	—	1	3	—	—	5
,, 18th	1	—	2	1	1	—	5
,, 25th . ..	—	—	1	2	—	—	3
Sept. 1st	—	—	1	1	—	2	4
,, 8th	1	1	4	1	—	1	8
,, 15th . . .	1	—	—	3	—	—	4
,, 22nd	—	—	4	3	2	2	11
,, 29th	—	—	5	2	—	1	8
Oct. 6th	2	1	1	2	—	1	7
,, 13th	3	2	4	3	—	—	12
,, 20th	2	—	—	2	—	—	4
,, 27th	3	—	3	1	—	—	7
Nov. 3rd	1	—	5	3	—	—	9
,, 10th	1	1	3	4	1	—	10
,, 17th	3	—	2	2	—	1	8
,, 24th	—	—	1	3	—	—	4
Dec. 1st .. .	6	—	3	4	1	—	14
Total	39	11	93	105	20	19	292

After the exhaustive investigation carried out by Dr. Tattersall and Professor Delépine there remains very little to be said on the subject except on matters of detail. There are, nevertheless, some points on which the committee would probably wish to be informed, especially what has been the nature and magnitude of the evil.

Nature of the disease.—There is a class of disease known to medical men as alcoholic neuritis. As a few good observers state that they see no difference between these fresh cases and those which they have previously known as alcoholic neuritis this will sufficiently indicate the nature of the outbreak to medical men In the slighter cases there may or may not be nausea and sickness and irritation of the eyes, followed by a feeling of pins and needles in the tips of the fingers and toes; the calves are painful on pressure, and the hands presently become numb and useless. Wasting of certain small muscles of the hand is almost invariable. Many cases get dropped wrist or walk unsteadily. In the most severe cases the paralyses advance quickly, the patient cannot stand, has perhaps delirium, and sinks into a comatose state from which he does not recover. A prominent feature of many of the cases is pigmentation of the skin, which in some cases has been very deep, the patient being almost like a mulatto.

It is impossible in a report of this kind to do more than indicate the kind of illness to which our figures relate, although the courtesy of the medical officers at Crumpsall and Withington in allowing the medical officers to see the cases must be acknowledged. The medical officer of health has received information of about 1000 cases of the above class of illness from 90 medical men. These do not include the cases which have been sent into the union hospitals during the last few months which will probably come to 700 or so more. Allowing over 300 cases to medical men who have not answered the circular there have thus been at least 2000 cases who have been seen by a medical man. There will, no doubt, be a good many more with minor degrees of illness which have not been seen by a medical man.

An important question is whether there is any appearance of improvement in the outbreak. Many medical men state that the cases still continue to come in, as they will do for a little time even if the incriminated beer is entirely stopped, since it takes some time to produce the wasting observed in these cases. The general impression conveyed by the statements of medical practitioners is that the worst has passed and that the worst period of all was towards the end of October. What do our statistics say? The statistics should throw some light on the question whether this is or is not an entirely new phenomenon, and I have, therefore, had the deaths excerpted week by week under these headings: peripheral neuritis; neuritis; alcoholism; cirrhosis of the liver; other disease of the liver; gastritis in adults. These deaths are then added up to make a total for the week. The result is shown on the table given on the previous page and the figures are sufficiently remarkable.

The number of total weekly deaths from the enumerated causes suddenly shoots up in the last week of May and thenceforward, generally speaking, remains high up to the present time. We may suspect that some alteration took place in the quality of the beer used about the beginning of May. This we have not yet time to inquire into. The same period—viz., the end of May—also marks a slight increase in the number of deaths ascribed to peripheral neuritis, which now furnishes about one death a week. Yet even in the last two weeks of September no death is ascribed to this cause. In October, however, there is a very slight increase, sufficient at all events to show that some observers were now becoming alive to the character of the cases. We may at the same time confidently assume that, in the absence of this suspicion, most of the few cases added to peripheral neuritis in October would have appeared in the column alcoholism. This your medical officer of health has ascertained both as the result of conversations and *from* the reports sent in.

How do the figures of 1900 compare with the figures for a corresponding period of 1899? The deaths from peripheral neuritis have nearly doubled in 1900. The difference is, however, confined to recent months, since up to the end of May there were in 1900 only five deaths from this cause, as compared with eight in 1899 from Jan. 1st to May 31st. Many medical men have regarded this outburst as an outbreak of alcoholism due to the war fever. It is therefore of considerable interest to see whether in 1899 there occurs any change in the number of deaths from the causes enumerated similar to that which appears in the present year. It will be seen from the table that the figures for July and August of 1899 seem to indicate a similar increase of this class of case on a smaller scale, the increase being observable under both alcoholism and cirrhosis of the liver. These figures suggest to your medical officer of health that the recent occurrence does not stand quite alone and that previous mischief in connexion with alcohol has occurred in an epidemic fashion. The suggestion is that there may have been arsenic present in the beer formerly. There is, indeed, reason to suspect that the same phenomenon may have been going on for years, though in a slighter degree. This would justify some delay in recognising the nature of the disease, since the cases would be regarded as ordinary alcoholic cases of a recognised type with an unusual proportion of certain striking though not unknown features.

Tables have also been prepared for 1897 and 1898 and the results may be thus summarised :—

Causes of death.	Number of deaths in the first 48 weeks of			
	1897.	1898.	1899.	1900.
Peripheral neuritis	11	17	18	39
Neuritis (other)	2	5	5	11
Alcoholism	71	43	77	98
Cirrhosis of the liver	88	76	88	105
Other diseases of the liver...	35	32	17	20
Gastritis (adults)	25	32	9	19
Total	232	205	214	292

There has, therefore, not been much change in the aggregate number of deaths in 1897 to 1899, while it has greatly increased in the present year (1900). There has been an increase year by year since 1897 in the number of deaths from peripheral and other neuritis, very much accentuated in 1900. The deaths from alcoholism have increased progressively since 1898, and in 1900 are more than double the number in 1898. They were, however, more numerous in 1897 than in 1898. The number of deaths from cirrhosis of the liver have increased progressively since 1898. In 1897, however, they were more numerous than in 1898. From other diseases of the liver than cirrhosis the number of deaths was greater in 1897 and 1898 than in 1899 and 1890. From gastritis the same relation very singularly holds, with the addition that the deaths in 1900 number more than twice as many as those in 1899. The far larger number of deaths from alcoholism and cirrhosis of the liver in 1897 than in 1898 taken along with their distribution in weeks is striking and calls for future inquiry. On the whole, the complete figures do not remove the impression that this is not an entirely new phenomenon.

In accordance with the instructions of the Sanitary Committee a vigorous search is being made for arsenical beers and stouts sold in public-houses, and suspected samples have been submitted officially to Mr. Estcourt. It is desirable that a quantitative analysis should be made for one of these samples, but it is probable that the qualitative tests carefully carried out will suffice for a prosecution under the Food and Drugs Acts. Still, one quantitative analysis is advisable.

To the assistant medical officers, Dr. Coates and Dr. McCleary, I am indebted for the accounts of individual cases which they have collected and for the pains which they have taken to collect facts. Mr. R. M. Rowe of the sanitary department has conducted the qualitative analysis of samples with his usual care and skill and with ungrudging zeal. My statistical clerk, Mr. Ross, has prepared the statistical tables which have entailed considerable labour.

THE WAR IN SOUTH AFRICA.

NOTWITHSTANDING the assurance of Lord Roberts that the war is over it cannot be said that Boer resistance has ended or that there is any immediate prospect of its being ended. The war has, as we all know and regret, degenerated into a desultory kind of marauding and surprises, varied by vigorous and exhausting pursuits of De Wet. As a rule, the efforts of the British to repel the attacks of the more or less disorganised and scattered bodies of Boers acting independently of one another have been very successful, but it is still far from being the fact that all dangerous opposition has been stamped out. Lord Roberts has resigned his command in South Africa and has handed it over to Lord Kitchener, who is generally thought to be admirably suited to deal with the present phase of the war and to bring it to an end. It will be remembered that while in a military sense the conquest of Burma proved a comparatively easy task, the real subjection of that country and the suppression of the system of dacoity was a very difficult one, and the Boers are a very different and far more tenacious foe than the Burmese. Such is, briefly summarised, the present position of affairs in South Africa. The capture of that redoubtable warrior and clever tactician De Wet and his force, whenever it is accomplished, will probably have a decisive effect The description of the recent chase of De Wet is of the most exciting kind and says a great deal for the pluck and endurance of the troops on both sides No better illustration could be given, by the way, of the very difficult and puzzling problem of safeguarding the health of troops on service by sanitary measures than is afforded by these forced marches It is not easy to see what plan of hygienic precautions could be devised for the purpose, and it is likely that any recommendations on the part of the medical service would be, and from the emergent nature of the case probably would have to be, practically disregarded Such occurrences must, we fear, often take place in war where it is all that troops can do to carry their food supplies and ammunition Setting aside, however, such exceptional conditions, it seems to us that we may in future wars have to organise a special sanitary corps with a large and properly directed executive service and furnished with all necessary appliances for field sanitary work

Turning to matters of more immediate medical interest we have to note that Lord Stanley, writing from headquarters in South Africa, has replied to a letter by Mr Burdett-Coutts dated Sept 19th last in which the latter challenged the correctness of Lord Stanley's evidence before the Royal Commission Lord Stanley adheres to his original statements and inferences, and by way of corroborating them accompanies his letter with one from Mr W Maxwell, a correspondent of the *Standard* Mr Burdett-Coutts, however, replies at some length in the *Times* to Lord Stanley, repudiating the notion that he had ever used or intended any covert threat as alleged It is a lively little episode, but it has no real bearing on the facts regarding the state of the hospitals —at least none of public interest as it seems to us According to Mr Balfour's statement in the House of Commons, in reply to Sir Walter Foster, the Royal Commissioners hope to present their report on the South African hospitals early in the ensuing year and we may therefore be content to await its publication The figures showing the amount of sickness attributable to typhoid fever during the campaign are heavy Mr Powell Williams stated in the House of Commons on Dec 11th that the total number of cases of typhoid fever amongst the forces in South Africa from the beginning of the war till Sept 28th last was 15,655, and the number of deaths from that disease was 3642, and that the number sent home as invalids was 9128 Mr Brodrick has promised in the House of Commons to give the fullest consideration to the report of the Hospitals Commission He pledged himself, moreover, to make such changes, however radical as would be likely to make an efficient army medical service The Queen and the Royal Family have always manifested a great interest in all that concerns the sick and wounded soldier, and it was only to be expected that the Princess of Wales would visit Southampton in order to welcome home the invalids and wounded arriving in this country on board the hospital ship named after Her Royal Highness This being the third voyage in this particular service made by the vessel a statement was handed to the Princess during her visit setting forth the important services which the ship had performed during the year of her employment for hospital purposes

THE IMPERIAL YEOMANRY BASE HOSPITAL

By L V. CARGILL, F.R C S.,

OPHTHALMIC SURGEON TO THE HOSPITAL.

To day (Nov 10th) there are 492 patients in the hospital—viz, 16 officers and 476 non commissioned officers and men Of these nine officers and 362 non commissioned officers and men (i e, nearly four fifths) belong to the Imperial Yeomanry We are becoming almost entirely a Yeomanry Hospital in deed as well as in name, for although we have not received hospital trains for the last few weeks Yeomanry are arriving from the front daily in tens and twenties They come down by the ordinary trains and are mostly convalescent and recovering from fever contracted further north In response to the diminution in the work there has been a further reduction in the staff Dr J W Washbourn has transferred his services to the branch hospital at Pretoria, where he was much needed, I myself am just leaving for home; whilst Dr J B. Christopherson and Mr W O G Ashdowne, as well as several nursing sisters, have already left

On the surgical side Mr H A Ballance has operated on several cases of appendicitis lately with satisfactory results In some of these an abscess had formed and in others the appendix was removed in the quiescent interval, the hardships of the campaign causing the old disease to be again active A case of typhoid fever with perforation was operated on recently The patient, a man, aged 30 years, was under the care of Dr A Elliot, and perforation occurred in the fourth week of the disease, which was severe and marked by much toxæmia Distension was not great At the time of perforation the pulse was 96 and the temperature was 101 2° F There was no fall of temperature with the perforation, although the pain was sudden and was severe enough to make the patient call out and to double him up in bed During the next few hours the temperature gradually rose to 102 6° and the pulse to 116 Tenderness and rigidity increased to the lower half of the abdomen Mr Ballance operated within six hours of the attack of pain and found that there was perforation immediately under the laparotomy wound in a coil of the ileum 18 inches from the cæcum It was one sixteenth of an inch in diameter and there had been very little leakage into the abdominal cavity The aperture was closed by eight Halsted silk sutures, quite half an inch of the wall of the bowel being infolded on each side of it As a precautionary measure a few stitches were placed in another Peyer's patch, 12 inches from the cæcum, to infold its very thin base The intestinal coils and Douglas's pouch were sponged dry No irrigation or drainage was used The patient progressed extremely well for the next 48 hours the pulse coming down to under 90, the temperature was subnormal, there was no pain, and it was thought that he would pull through At the end of this time, however, he again complained of abdominal pain, distension came on rapidly, the temperature rose to 102 6°, the pulse to 144 and he died in 56 hours from the time of the operation There was no vomiting either at the time of the initial perforation or subsequently At the necropsy it was seen that another minute perforation had occurred through the base of the same ulcer as before along the track of one of the sutures and had caused the second attack of peritonitis The whole of the Peyer's patch, which was a very wide one, had not been infolded at the operation, as too much narrowing of the lumen of the bowel was feared There was extensive ulceration in the lower three feet of the ileum and also in the cæcum It is to be regretted that of the three cases of perforation in enteric fever operated on in this hospital not one has recovered A case of abscess of the liver resulting from a Mauser bullet which traversed the right lobe of the organ has occurred The patient is rapidly recovering since the operation, but as the recovery is not yet complete details of the case must be left to a subsequent report Too much praise cannot be accorded to Mr Hall Edwards for the admirable way in which the x ray department has been managed and the absolute certainty of localisation to the smallest fraction of an inch that has attended his work on the radiography of foreign bodies lodged in the tissues

On the medical side there is not much of importance to record Enteric fever has been decidedly on the increase during the last month and a number of cases have come down from the front either with signs of the disease or in the incubation stage but none has been contracted in hospital The general type of disease is less severe than formerly, which is due, no doubt, to the better condition and therefore greater resisting power of the men One of our dressers (Mr A C Ransford) is at present suffering from enteric fever, contracted in all probability in Pretoria So far the disease is running a mild course With regard to the cases of enteric fever the frequency of phlebitis in the convalescent stage is to be particularly noted The frequency of this complication here is considerably greater than in ordinary civil practice Suppurative otitis media is also far from uncommon In two cases complicated with malaria the tertian parasite has been demonstrated as well as Widal's reaction A few cases of acute dysentery and many of chronic dysentery have been admitted and all the patients have done well Experiments are now being carried out with various native remedies in the treatment of dysentery, hitherto with no very striking results, but the cases have been comparatively few in number A fuller report will follow at a later date

No fresh case of scarlet fever has developed in hospital for over four weeks Suspicious cases, and a few in which the diagnosis is beyond suspicion, still continue to be admitted. Cases of heart and renal disease have increased in number to a considerable extent since the last report. Of the former a few are instances of valvular disease arising during an attack of acute rheumatism, but the majority are examples of failure of compensation due to the strain of hard work and exposure on an already damaged heart. To the same causes our cases of acute kidney affection can be traced. Rheumatism, especially the subacute articular and muscular varieties, is still very common. It is interesting to note that in the great majority of the former and in many of the latter there is a history of previous acute rheumatism. Acute rheumatism is, and has been, conspicuous by its absence, though many patients convalescent from the disease have been admitted. Dr. Elliot remarks that from what he has seen here he would be inclined if examining men for war purposes to reject all, or nearly all, those who have passed through an attack of rheumatic fever. The selection of men for the Yeomanry battalions has apparently been made on specially liberal lines. Many cases of old-standing valvular and renal disease have come out and one man arrived in hospital with an unhealed nephrotomy wound with which he had left home. Other patients have come under my own care who have been passed and sent out for active service in the field, the condition of whose eyes and sight should have led to their rejection.

Deelfontein, Nov. 10th.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Annual Report of the Medical Officer of St. George-the-Martyr, Southwark, for 1899.—The population of the above metropolitan parish at the last census showed a low rate of increase compared with that of London generally. That fact is accounted for by the disproportionate mortality and not by the birth-rate, which in 1899 was 5·8 per 1000 above that for the whole of London and 5 per 1000 above that for the 33 large towns. The total population of the parish at the last census in 1896 was 60,278, as against 59,712 in 1891. In 1899 the population density of St. George-the-Martyr was rather over 213 to the acre, that is to say, about four times that of London generally, and 400 times that of the United Kingdom. The death-rate for 1899 is abnormally high, being 27·7 per 1000 living. Analysis shows that the brunt of the mortality falls upon the Borough road sub-district, in which the rate was 34·8 per 1000, as against 23·5 for the London-road and 26·6 for the Kent-road sub-districts. Further, the average for the years 1892 to 1896 in those sub-districts showed the Borough-road rate to be 31·4 per 1000, compared with London-road 20·6 and Kent-road 22·3. This interesting method of analysis leads Dr. F. J. Waldo to remark: "Were it possible to eliminate the Borough sub-district or to reduce its mortality to a level with that of the other sub-districts the condition of St. George-the-Martyr as a whole would compare favourably with many districts much more happily situated, both as regards density of population and general happiness of surroundings." In the ten years 1841 to 1850 the average death-rate of the parish stood at 30 per 1000, as against 25 for the whole of London. In 1899 it was 27·7, against 19·3. For last year, indeed, St. George-the-Martyr stands in a worse position with regard to the London death-rate than it has stood in any ten-yearly period since 1840. Diarrhœa has been answerable for more deaths than any other of the principal zymotic diseases during the eight years 1892 to 1899. Dr. Waldo's conclusion as to the origin of this malady, announced in the Milroy lectures for 1900, attributed the infection to contamination of food, air, and general environment of towns by street-dust specifically contaminated by bacteria from horse-dung. In connexion with the recent outbreak of enteric fever in the parish it is interesting to note that in March, 1898, Dr. Waldo urged the vestry to establish a free bacteriological service for the early diagnosis both of typhoid fever and of diphtheria. In neither case has the recommendation been acted upon. The report before us will be notable in the history of the ancient parish of St. George the-Martyr, as it represents the last official year of separate existence as a local authority. The opportunity has been taken to draw up a short summary of progress in public health matters that has been made during the seven years and seven months of Dr. Waldo's tenure of office. Disinfection is now carried out by means of a steam disinfector of the best modern type, the special staff has been increased, and a shelter has been provided for infected families. Lavatory accommodation has been greatly increased. A large number of houses unfit for human habitation have been closed and a large unwholesome area, that of Falcon court, has been dealt with by the London County Council. The sanitary staff has been increased from two inspectors and a third officer, who acted as mortuary-keeper and disinfector, in 1892, to one chief and three district inspectors, two women inspectors to carry out the tenement by-laws, two caretakers of the Reception House, and a sanitary clerk. This staff is still inadequate for so large and crowded a parish. The important question of the sanitary control of the Salvation Army shelters by the local authorities has to a great extent been fought out in Southwark. In 1890 the late Lord Coleridge decided that the Salvation Army shelter was not a common lodging-house. In 1893 small-pox was traced to the Blackfriars shelter, the keeper of which was prosecuted by the St. George's authority for neglecting to disinfect. The magistrate convicted, but his decision was reversed on appeal. In this way it was shown that efficient disinfection could not be insisted upon under the Public Health Act. In 1895 small-pox was again traced to the shelter, but the medical officer of health having been refused admission at night obtained entry later by a magistrate's warrant. The question thus opened up was carried to its conclusion by the London County Council in 1898. On appeal in December, 1899, the High Court of Justice decided that the shelters were common lodging-houses and therefore were subject to public sanitary control. Among the special reports is an interesting one dealing with a case of typhus fever and its origin. The original case was notified on Feb. 20th, 1899, and was found to have come from Bermondsey. In the previous year two cases of typhus fever, one in April and one in October, had occurred in the parish of St. George-the-Martyr, and some members of one infected family, the second case, had gone to Bermondsey. Careful inquiry revealed a direct chain of infection between the case in October, 1898, and the case in February, 1899. At least 12 cases were found; they had been treated at various hospitals and at home for enteric fever, delirium tremens, and other supposed maladies, but only in one or two instances was the typhus fever recognised at the time. This record is suggestive in many ways and emphasises the rarity of the disease nowadays in the metropolis. The medical officer may be congratulated upon the amount and the degree of good work accomplished since he has held his official post in the parish. In the matter of the control of bakehouses, especially when underground, he has been specially active, and his reports, no doubt, influenced the legislation that has been enacted within the past few years in that direction.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 33 of the largest English towns 6082 births and 3937 deaths were registered during the week ending Dec. 8th. The annual rate of mortality in these towns, which had risen from 16·9 to 18·0 per 1000 in the four preceding weeks, declined again last week to 17·7. In London the death-rate was 17·5 per 1000, while it averaged 17·8 in the 32 provincial towns. The lowest death-rates in these towns were 11·5 in Croydon, 11·8 in Cardiff, 13·6 in Portsmouth, and 14·4 in West Ham; the highest rates were 21·2 in Sunderland, 21·5 in Sheffield, 21·9 in Liverpool, and 22·1 in Hull. The 3937 deaths in these towns included 363 which were referred to the principal zymotic diseases, against 351 and 356 in the two preceding weeks; of these, 98 resulted from diphtheria, 91 from whooping-cough, 55 from "fever" (principally enteric), 51 from measles, 35 from scarlet fever, and 31 from diarrhœa. No death from any of these diseases occurred last week in Birkenhead, Huddersfield, or Gateshead; in the other towns they caused the lowest death-rates in Croydon, Sunderland, and Newcastle, and the highest rates in Swansea, Blackburn, Preston, and Sheffield.

The greatest mortality from measles occurred in Swansea; from scarlet fever in Burnley; from whooping-cough in Nottingham, Derby, Preston, Halifax, and Hull; from "fever" in Plymouth, Wolverhampton, and Preston; and from diarrhœa in Blackburn. The 98 deaths from diphtheria included 34 in London, 14 in Sheffield, eight in Leeds, and eight in West Ham. No fatal case of small-pox was registered last week in any of the 33 towns, and only one small-pox patient remained under treatment in the Metropolitan Asylums hospitals on Saturday last, Dec. 8th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2687, against 2725 and 2727 on the two preceding Saturdays; 259 new cases were admitted during the week, against 261, 246, and 279 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 322 and 436 in the two preceding weeks, declined again last week to 400, and were 48 below the corrected average. The causes of 56, or 1·4 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Oldham, Leeds, Sunderland, and seven other smaller towns. The largest proportions of uncertified deaths were registered in Leicester, Liverpool, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 19·2 to 21·7 per 1000 in the four preceding weeks, declined again last week to 20·7, and showed an excess of 3·0 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 17·2 in Leith and 17·4 in Dundee to 21·9 in Perth and 23·1 in Edinburgh. The 641 deaths in these towns included 31 which were referred to whooping-cough, 18 to diarrhœa, 15 to measles, nine to scarlet fever, nine to diphtheria, four to "fever," and one to small-pox. In all 87 deaths resulted from these principal zymotic diseases, against 69 and 89 in the two preceding weeks. These 87 deaths were equal to an annual rate of 2·8 per 1000, which was 1·2 above the mean death-rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had increased from 13 to 42 in the eight preceding weeks, declined again last week to 31, of which 18 were registered in Glasgow and five in Greenock. The deaths from diarrhœa, which had been 20 and 19 in the two preceding weeks, further declined to 18 last week, and included six in Glasgow, three in Edinburgh, three in Dundee, and three in Aberdeen. The fatal cases of measles, which had been eight and 12 in the two preceding weeks, further rose last week to 15, of which nine occurred in Edinburgh and four in Aberdeen. The deaths from scarlet fever, which had been five in each of the two preceding weeks, increased to nine last week, and included five in Glasgow and three in Edinburgh. The fatal cases of diphtheria, which had been four and six in the two preceding weeks, rose last week to nine, of which five were registered in Glasgow, two in Edinburgh, and two in Aberdeen. The four deaths referred to "fever" corresponded with the number in the preceding week, and were all recorded in Glasgow, where the fatal case of small-pox was also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 156 and 160 in the two preceding weeks, declined again last week to 151, and were slightly below the number in the corresponding period of last year. The causes of 25, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·1 and 24·5 per 1000 in the two preceding weeks, rose again to 27·4 during the week ending Dec. 8th. During the past four weeks the death-rate in the city has averaged 26·0 per 1000, the rates during the same period being 17·4 in London and 20·3 in Edinburgh. The 184 deaths belonging to Dublin registered during the week under notice showed an excess of 20 over the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 19 and 11 in the two preceding weeks; of these, four were referred to whooping-cough, three to "fever," three to diarrhœa, and one to scarlet fever. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 1·5 in London and 3·3 in Edinburgh. The fatal cases of whooping-cough, which had been five and six in the two preceding weeks, declined again to four last week. The deaths referred to different forms of "fever," which had been eight and three in the two preceding weeks, were again three last week. The fatal cases of diarrhœa, which had been five and one in the two preceding weeks, rose last week to three. The 184 deaths in Dublin last week included 41 of infants under one year of age and 45 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed an excess over the numbers recorded in the preceding week. Four inquest cases and four deaths from violence were registered, and 64, or more than a third, of the deaths occurred in public institutions. The causes of 18, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: Walter H. S. Stalkartt to the *Alacrity*; Hugh S. Burniston to the *Duke of Wellington*, additional for Portsmouth Dockyard; H. W. W. Townsend to the *Blenheim*; and E. T. Meagher to the *Briton*.

Fleet Surgeon Henry L. Crocker, of the *Britannia*, medical officer of the Naval Cadets' Training Establishment, is selected for appointment to the *Royal Arthur* when recommissioned as flagship of the Australian station.

ROYAL ARMY MEDICAL CORPS.

Major Fausset Maher Baker retires on retired pay.

MILITIA.

Royal Garrison Artillery: The Mid Ulster Artillery (Southern Division): Surgeon-Lieutenant-Colonel W. Twigg retires under paragraph 81 Militia Regulations, with permission to retain his rank and to wear the prescribed uniform on retirement.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major A. Kinsey Morgan resigns his commission.

VOLUNTEER CORPS.

Artillery: 2nd Devonshire (Western Division, Royal Garrison Artillery): Surgeon-Lieutenant-Colonel J. May resigns his commission, with permission to retain his rank and to wear the uniform of the corps on retirement. 1st Warwickshire: The undermentioned officer is removed from the Volunteer Force, Her Majesty having no further occasion for his services:—Surgeon-Lieutenant S. P. Johnson. *Rifle*: 4th Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Lieutenant-Colonel W. S. Limrick resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement. 8th (Scottish) Volunteer Battalion the King's Liverpool Regiment: Archibald Gordon Gullan to be Surgeon Lieutenant. 1st Lanarkshire: James Grant Andrew to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Vernon John Greenhough to be Surgeon-Lieutenant. *17th (North) Middlesex*: The undermentioned Surgeon-Captains resign their commissions:—P. S. Spokes and J. W. Pare. *16th Middlesex* (London Irish): Surgeon-Captain A. G. Bateman resigns his commission.

TRANSVAAL WAR NOTES.

Mr. Vernon Cargill has returned to England after an absence of ten months, during which time he has served as ophthalmic surgeon to the Imperial Yeomanry Hospital in South Africa.

Civil Surgeons R. Ward, A. Broslin, C. Gibbs, H. J. Scharlieb, and W. W. Woolliscroft have returned invalided to England in the transport *Yorkshire*. Civil Surgeon Gordon Watson is returning home in the *Carisbrooke Castle*. Civil surgeons E. A. Nathan, E. M. Pearse, and A. N. Weir left South Africa on Dec. 6th in the *Manhattan*.

The Princess of Wales went to Southampton on Dec. 10th to visit the hospital ship bearing her name, which arrived from the Cape on Dec. 8th with 170 invalids in charge of Captain A. Pearse, R.A.M.C. Her Royal Highness briefly conversed with all the patients.

Civil Surgeon H. Hartley (Lovat's Scouts) is reported convalescent at Cape Town.

THE SPECIAL ARMY ORDER REWARDING THE TROOPS.

A special Army Order has been promulgated from the War Office to the effect that the Secretary of State has decided that a special war gratuity should be issued to all the troops, whether Imperial or Colonial, employed in the operations in South Africa The unit of the scale will in all cases be £5, which will, therefore, be the minimum sum to which any soldier will be entitled. A table setting forth the number of shares or units assigned to the different ranks—from that of a Field-Marshal downwards—together with an explanatory statement, is published for general information, so that everybody concerned can calculate the amount of the gratuity to which he is entitled. The total, considering the numbers who have taken part in the war, will reach a good sum, but the taxpayer, instead of grudging the outlay, will, we believe, pay it with a hearty goodwill. It has been well earned, for it has been a most arduous and trying war from start to finish—that is when it is actually as well as virtually finished. Lord Roberts has told the nation his opinion of the troops who have served under him—namely, that the soldier was a hero in the battlefield and a gentleman elsewhere. In addition to all the fighting there has been an unprecedented amount of marching, and no one can have read the description of what the troops had been undergoing in their last chase of De Wet without realising the labour and hardships which this war has entailed. It has proved the very opposite of what was once a popular affix to the signboards of hotels and country inns—"good entertainment for man and beast." We trust that has yet to come for all our soldiers and medical and other officers who have suffered the risks and fatigues and who survive all the dangers of this war.

MENTIONED IN DESPATCHES.

Sir Claude MacDonald, in his despatches relating to Pekin, refers to Dr. Morrison, the *Times* correspondent, who acted as lieutenant to Captain Strouts and rendered most valuable services. He was, says the despatch, active, energetic, and cool: he volunteered for every service of danger and was a pillar of strengh when matters were going badly. He was severely wounded on July 16th by the same volley which killed Captain Strouts, and his valuable services were lost to the defence for the rest of the siege. The services of Dr. Poole, Legation surgeon, and Dr. Velde of the German Legation, are also referred to. These gentlemen were in charge of the International Hospital, and during the siege 166 cases passed through their hands, 20 of the patients suffering from illness and the rest severely wounded. Owing to the devotion and skill of these two medical officers 110 of the wounded were eventually discharged cured, notwithstanding that towards the end of the siege, the resources of all the dispensaries proved unequal to the strain. Dr. Poole, continues the despatch, speaks most highly of the sick-berth steward, Fuller, of Her Majesty's ship *Orlando*, and his commendation is fully endorsed by Dr. Velde and all the besieged. From personal observation Sir Claude Macdonald says that his care and gentle treatment of the wounded and the willing and cheerful manner in which he carried out his duties were beyond all praise.

THE SYRACUSA CONVALESCENT HOME FOR WOUNDED SOLDIERS, TORQUAY.

At a meeting of the subscribers of the Syracusa Convalescent Home held at Torquay on Dec 5th it was stated that since the opening of the home at the beginning of the year 127 soldiers had been admitted representing 50 different regiments. During the five months July to November the average daily number of patients were 31, and the average weekly cost per head was 8*s.* 3*d.* The credit balance at the end of November amounted to £1730. Colonel Stovell, the honorary secretary, said that the conduct of the men had been splendid. In the words of Lord Roberts their bearing had been that of heroes and their manners those of gentlemen. Colonel Stovell further alluded to thoughtless people who gave the soldiers drink, and quoted a case where a person gave a man a bottle of brandy which he was urged to hide in his bedroom in case he felt ill and needed it, the result being that the man became mad with drink and threatened to commit suicide.

OUR LOSSES IN SOUTH AFRICA.

According to a War Office return the total reduction of the military forces through the war in South Africa up to, and inclusive of, November has amounted altogether to 14,178, of which number considerably under 12,000 have been from deaths—either killed in action or from wounds or from disease contracted on service. Looking to the duration of the war, the numbers engaged, the continuous fighting of some sort or other and somewhere or other in the theatre of war, and other circumstances, these figures do not seem so large as might have been expected.

THE PASTEUR INSTITUTE AT KASAULI.

This institute, which has been recently opened at Kasauli under the management of Major D. Semple, R.A.M.C., for the Pasteur treatment of soldiers and others, is, we are glad to say, popular and is apparently doing a great deal of good. Up to Nov. 4th last 75 patients had presented themselves for treatment and 62 had completed their course, while 13 were under treatment. The 75 patients comprised seven British officers, 25 soldiers, and one soldier's child, one native officer, four native soldiers, 12 European civilians, and 25 native civilians.

ST. JOHN AMBULANCE ASSOCIATION.

The St. John Ambulance Brigade is despatching 100 more hospital orderlies for service in South Africa, having received a further requisition from the War Office to that effect. This is in addition to the 68 extra brigade men dispatched a fortnight back at Lord Roberts's request, and brings the total of its members on active service up to 1739. Over 60 members of the brigade have, we regret to say, died from enteric fever and other diseases.

DEATHS IN THE SERVICES.

Surgeon-General G. V. Currie, late I.M.S., in London, on Dec. 3rd, aged 72 years. He served in the Indian Mutiny campaign against the Momunds on the North-west Frontier in 1858, in the Eusofzai and Swat Expedition of 1866, and in the Afghan War of 1879.

Captain William Pearson Barter, R.A.M.C., at Agra, aged 34 years. He was the only surviving son of Brigade-Surgeon J. F. Barter (retired), of Beneden, Harlesden N.B. He joined the Army in 1893 and became Captain in 1896.

John Grant, M.B., C.M. Edin., has been appointed temporary surgeon to H.M. forces now operating in Ashanti.

Correspondence.

"Audi alteram partem."

NEW-LAID EGGS AND FRESH EGGS.

To the Editors of THE LANCET.

SIRS,—In the interesting annotation which you have given us on the "new-laid" and "fresh" egg question, arising out of the recent correspondence in the *Times*, you have not (any more than the *Times* correspondents) given scope to a solution of the difficulty which certain early recollections of my own lead me to believe deserves more attention than has been hitherto assigned to it. I admit that the "trader" and his conventional nomenclature (with a view to charges and profits) has no part in my experiences, which centre round a very dear old relative long since passed away, who in my boyhood used to supply us with "fresh" eggs on a system of her own—not unknown indeed to others, but practised by her with a carefulness which gave it a place quite apart from commercial experience Her plan was simply to grease all her eggs—not, observe (for to this she attached great importance), within the first 24 or any number of hours, but *the instant they were laid and before they had time to cool.* The pores of the egg being thus effectually sealed up before any chemical change had time to take place, the practical result, as I have tested over and over again, was that the eggs remained "fresh" (by which I mean that they retained the creamy quality of the albumen to which you refer), not for hours or for days, but for weeks and, I believe, for months, during which the eggs, though not "new-laid," were emphatically as "fresh" to the taste as if they had been eaten an hour after being laid. This I know to be the fact because it was one of this old lady's business-like ways that on an immensely long egg-rack she had every egg marked with the date of laying at the very moment of its being submitted to her preservative process; and although I do not claim to have investigated the matter scientifically, I do know as a fact that an egg, say, three weeks or six weeks old as by date, could absolutely not be distinguished by the taste from one laid only the day before, or even on the same day, as it was served up to breakfast. I have often wondered that my dear old relative did not make a more definitely "trading" use of her system, or that no other more commercial genius followed in her footsteps and boldly placed upon the market eggs which, though not "new-laid," were "fresh" in the best sense of the word. The system, indeed, required constant watchfulness, for if the egg was allowed to cool the chance was lost. But it should not be beyond the resources of a company of poultry-farmers to supply London with eggs guaranteed to be "fresh"—and only such—without reference to the exact date, the fact of freshness being tested as you describe, by the "ooscope" or otherwise. In short, if it is possible to preserve eggs indefinitely in the way here described it should be done, and all the resources of science should be applied to getting it done properly and securely. A company which could at once make *sure* that *all* eggs which it placed upon the market, independent of date, were fresh in the sense described might ask the highest prices and would be certain to get them, because the eggs would not need classification. I am, Sirs, yours faithfully,

Edinburgh, Dec. 10th, 1900. W. T. GAIRDNER.

"ISOLATION HOSPITALS."

To the Editors of THE LANCET.

SIRS,—It is to be feared that the readers of your valuable journal will gather from your remarks that I have merely expressed an opinion which may be met by the expression of an opposite opinion. If a system is not to be judged by results, by what standard shall we measure it? But if it may be so judged, then I claim that I have brought the failure of the isolation hospital, so far as scarlet fever is concerned, to an absolute demonstration. Being no great believer in statistics, there are yet, I hold, certain figures which are inexorable. The "returns" of the Registrar-General and the annual returns of the number of notified cases of medical officers of health cannot be ignored. On these, and these only, I have made out my case, and with deep respect for your opinion it is, I submit, a case which will have to be answered, and authoritatively answered. You place before your readers three reasons—which I can only regard as three excuses—for the existence of these hospitals—namely, (1) to minimise the risk of infection from invaded houses to the rest of the community; (2) to enable the sick to be separated from the healthy and the healthy to proceed to their occupations; and (3) to provide for better medical control and nursing than is possible in the homes of the poor.

With reference to the last position I may say at once that the isolation hospital is a preventive institution or nothing. It was certainly never designed to be a mere nursing institution for the poor. Had it been so intended it would have taken its proper place under the ægis of the Poor-law. As a matter of fact, the rich have frequently been admitted to whatever its advantges may be, to the exclusion of the poor. It is an entirely new reading of the ends and aims of isolation hospitals to include better medical attendance and nursing amongst the objects to be attained. With reference to the first position, I say that the risk from invaded houses has *not* been minimised, but, on the contrary, has been increased by "return" cases. We have all seen examples of houses being kept centres of infection for many months from this cause.

I have long held the opinion—take it for what it is worth—that discharged patients are *all* a source of danger to the community and that the period during which they remain in an infective condition is extended far beyond the limits of time exhibited by cases nursed at home, be the surroundings what they may. The definition of a "return" case has successfully covered up the formidable public danger which these cases undoubtedly constitute. I have a list of 250 cases which received their infection through the medium of a hospital, many of which were treated in the hospital itself, but only a dozen of which appeared in the annual report as "return" cases. I have called attention to the high mortality rate of "return" cases, as pointed out by Dr. C. K. Millard, Dr. P. Boobbyer, and others. As to the second position, if you are unable to guarantee freedom from infection on discharge from the hospital what becomes of "enabling people brought in contact with the patient to go to work, school," &c.? You know that this cannot be guaranteed. No secret is made of the fact. Here is the handbill sent to the friends of patients admitted into our isolation hospital:—

NOTTINGHAM CORPORATION. BAGTHORPE HOSPITAL. SCARLET FEVER.

To Parents, Guardians, and Others.

Although every care is exercised to prevent the carriage of infection by persons discharged from Bagthorpe Hospital it is impossible in some instances to insure against such an accident, for no one can say with certainty how long scarlet fever may lurk in the system Parents and others are warned against allowing recently discharged patients to come into unnecessarily intimate contact with others. No person discharged from a fever hospital should be allowed to sleep in the same bed as another until at least a fortnight after discharge. A short holiday in the country with plenty of fresh air, apart from others, is always desirable after convalescence from scarlet fever. But all persons recovering from scarlet fever should be warmly clothed and otherwise protected against cold. Any recently discharged person who complains of sore throat, nose, or ears, or who has a breaking out on the skin, should be at once isolated and placed under the care of a medical man In any case the corporation cannot accept responsibility or liability for the outbreak of infection occurring among the companions of persons recently discharged from hospital.

PHILIP BOOBBYER, M.B., Medical Superintendent.

One of the leading sanitarians in this country wrote to me last week saying that he could not conceive a more humiliating or tragic confession. Nor can I. When sanitary authorities hold out such danger signals as these surely the time has arrived to investigate, and if the investigation results in the accumulation of evidence which points to complete and universal failure, shall we ignore it? If it is proved that to aggregate cases of infective disease means the spread of disease, are we, as scientific men, under any pretext whatever to seek to excuse the carrying out of a system which has thus been weighed in the balance and found wanting? We know that it is happening every day that discharged patients are sowing scarlet fever broadcast in schools and elsewhere. You attribute this to defective administration. I am of a different opinion. I have shown that "return" cases are more often the result of lengthy detention than premature discharge. In our splendid new hospital the administration is well-nigh perfect, but we are no exception to the rule. What must be the case in towns where no warning is given of the danger run by being brought in contact with discharged patients and where, under a sense of security, these patients are allowed to mix freely with others? I leave your readers to judge. Their judgment will be assisted by a reference to the number of cases annually notified in the 32 large towns of England and Wales and London. Taking the latter city first we find that in 1891 there were 11,330 cases of scarlet fever notified in the registration county of London. The next year there were 27,093 cases and the year following 36,901. Liverpool in 1891 had 1176 notified cases. The next year she had 1554 and the following year 3538. Manchester commenced in 1891 with 1138 cases. In 1892 she had 1671 and in 1893 2031. Birmingham's figures run: 1892, 1418; 1893, 1614; 1894, 1788; 1895, 2964; and 1896, 3389. Leeds began in 1894 with 758 cases (eight months). In 1895 she had 874; in 1896, 1216; in 1897, 1791; and in 1898, 2002. Nottingham, which boasts the highest percentage of removals combined with lengthy experience of isolation, divides the honours with Bolton as providing the most complete object-lesson. Bolton, coming under notification so far back as 1879, and commencing her career without the advantages (?) of hospital accommodation, provides a useful example of how a town fares before and after. The figures are therefore given *in extenso* in these two instances.

Nottingham.

Year.	Cases notified.	Percentage of removals.	Year.	Cases notified.	Percentage of removals.
1883	428	... ... —	1892	1163	... ... 88·0
1884	384	... ... —	1893	1511	... ... 70·0
1885	390	... ... 12·0	1894	1164	... ... 80·0
1886	351	.. ... 15·0	1895	1250	... ... 93·0
1887	615	... .. 45·0	1896	731	... ... 86·0
1888	643	.. .. 49·0	1897	617	... ... 90·0
1889	1047	... ... 71·0	1898	931	... ... 71·0
1890	984	.. ... 81·0	1899	2520	... ... 48·0
1891	896	... ... 86·0			

The population has increased by one-fifth during this period.

Bolton.

Year.	Cases notified.	Percentage of removals.	Year.	Cases notified.	Percentage of removals
1879	404	... ... —	1890	1071	... ... 24·9
1880	702	... ... —	1891	411	... ... 27·0
1881	320	... ... —	1892	683	... ... 22·8
1882	259	... ... —	1893	747	... ... 21·4
1883	103	... ... —	1894	267	... ... 49·4
1884†	303	... ... —	1895	495	... ... 31·1
1885	186	... ... 47·3	1896	816	... ... 35·7
1886	322	... ... 69·9	1897	645	... ... 40·4
1887	721	... ... 40·4	1898	487	... ... 53·5
1888	924	... ... 30·1	1899	1226	... ... 41·0
1889	1256	... ... 23·2			

† Hospital opened.

It will be seen that the percentage of removals bears a more or less definite ratio to the number of cases so far as the former town is concerned, while in the latter (which was doing well without an aggregative institution) the opening of the hospital was signalised by an increase in the number of notified cases too gradual to leave us in doubt as to the cause. It is the fashion to speak of isolation hospitals as though they had existed from time immemorial, whereas many large towns have only had nine or ten years' experience of them and one—Leeds—only five, and in some of the large towns isolation is a dead letter to-day. These towns are at least as well off as Nottingham, Bradford, and other places where a high removal percentage has been the forerunner of endemic fever. I think it strange that when this system is attacked nobody attempts to defend it by the production of facts which tell in its favour. It is generally considered sufficient to meet the attack with a direct negative. It will occur to the unbiased reader that it is not enough to say that the system is a success, and he will feel with me that the importance of the subject demands that tangible proof shall be forthcoming that these institutions have in some remote corner of the earth done what is claimed for them Where are we to look for the evidences of prevention which these "preventable" institutions have brought about? If they exist surely it will not be difficult to point them out. That this has never yet been done is at least evidence *prima facie* that no such facts are obtainable.

You ask, Sirs, how I propose to deal with cases of plague and refer to the Great Plague of London. Dr. J. F. Payne in Allbutt's "System of Medicine" says that "under some circumstances the patient might be better isolated in his own home," but the question is too large to be dealt with here. It is surely not contended, however, that isolation hospitals—affairs of the last two decades—are responsible for the fact that the plague has not (till quite recently) visited these islands since 1665. If the ascertainable results of "isolating" cases of plague demonstrated that these precautions were instrumental in increasing the number and mortality of cases—as in the case of scarlet fever—I should not hesitate to denounce the system as a failure.

I am, Sirs, yours faithfully,
Dec. 10th, 1900. EDWARD DEAN MARRIOTT.

"THE WORKMEN'S COMPENSATION ACT, 1897: TWO VIEWS."

To the Editors of THE LANCET.

SIRS,—I gather from the editorial note at the head of the two articles under the above heading published in THE LANCET on Oct. 27th, p. 1227, that you, with your unique facilities of gauging medical opinion, consider that in the view of the medical profession grave miscarriages of justice do now occur, and must in future continually recur unless the fundamental safeguard of the Act is made compulsory—namely, that the medical referees called into being and initiated by the Home Office shall have their services called into requisition as was originally intended by the Act. In fact, the profession is agreed on the following points:—

1. That the non-employment of the medical referees appointed under the Act has been detrimental to the interests of both employers and workmen.
2. That medical referees would be more useful if they sat as medical assessors with the county court judges than if they only made a written report.
3. That the early reference to medical referees of cases in which no legal question is in dispute and in which there is a difference of opinion as to the amount of injury would save the time of the judges and much money to both employers and workmen.
4. That in the interests of the public generally the effects of accident should be differentiated from the effects of pre-existing disease.
5. That in every case the amount of injury should be assessed by an impartial medical man unconnected in any way with either employer or workman or with any society to which either belongs.

I shall be glad to hear your views authoritatively spoken as to the position of resident medical officers in hospitals, for at present house surgeons and other resident medical officers hold positions which could with difficulty be filled by others, they being on the spot and thoroughly conversant with the cases under their charge. I have never known hospital officials to be otherwise than absolutely impartial, and the opinions which they have given have to my knowledge saved an immense amount of litigation. Employers do not resist claims which they know to be *bonâ fide* and workmen cannot impose on employers when their injuries have been under observation by impartial medical men from the first.

I fully understand that it is impossible for you to insert individual opinions, but I feel sure that you are now in a position to judge rightly as to the questions raised and as they are of great interest to medical men and will be of still greater interest in the future I ask you to give, as you have so often done before, guidance which the profession as a whole may accept as authoritative.

I am, Sirs, yours faithfully,
ALBERT BENTHALL, F.R.C.P. Edin
Cockspur-street, S W., Nov. 24th, 1900.

ARSENIC IN BEER.

To the Editors of THE LANCET.

SIRS,—My attention has been called to the fact that in the "Notes on Recent Beer Poisoning in Salford," published in THE LANCET of Dec. 1st, I had in no way acknowledged the intimation stated to have been given me by Dr. Kelynack as to the presence of arsenic in inverted sugar. I was unaware until to-day that the verbal intimation had been left at my office, although I knew that Dr. Kelynack had called on me on Nov. 23rd, when he failed to see me, as I was absent pursuing the inquiries which resulted from Professor Delépine's discovery on the 22nd of the presence of arsenic in a sample of glucose. Although Dr. Kelynack's information reached me too late to be of use, I would have acknowledged the trouble he had taken to inform me what Mr. Kirkby had found had I been acquainted with the nature of the statement he had made to my clerk in my absence.

I am, Sirs, yours faithfully,
C H. TATTERSALL,
Salford, Dec. 7th, 1900. *Medical Officer of Health, Salford.*

To the Editors of THE LANCET.

SIRS,—There is no doubt that substances enter into the composition of modern beer which interfere with the usual methods of analysis for the detection of arsenic. This must have forcibly struck every chemist who has analysed beer for the presence of arsenic, as very many have, in beers brewed from arsenical glucose, and failed to detect it. Two of the nostrums used in the brewing of modern ales are finings, which are "cut" with sulphurous acid, and bi-sulphites of lime and magnesia, &c. These are both used as preservatives either in washing the barrels or by adding direct to the beer. If chemists had been acquainted with the presence of these in beer much less difficulty would have been felt in dealing with arsenical beer. Both these compounds will prevent the discovery of arsenic in beer by the Marsh test and by the Reinsch also, for unless the beer is boiled *some time* with acid *before* putting in the copper the sulphurous acid in the beer will produce the blackening.

Beers brewed from malt, hops, and glucose may be used direct in the Marsh apparatus, and if arsenic is present it will be detected. I have tried the experiment upon beer before racking when sulphurous acid had not been added. Thus it is not organic matter alone which makes arsenic in beer so difficult of detection, which I proved by taking a beer absolutely free and adding to it a known quantity of arsenious acid. In the Marsh apparatus I got out practically all I had introduced. To another portion of the same beer, with arsenic in such proportion as gave a large deposit in the heated tube, I added a very small quantity of a bi sulphite of calcium, and got no deposit of arsenic on the heated tube, only sulphur appearing there The arsenic was obtained from the flame at the end of the tube when received on porcelain The difficulty in connexion with the 12 samples of Manchester beer is now explained I had to do the samples in a day I did take 12 working hours and knowing nothing of the presence of sulphite I found no arsenic I may say that I had only about 11 ounces per sample, and in the small quantities which I used for experiments the trace of arsenic was probably lost in the preparation of the beer for the Marsh test I may premise that I tried a series of experiments with the original beer Any test to succeed must deal with not less than 100 cubic centimetres, and this should be charred *only to intumescence* with acid, then diluted and filtered, and the filtrate evaporated I did this process in flasks, but found that the medical officer here was doing the process in porcelain basins which I now adopt If one omits to evaporate the filtrate sulphurous acid may easily be present (carbonaceous matter and sulphuric acid) and spoil the experiment

I am, Sirs, yours faithfully,
CHARLES ESTCOURT,
Public Analyst to the City of Manchester
Manchester, Dec. 10th, 1900

To the Editors of THE LANCET

SIRS,—The obscure nature of chronic poisoning by small doses of arsenic has been shown in a startling manner by the wholesale beer poisoning outbreak in Manchester Does not the revelation point a moral as to the harm that may be done by administering small doses of arsenic in medicine over a prolonged period? That arsenic is an irritant to the kidneys, skin, mucous membranes, and all other excretory outlets to the body has long since been experimentally established Yet the drug is given daily by medical men and its use is extended over long periods of time In one case under the writer s care a patient had been treated with arsenic for years at various skin hospitals He is suffering from chronic Bright s disease, which in the absence of other assignable cause, may, not unreasonably be attributed to the arsenic It is a well known fact that during a course of arsenic a patient's urine may become albuminous So strongly have I felt upon this subject that personally I have practically ceased for years past from prescribing arsenic either in hospital or in private practice It has been said somewhere that arsenic never yet cured a skin disease—a dictum with which most dermatologists will be inclined to agree—although it undoubtedly now and then appears to modify favourably some cutaneous troubles The question arises, is it worth while for the sake of this remote possibility to expose a patient to the risk of grave mischief from the action of a virulent irritant poison upon excretory and other organs? Given in minute doses for a short time the drug certainly appears to exercise a beneficial effect in some cases of anæmia

In my own case arsenic has a curious effect I have on various occasions experimentally taken five minims of liquor arsenicalis and within 12 hours a fine punctate irritating rash appears on the back of the wrists I have little doubt that arsenic is answerable for some at least of the cases that present themselves at the skin hospitals Supposing a patient suffering from arsenical beer rash, so to speak, went to a hospital in Manchester there would have been no clue as to the nature of that eruption prior to the discovery of the poison at the breweries

I am Sirs yours faithfully
Bentinck street, W Dec 4th 1900 DAVID WALSH

PREVENTIVE INOCULATIONS AGAINST THE PLAGUE.

To the Editors of THE LANCET

SIRS,—A course of three lectures on bubonic plague was recently delivered in London at the Examination Hall of the Royal Colleges of Physicians and Surgeons by Professor Calmette, Director of the Pasteur Institute at Lille [1]

In the third of these lectures Professor Calmette described a new method of preparing a prophylactic against plague the product being a substance which possesses (in accordance with Professor Calmette's statements) the advantages that its strength can be easily determined and that it may be kept for a considerable time without becoming contaminated and without losing any of its immunising properties In this way he thinks that he has solved the problem of obtaining an easy and sure inoculation against the plague—a description which does not apply to Professor Haffkine's prophylactic

Professor Calmette's method consists in filtering off the plague microbes from their culture media drying them, and keeping the dried substance carefully in sealed bottles This substance can be easily weighed and dissolved in water, and it is then ready to be used for inoculation

In connexion with this subject I must advance the claim that a dried "vaccine' against the plague of definite strength and admitting of preservation was for the first time prepared by myself in collaboration with Dr Galeotti, as is shown by papers published in different periodicals in 897 and 1898 [2]

The method followed by us can be briefly described When plague microbes are cultivated on large agar agar plates they form a thin layer which is scraped off from the surface of the solid culture medium and treated with caustic potash By the strong alkali the microbes are not only killed but are also completely disintegrated and dissolved To the resulting solution, which is of a mucilaginous consistence, acetic acid is added till a white and flocculent precipitate is thrown down which changes on drying to a brown amorphous mass without losing its properties This precipitate is a nucleo proteid free from the metabolic products of the plague bacteria and when used for immunisation it is dissolved in a solution of carbonate of soda It is usually dried in vacuo and can afterwards be kept in sealed bottles and dissolved again in determinate proportions

The immunising properties of this "vaccine were fully demonstrated by numerous experiments made in the Pathological Laboratory at Florence and in the Parel Laboratory at Bombay at different times from 1897 to 1900 These experiments were performed on rats, rabbits guinea pigs, monkeys &c As regards the human subject, it was tried with good results in Florence in Bombay and in Australia, applications for it being made by the medical men of several towns of that country on the occurrence of the recent plague epidemics For the present it is prepared in the Vaccine Institute in Berne under Professor Tavel s direction

With this ' vaccine it is very easy to obtain a high degree of immunity in the human subject without any of those ill effects which follow inoculations made with other prophylactics—ill effects due to the impossibility of standardising the liquid and to the presence of other substances which are pathogenic without being in any way immunising By our method we isolate the only substance—the nucleo-proteid—by which immunity is produced and nothing but this substance is inoculated in proper doses, well dissolved in water and therefore in the best conditions for rapid absorption On the contrary, by Professor Calmette s method not only the active nucleo proteid but other substances composing the bodies of the bacilli are introduced into the organism and their solution and diffusion in the tissues are more difficult and slow

Therefore if Professor Calmette s claim of having obtained a better ' vaccine than Haffkine's is justified we can claim to have produced the best prophylactic of any since our "vaccine has not only the advantages shown by Professor Calmette s but also the other ones which have been mentioned above

I am Sirs, yours faithfully,
PROFESSOR A LUSTIG
Florence Nov 30th 1900

KIRKES' PHYSIOLOGY AND AMERICAN PIRACY.

To the Editors of THE LANCET

SIRS —Some months ago Mr John Murray publisher and proprietor of Kirkes' Physiology drew attention by letters to the press to the fact that an unauthorised edition of a book bearing the same name was being published and sold in America It may interest your readers, particularly those who have had to grapple with questions of international copyright, to know that this reprehensible proceeding still continues In fact a fresh edition of the unauthorised version has just appeared. In a recent number of the *Boston Medical and Surgical Journal* the following note is appended to reviews of the two rival editions:—

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[1] THE LANCET, Nov 10th p 1366 Nov 17th p 1454 Nov 24th, p 1522.

[2] Deutsche Medicinische Wochenschrift, 1897, Nos. 15-19, Brit. Med. Jour, vol I, 1897 p 1027 and No. 2041, 1900

> It seems strange to the uninitiated on reading the above reviews to find two books, both called "Kirkes' Handbook of Physiology"; the reader will naturally stop and wonder which is the book. To explain this peculiar anomaly, by giving a short history of "Kirkes' Physiology," this note is written. About the year 1850 Dr. Kirkes, with the aid of the late Sir James Paget, produced in England "Kirkes' Handbook." This book, in vulgar parlance, "filled a long-felt want." It passed through many editions until at last Kirkes died; then, after passing through various minor changes, the editorship of the volume was assumed by Mr. Baker and Dr. Harris, and by them the book was kept up to date, Mr. Murray, the publisher, owning the book. In this country the book was reproduced by Lea Brothers and Co., and by them sold to Messrs. Wm. Wood and Co. (What they sold is a mystery, as they had no rights to sell.) This firm never had permission to use either the late Mr. Baker's or Dr. Harris's name in connexion with their publication. Still the publication and the sale went merrily on. Over four years ago Dr. Harris and Mr. Baker resigned their offices as editors. Mr. Baker is now dead and Professor Halliburton assumed sole control, producing the present English publication or Blakiston's American edition. Although Mr. Baker and Dr. Harris have had no connexion with the book for over four years Messrs. Wm. Wood and Co. still produce a "Kirkes" claimed to be edited by these men and revised for American consumption by Warren Coleman and Dr. Charles L. Dana. In Wood's edition under review several illustrations can be seen (those on blood crystals) which have been lifted bodily from Halliburton's edition and no acknowledgment made. There is also a remarkable similarity between the two editions in parts of the text. Perhaps this may be explained by the theory of telepathy. Of the two editions I understand that Blakiston's is the only edition published in this country with the owner's permission and from which the editor, Professor Halliburton, receives any remuneration. However, the present unfortunate state of international copyright law places no legal obstacles in the way of Messrs. Wood and Co.'s producing the book as they have done, but there is no doubt that fair-minded people will be shocked to find that in the noble profession of medicine men are found who assist in such questionable proceedings, even after personal protests not only from Mr. Murray, the owner, but also from Professor Halliburton. To sum up the whole matter, it simply means that Blakiston's is the authorised edition, while Wood's is not. *O tempora, O mores!!*

This statement is substantially correct. The figures of blood crystals which are specially mentioned as having been "lifted" were in the handbook before I assumed control. But other figures which have been added during my editorship have been pilfered. So that the ethics of the case remain unaltered. The editor of the *Boston Journal* is to be thanked for the determined stand he has made in the matter in the interests of international honesty.

I am, Sirs, yours faithfully,
W. D. HALLIBURTON.

King's College, London, Dec. 6th, 1900.

"SUGGESTIONS FOR THE PRACTICAL TREATMENT OF TYPHOID FEVER."

To the Editors of THE LANCET.

SIRS,—In Dr. W. Ewart's interesting paper on the treatment of typhoid fever published in THE LANCET of Dec. 8th he refers to the beneficial effects resulting from the administration of 20 minims of the liquor hydrargyri perchloridi with 15 or 20 minims of the tinctura ferri perchloridi every six hours—a plan recommended some years ago by Mr. W. B. Wedgwood of King's Lynn. Whilst fully endorsing Dr. Ewart's statements I nevertheless think it well to point out that the administration of the perchloride of iron should generally be restricted to those cases of typhoid fever in which diarrhœa is a prominent symptom. If there is a tendency to constipation other remedies may be used more advantageously.

Both the perchloride of mercury and the perchloride of iron act as germicides. That this is the case with mercury is well known. After being absorbed into the system it is afterwards largely eliminated by the mucous membrane of the intestines, both large and small, and so comes in direct contact with diseased surfaces. The perchloride of iron is also a germicide. It readily parts with some of its chlorine and so may be regarded more as a preparation of chlorine than of iron. To show that this is the case it is only necessary, as Professor Binz[1] has pointed out, to add a drop of the tincture or solution of perchloride of iron to a solution of potassium iodide mixed with a little mucilage of starch when a deep blue colour is produced, precisely as if pure chlorine water had been added. Tincture of guaiacum, the well-known test for nascent oxygen, also acquires a blue colour on the addition of a drop of the iron solution. The beneficial effect of the remedy is therefore, in my opinion, due chiefly to the chlorine which it readily gives up, and its action consequently must be exerted chiefly, if not entirely, on the contents of the stomach and duodenum. When there is a tendency to constipation I think that there is some risk the administration of iron of increasing both the tion and the pyrexia. In such cases a solution of euchlorine made from potassium chlorate and strong hydrochloric acid may be used as a drink from time to time instead of the perchloride of iron. The administration of euchlorine water, too, is also to be recommended in preference to iron for those individuals (and the number is not small) whose stomachs will not tolerate ordinary doses of the latter remedy.

Furthermore, the question arises whether calomel is not a better remedy in typhoid fever than corrosive sublimate. The former reaches the lower part of the small intestines before it is converted into the latter, and so acts more directly and specially upon the lower part of the ileum, where, as we know, the morbid changes are generally most marked.

In 1893 I discussed in THE LANCET[2] the action, not only of calomel in typhoid fever, but also of other remedies, such as the subnitrate of bismuth, tannic acid, oil of turpentine, &c., all belonging to the germicide class, and to that paper I would refer those who are interested in the subject. As I there pointed out, these are all old remedies—germicide remedies—their use, though empirical, suggested and adopted as a result of the keen clinical observation and experience of the physicians of a bygone age. The scientific investigations of the present day are only teaching us now how to employ these remedies with greater precision.

I am, Sirs, yours faithfully,
P. W. LATHAM,
Consulting Physician to Addenbrooke's Hospital, Cambridge.

Cambridge, Dec. 8th, 1900.

"THE TREATMENT OF SPRAINS AND OF SOME FRACTURES."

To the Editors of THE LANCET.

SIRS,—The address by Mr. Tubby on this subject is of much interest. As you have on two former occasions[1] been good enough to insert in THE LANCET communications by me relating to the treatment of recent sprains and dislocations by movement I would ask your permission to recur to the subject. After a pretty extensive experience of treatment by pressure by cotton-wool and bandage and also by strapping, especially at the time when Mr. Cotterill first published his book, which at present I am sorry I cannot lay hands on, I have a very decided preference for the movement treatment. Mr. Tubby says that there are two methods of treatment, one of which is by "rapid forcible movement immediately after a sprain." Then again, he says, referring to the treatment by mobility from the first: "It is one which can only be employed in very slight cases and even then with some misgiving, for in certain patients the symptoms instead of rapidly clearing away become more pronounced and permanent thickening and disability of the joint remain."

Is it necessary to use rapid forcible movement? My opinion is that forcible movement is generally employed (as a rule successfully) by the bone-setter after a patient has been under treatment by immobility for some time. A recently sprained joint is extremely painful and has at first to be handled very tenderly. Only very slight friction and squeezing can be borne. As the pressure is gradually increased the patient is encouraged to move his joint till flexion and extension are as complete as possible. No force is used. In the case of the ankle on attempting to walk the expression of surprise on the patient's face denotes that there is a considerable difference in the state of his joint. I am not speaking from the experience of a few cases, for I have employed movement in the treatment of recent sprains and dislocations for a good many years. I have used it for sprains of every degree of severity. Impairment of the usefulness of a joint may remain after a sprain, no matter what kind of treatment has been employed. I cannot remember any occasion in which I have regretted treating a sprained joint by movement instead of by any other method.

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[1] Binz's Pharmacology: Sydenham Society's Translation, vol. ii., p. 46.

[2] Some Remarks on the Pathology and Treatment of Typhoid Fever, by P. W. Latham, M.D. Cantab., F.R.C.P. Lond., and Arthur C. Latham, B.A., Balliol College, Oxford, THE LANCET, March 4th and 11th, 1893.

[1] THE LANCET, Feb. 2nd, 1898 (p. 465), and June 18th, 1[illegible] (p. 1756).

I am, Sirs, yours faithfully,
Galashiels, N.B., Dec. 8th, 1900 WILLIAM DOIG, M.D. Edin.

"SOME NOTES ON CASES OF MOVEABLE KIDNEY."

To the Editors of THE LANCET.

SIRS,—IN an article under the above heading by Dr. H. Davy, in THE LANCET of Dec 1st last, occurs the following statement: "Shortly after complete obstruction supervened and it was thought advisable, after consultation with Mr. A. J. Cumming, to perform lumbar colotomy. Mr. Harris performed colotomy in the ordinary way and he performed a most difficult operation extremely well, for he found the colon *completely empty*, and it is a matter of some difficulty to perform colotomy on an *empty* colon. Within a week the patient died," &c. The italics are mine. It would be of interest to hear what benefit was expected from this remarkable procedure. I am, Sirs, yours faithfully,

C. HAMILTON WHITEFORD.
Sussex-terrace, Plymouth, Dec. 8th, 1900.

"ARTHRITIS AND APPENDICITIS."

To the Editors of THE LANCET.

SIRS,—As a contribution to the discussion on the occurrence of arthritis in cases of appendicitis, reported in THE LANCET of Oct. 27th, p. 1203, may I recall the fact that French writers have often described arthritis as a complication of dysentery and in the discussion at the Medical Society of London Mr. F. C. Wallis referred to cases in connexion with ulceration of the bowel? This complication of dysentery appears to be very rare in India, but to judge by the amount of space devoted to it in French books on tropical diseases it must be more common in the dysentery of temperate climates In his recent book, "Maladies des Pays Chauds," M. Brault devoted no less than ten pages to the discussion of what he calls "le pseudo rhumatisme infectieux dysentérique," whereas the complication is not mentioned in Manson's "Tropical Diseases." It is certainly very rare, but I have recently met with one case in which on the third day the bowel symptoms suddenly ceased and well-marked arthritis of both knee-joints took their place.

I am, Sirs, yours faithfully,
W. J. BUCHANAN, M.B. Dub.,
Bhagalpur, Bengal, Nov 20th, 1900 Major I M.S.

THE USE OF COPPER FOR ELECTRODES.

To the Editors of THE LANCET.

SIRS,—I notice that in the last edition of Dr. Lewis Jones's work on "Medical" Electricity, as in most of the textbooks on the subject previously published, the electrodes to be employed in giving various kinds of electric baths are recommended to be made of copper. Now electrodes made of this metal rapidly discolour and corrode under the influence of the products of electrolytic decomposition of whatever fluid is used for the bath, and consequently are troublesome in use. I have been using for the last two years electrodes of thin sheet aluminium and find them practically untarnishable in the solutions usually employed and in every way much more suitable. In the case of aluminium the terminals should be clamped on, as soldering the metal is difficult and unsatisfactory. Possibly the hint may be of use to those of your readers who use electric baths in their practice.—I am, Sirs, yours faithfully,

RICHARD J. COWEN, L.R C.P. Irel., &c.
Clarges-street, Mayfair, W., Dec. 11th, 1900.

"OUR WIDOWS AND ORPHANS."

To the Editors of THE LANCET.

SIRS—I have read the letters of Mr. Heath and Dr. Cullingworth in THE LANCET of Nov. 17th (p 1459) and Dec. 1st (p 1610) respectively, pointing out the advantages of joining the Society for the Relief of Widows and Orphans of Medical Men.

May I ask, through the medium of your columns whether the scope of the society cannot be extended so as to include subscribers practising in any part of England? I do not know of any other society doing similar work, yet the benefits offered by the society are open only to those practitioners who join while they are living within the radius of 20 miles from Charing Cross.

There must be a large number of men who, like myself, never heard of the society when they were in London, and would now very gladly subscribe. Cannot something be done for us? I am Sirs, yours faithfully.

Dec. 3rd, 1900. A COUNTRY DOCTOR.

To the Editors of THE LANCET.

SIRS,—Thank you for your note *in re* medical charities, but let me have my growl. I have never been asked for a subscription until now for Epsom College and have often wondered how the institution was financed. As to the British Medical Benevolent Fund, I never heard of it before. How many practitioners are similarly placed? Why not present to every man an appeal when he receives his certicate of registration?

I am, Sirs, yours faithfully,
Dec. 8th, 1900 A.K.C. LOND.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Great Rise in Plague Mortality.—The Famine.—Decoration of Bombay Plague Nurses.

I HAVE to record for the week ending Nov. 18th a great rise in the mortality from plague throughout India, largely due to the recrudescence of the epidemic in Bengal. The deaths were 2963, a rise of 776 on the previous seven days. In Bengal the deaths were 583, a rise of 242 The death-roll is increasing in all the affected districts which are Gaya, Saran, Patna, and Monghyr. For the corresponding week of last year the deaths from plague throughout India were 2968, so that the general condition of things can hardly be said to have improved. The Mysore State is still suffering heavily and records 932 deaths, as against the previous return of 831. There is a decided decrease in the Bombay Presidency as well as in Bombay city Information has just been published from Lahore of an outbreak of a very virulent type of plague at Darnam in Gurdaspur district. It is said that the death-rate in Hissar is appalling and the people are all seriously debilitated from the prolonged famine. Plague is rapidly going down in Poona. Both the cities of Calcutta and Bombay continue to return very high death-rates. For the past weeks of November the rate in Calcutta has been about 45 per 1000 per annum—the average being only 35 For the same period in Bombay it has been about 47 5 per 1000. In both cases also there is no satisfactory explanation given of the increases. In Calcutta cholera and small-pox are only about the average, but there is an increase under fevers and bowel complaints and especially under "all other diseases." Plague deaths are now merely nominal. In Bombay much of the increase seems to be recorded under phthisis and diseases of the respiratory organs. Large numbers of people from the famine districts have immigrated to Bombay and it has been found necessary to convert the old Grant-road Plague Hospital into a sort of workhouse infirmary where Mrs. Adams Wylie is distinguishing herself in nursing and charitable work.

The numbers under famine relief will soon cease to be published, as the decrease during the past week has been nearly 250 000 and at the present time the total under relief is only 554,787. The Bombay Presidency and the Central Provinces continue to be the chief districts afflicted, but the Baroda State and some of the Bombay native states still record large numbers.

Even after a considerable lapse of time it is pleasing to note the recognition of services of some of the plague nurses during the earlier periods of the epidemic A presentation lately took place in Bombay by Lady Northcote to three nurses who have especially distinguished themselves in connexion with plague work in the city. Nurse Leavers, Nurse Remy, and Sister Mary Edith have been made Honorary Nursing Sisters of the Order of St. John of Jerusalem and the presentation of the badges and diplomas were formally made to them. It must not be forgotten that there are at least a dozen others who have worked equally well and arduously. Many of these were mentioned by name at the public meeting, but honours and decorations can only fall to a few.

Nov. 22nd.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

University of Birmingham.

THE Principal of the University, Dr. Oliver Lodge, delivered an address to the students on Nov. 28th on the Aims and Hopes before them in the new University. There was a crowded audience, the chair being taken by the Vice-Chancellor, Alderman Beale. This was the first public occasion on which the University assembled as such, and much interest was exhibited in the proceedings. Defining the term "university," the Principal spoke of it not as a building, but as a society—an assemblage of students combined together for mutual help and coöperation. "Unity of aim and diversity of method" was the keynote of valuable and forcibly expressed statements as to "the production of strong and useful citizens to go out to the furthest limits of the great English-speaking commonwealth" in different capacities and there to serve their kindred and their race in a hundred different ways. A students' council was suggested and the social and recreative side of the student's career was emphasised. Many important suggestions were made in the course of the address which was illustrated by appropriate similes and humorous allusions. High ideals and lofty aims were set before the students as part of the thoroughness which ought to characterise their efforts. In language gracefully expressed, yet in dignified terms, the Principal sketched the aspirations of a great university and foretold the vast influence for good such an institution would bring to bear upon the community at large. The address was listened to with much interest and unanimous opinions were expressed as to its excellence and power. Already the effect of some suggestions made has been witnessed to by the appointment of student representatives on the council of the University.

Some Criticisms.

But already some rifts have appeared in the lute, though of somewhat unimportant character. The University has had a seal made which is intended to embody certain traditions in its symbolic features. Among others the derivation of the name of the city of Birmingham is represented by sprays of "broom" around the margin of the seal. This, competent critics declare, is entirely an error and that the word "Bromwicham" or "Bromicham" dates from the seventeenth century only, whereas the town existed long before. If this derivation was really the true one there would be some justification for the appellation of "Brummagem." History shows that we are influenced much by phrases, and if the unreal enters as an element into these heraldic bearings some obloquy may be associated with the place itself. Again, complaints have been made that the fees of the University as charged to students are too high. There is no ground whatever for this allegation. They are calculated at about the same rate as—or even lower if anything than—the English university colleges and are not intended to compare with Scotch universities where the Government grants and conditions are entirely different.

The Consultative Medical and Surgical Institution.

In consideration of the finding of the General Medical Council the authorities of this institution have agreed to withdraw and as far as possible to recall all advertisements relating to the medical aspect of its constitution. This resolve was the subject of a communication to the Council during the recent sitting, but that body wisely determined not to entertain it as their judgment is not to be pronounced until next May. In the meantime much controversy and some bitterness are being shown concerning the methods of those who promote the cause. The epithet of "street doctor" applied by the leading spirit of the movement is an uncalled-for and unnecessary term, which has provoked much rancour and recrimination. The institution may fairly be allowed to stand or fall upon its own merits. The opinion of the profession being expressed in clear and unmistakable terms it is confidently expected that the misjudged "philanthropy" which started it will meet with its decline and fall in due time.

The Dental Hospital.

The forty-first annual meeting of the subscribers and friends of the Dental Hospital was held on Dec. 7th. The report showed a balance of £493, of which £450 would be reserved for building at the expiration of the lease. The mechanical department showed that the supplying of artificial teeth would prove one of the most important parts of the future work. The necessity of building a new hospital was conclusively demonstrated. In 1900 there were 27,273 cases, including 15,669 extractions, while the value of the work had increased tenfold. It was estimated that a new building would cost £10,000, while £5000 would be required to fit it up Some allusion was made to the influence of the new water-supply upon the teeth. Various votes of thanks were then passed.

Birmingham Musical Festival.

On Dec. 7th the Board of Management of the General Hospital received a cheque for £6009 6*s.* 7*d.* from the Orchestral Committee of the late Musical Festival, being the profits from this year's performances. On three previous occasions only has this amount been exceeded—namely, in 1870, 1873, and 1876.

Dec. 11th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Chemists and Arsenical Beer.

AT the meeting of the Manchester Section of the Society of Chemical Industry on Dec. 7th some conversation took place on the subject of beer-poisoning. The chairman (Mr. H. Grimshaw) said that though they had heard so much on the subject there was little that was definite. Mr. J. Carter Bell had found that many of the processes for detecting arsenic which he had tried did not work satisfactorily. He had not come across any sample of beer "loaded," as had been said, with arsenic, but he had returned the quantity found in a bad sample as "0·2 of a grain calculated as arsenious acid in one gallon of beer," so that 100 gallons of beer would contain about two grains of arsenic. He added that the Marsh test had not proved trustworthy in showing minute traces of arsenic in beer, which as ancient history was interesting. Mr. Duncan stated that he had often had to test for arsenic and he had found in beer one-tenth of a grain to the pint. This was outside Manchester and before anything had appeared in the papers. He was asked to look for lead, antimony, and tin, which he did not find, but tested for arsenic, which he did find. Dr. Gerland spoke of the difficulty in using the Marsh test caused by the presence of organic matter. Mr. F. Scudder considered that in testing for arsenic in beer at least a litre should be used. He thought that it was important to ascertain the toxic effect of arsenic when combined with alcohol. "It was" said to be "in some cases customary for a man to drink two gallons of beer, and it might be that while 0·04 of a grain of arsenic would not of itself produce ill-effects it might when combined with alcohol have a particular therapeutic effect." As was to be anticipated, the epidemic of arsenical poisoning—or to put it differently, of peripheral neuritis associated with the drinking of beer—has been widespread, but as the authorities are on the *qui vive* and the public have been abundantly warned it may now gradually subside. There seems to be a general hope that this lamentable visitation may lead to the use of malt and hops again, free from the intrusion of "substitutes."

The Manchester Corporation and Beer-poisoning.

It was officially announced yesterday by the Sanitary Committee of the Manchester Corporation that the brewers and retailers of certain beer in samples of which the city analyst has found arsenious acid are to be prosecuted. Dr. J. Niven, the medical officer of health of Manchester, has written to the honorary secretary of the Confectioners' Association stating that in three samples of glucose, two used in making cheap sweets and one used in making jams, no trace of arsenic was found.

Manchester Volunteer Medical Staff Corps.

A further appeal for funds is being made by the Volunteer Medical Staff Corps of Manchester to enable them to provide suitable headquarters and drill accommodation. A first subscription list is being prepared which is headed by Honorary Surgeon-Colonel Walter Whitehead with £100 The sum required will not be less than £12,000. Each company consists of four officers, three of whom must be qualified surgeons, and 100 men. The latter are drawn from all classes. The artisan, the clerk, the labourer, the warehouseman, the railway porter, the student, may all be found in the ranks. They are trained in drill, nursing, physical exercises, "first aid," and in the safe and easy transport of the sick and wounded on stretchers, on hand seats, in wagons, cacolets, railway trains, &c.; further, as the men have to drive the ambulance wagons, some are trained in riding and driving and in the care and management of horses. Almost nightly work is done in Manchester and the corps goes for training every year alternately to Aldershot and to the hospital at Netley. The strength of the corps equals that of the London corps, which speaks much for the zeal and activity of Manchester and the district, but it suffers from want of adequate and proper quarters. This body of men is fitted for useful work in peace or war, for in cases of accident their training must make them the most skilful and best disciplined helpers, and in case of threatened or actual invasion they would be prepared to do their duty to the full, as witness the work done by volunteers from the corps in South Africa. Even if the wave of self-sacrificing patriotism is less evident than when it first arose, the £12,000 asked for will be well spent if considered as part of the insurance premium which our country must pay for the blessings of peace. Manchester will not act up to its reputation if this appeal does not meet with a generous response.

The Ancoats Hospital.

At the annual meeting of the friends and supporters of the above hospital it was stated that an offer of £10,000 had recently been made by an anonymous donor to the hospital for the purpose of providing a convalescent home. The committee hope soon to be able to provide a comfortable home for 12 men and 12 women. A site has not yet been secured, and Mr. E. S. Heywood, chairman of the Manchester Royal Infirmary Board, advised the committee not to be in too great a hurry in deciding on a site, and "to select for the convalescent home a place where there was a little life, and, consequently, something going on that would prevent the patients from feeling dull." This advice is no doubt sound, for among the class from which the patients come there are few who would not soon feel bored by the peaceful quiet of even the most beautiful park-like scenery if it were unenlivened by human interest.

Charitable Bequests.

Under the will of the late Mr. F. Rothwell, a Manchester brewer, a sum of £24,000 has already been distributed to various public institutions and a further sum of £14,999 has been paid into the Chancery Court of Lancashire to be distributed according to a scheme approved by the court, and of this about half goes to Manchester and Salford charities, the various medical charities benefiting to the amount of £3200.

Dec. 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Society of Edinburgh.

AT the monthly meeting of the Royal Society of Edinburgh, held on Dec. 3rd, Dr. Richard J. A. Berry, Edinburgh, read a paper on the True Cæcal Apex, or the Vermiform Appendix, its Minute and Comparative Anatomy. The lecture was illustrated by lantern slides. Little had hitherto been done, the lecturer said, in the investigation of the comparative anatomy of the vermiform appendix. In his own investigations on this subject he had used three types of animals—the rabbit, the cat, and the pigeon. He found that in the majority of animals examined the lymphoid tissue in the cæcum was largely in excess of that contained in other parts of the large intestine. The line of demarcation between the two was in many instances, such as the pigeon, the rabbit, the cat, the mouse, the rat, the dog, and the striped hyæna, most sharply marked. The cæcum was thus in warm-blooded animals and the higher vertebrates a special seat of lymphoid tissue. Furthermore, the vermiform appendix in man represented the true apex of the cæcum. It was further proved beyond all doubt that the characteristic feature of the normal human appendix was lymphoid tissue. All those facts led to the conclusion that the homologue of the vermiform appendix in animals was the cæcum. He had shown in his work on the subject that in animals the seat of the lymphoid tissue in the cæcum varied considerably. In the pigeon it occupied the entire cæcal wall, in the mouse and rat the lateral wall of the cæcum near its apex, while in most animals it was found to be collected at the apex of the cæcum. Assuming the view to be correct that the lymphoid tissue tended to be collected into a specially differentiated portion of the cæcum, it might be expected from a knowledge of the laws of evolution that occasionally an appendix would be found in some of the lower animals. This was actually the case in two of the lower animals, the wombat and the capybara His conclusions were: (1) that lymphoid tissue was the characteristic feature of the cæcal apex (the vermiform appendix of man was therefore represented in the vertebrate kingdom by a mass of lymphoid tissue situated usually at the cæcal apex); (2) that as the vertebrate scale ascended this lymphoid tissue tended to be collected together into a specially differentiated part of the intestinal canal—the vermiform appendix; and (3) that the vermiform appendix was therefore not a vestigial structure, but a specialised part of the alimentary canal.

Professor Chiene on his South African Experiences.

On Saturday, Dec. 1st, Professor John Chiene delivered a lecture to the members of the Edinburgh University Union on the views and impressions which he had formed during his stay in South Africa. He gave an outline of his journeys in Cape Colony, Natal, the Orange River Colony, and the Transvaal, and then described the various hospitals which he visited as consulting surgeon He had been able to do a good deal for the wounded at Mafeking, having arrived there just two days after the relief of the town. He described the Edinburgh Hospital at Norval's Pont. He hoped it would long remain a hospital at this or some other important point on a main line of railway, and that many of our soldiers would get much benefit in time to come within its walls. Everywhere he went he met old students of Edinburgh University, from whom he had received the greatest kindness. It was an interesting fact that three of the hospital trains at the front were in charge of Edinburgh men. In the course of his journeys he had met Dr Pretorius, with whom he had a conversation. He had never come in contact with any British soldier who had been under the charge of the Boer doctors who had not expressed to him gratitude for the kindness they had received at their hands. Professor Chiene spoke highly of the various hospital trains. On his way home he visited St. Helena and met there some of his Boer friends whom he had seen at Mafeking. He had been glad to help them at Mafeking and they were equally glad to see him at St. Helena, where he found them looking well and as if well fed. He had there become acquainted with Cronje and his wife. Cronje had spoken to him of all the kindness he had received at the hands of the British.

The Health of Edinburgh.

The report of Sir Henry Littlejohn on the health of Edinburgh in October was submitted to the Public Health Committee of the town council on Nov. 27th. The report showed that on that date there were 320 patients in the City Hospital for Infectious Diseases. Of these 43 were cases of diphtheria, 25 of typhoid fever, 147 of scarlet fever, and 81 of measles. These figures show that there is a large increase in the number of cases of diphtheria, there being usually only 14 or 15 cases of that disease in the City Hospital. There did not appear to be any definite source of infection.

Glasgow University Club, London.

The members of this club dined together on the evening of Dec. 5th, at the Café Royal, Professor Sir Hector C. Cameron, M.D., being in the chair. There was a large attendance, and among others the chairman has supported by Lord Lister, Sir J. W. Batty Tuke, M.P., Sir W. T. Gairdner, K.C.B., Surgeon-General Jameson, C.B. (Director-General of the Army Medical Service), Major Babtie, V.C., C.M.G., and Dr. W. Bruce. The toast of "The Queen" having been duly honoured, the chairman proposed "The Club" and in so doing referred to the extensive scheme for the provision and extension of laboratory accommodation upon which the University authorities in Glasgow are at present engaged. The financial aspect of this scheme was necessarily a somewhat anxious one, but it could not be doubted that the money required would be forthcoming. In 1901 the University would celebrate its ninth jubilee, and the occasion was to be marked by an elaborate series of academic ceremonies, and he hoped also by substantial additions to the University resources. The next toast, submitted by Surgeon-General Jameson, was "The Health of Major Babtie, V.C., C M G.," who is a graduate of Glasgow University and who gained the Victoria Cross at the battle of Colenso for his heroism in going forward under a heavy fire to attend to the wounded and to succour the late Lieutenant Roberts, V.C. Sir William Gairdner spoke a few words in support of the toast, which was drunk with Highland honours. It was announced that Major Babtie had been elected an honorary member of the club. The other toasts included "The Guests," proposed by Mr. James Campbell, M P., to which Sir J. Batty Tuke replied, and "The Chairman," proposed by Lord Lister, who made some interesting references to his association with Sir Hector Cameron in the Glasgow Royal Infirmary where the early developments of the antiseptic system first took practical form. The dinner was marked by much enthusiasm and was, in every sense, a conspicuous success.

An Important "Skim Milk" Case at Glasgow.

Decison has just been given in an important test case, in which, under the Food and Drugs Act, at the instance of the corporation, a dairyman was charged with having sold as "skim milk" milk which was deficient in fat or cream to the extent of 0·72 per cent. Evidence had been given by experts from Glasgow, Edinburgh, and London, and by many prominent farmers, dairymen, and sanitary officials. The milk in the case in question had not been skimmed by hand but had been "separated" by mechanical means till only 0·28 per cent. of fat remained in it, and the question came to be simply whether such milk could properly be sold under the name "skim milk" or whether it ought not to be labeled distinctively as "separated milk." It was not a question of adulteration, but of the extent to which fat may be removed from milk. The prosecution drew the line arbitrarily at 1 per cent. of fat and held that unless at least this percentage is left the milk is not of the "nature, substance, and quality" of the article demanded by a purchaser who asks for skim milk. The respondent refused to accept this 1 per cent. standard, or any other standard, and boldly claimed the right to remove the entire fat if he could and still to sell it as skim milk. It was common ground among the witnesses that milk is still milk though all its fat be removed, so that its nature is not changed; it was also commonly admitted that, apart from its fat, milk contains other valuable food constituents which are not affected by the mechanical removal of the fat The sheriff put aside the argument as to danger to infant life from the use of such milk, as even the 1 per cent standard insisted on by the prosecution fell very far short of the proportion of fat requisite for a child fed on milk alone Further, the Acts did not profess to regulate diet or to prescribe the proper food for infants and did not condemn any article which was good for food merely because if wrongly used it might be injurious to health. The Acts only held a retailer to be in default if he sold an article which was not what he represented it to be. It was held now that the machine skimmer did not alter the nature, substance, or quality of the milk and was therefore not struck at by the Acts, and this view was strengthened by the fact that the machine did not necessarily remove the fat to a greater extent than did hand skimming, or it might be regulated so as to remove a greater or smaller proportion. The amount removed by hand depended on the length of time during which the milk had stood and the deftness of the skimmer, and even hand-skimmed milk might contain less than 1 per cent. of fat. Somerset House authorities had therefore so far refrained from drawing a hard-and-fast line. Sheriff Fyfe went further, being evidently inclined to the view that the increased degree to which the fat was removed was compensated for by the freshness and cleanliness of the machine-skimmed milk. Such milk was not usually allowed to stand for varying lengths of time in shallow dishes, but was at once treated and the centrifugal force employed seemed to be calculated to separate all possible impurities (bacterial and others) from both milk and cream. [The sheriff might also have stated that milk is usually sterilised before being treated in the separator.] In the absence of a standard of fat for "skim milk" the decision went against the prosecution—"the article of
commerce known as skim
description whether the fat in
cent., or nothing." The learned
less right enough as an interpreta
subject, but it makes clear the
distinctive labels, as "milk,"
"separated milk," and the fo
standard for each. Milk from wh
removed is properly a fluid prepare
is not.

Aberdeen Royal Inf

It is announced that a munificent d
be received by this infirmary from Lor
Dec. 11th.

IRELAND.

(From our own Correspo

Sir William Thomson.

At the request of the Lord Lieuten
William Thomson has consented to r
remainder of His Excellency's period of o
position as surgeon in-ordinary to the house
tion of which he had placed in the Lord L
on receiving the appointment of surgeon-in
Queen in Ireland.

Address and Presentation to Dr. Ma

Dr. Edward Magennis was the recipient of
presentation from the representative inhabitan
of Lurgan and the surrounding districts on D
occasion of his giving up the large practice
enjoyed there for 20 years and changing his
Dublin. Dr. Magennis has filled many importan
Lurgan and the county Armagh. He is a justice
of the counties of Armagh and Down. He grad
Royal University in 1884 and is a Licentiate o
College of Physicians and the Royal College of
Edinburgh.

The Nursing Question in Armagh Union.

At the weekly meeting of the Armagh Guar
Nov. 27th an important discussion took place on th
question. Some months ago the guardians sel
assistant in the infirmary a probationer nurse, an
ment which the Local Government Board refused to s
and three months afterwards the guardians were fo
dismiss her as the Local Government Board refu
sanction the appointment. The same central author
Dublin wrote to the master and medical officer statin
they would hold them responsible for the proper nursi
the sick in the infirmary and referring them to the n
order of September, 1897, where, acting under the requis
of the medical officer, the master was bound to appoi
qualified nurse until the next meeting of the board.
medical officer of the infirmary having requisitioned
master he procured the services of a trained nurse
assistant in the infirmary, and the matter coming before
board of guardians at their next meeting they una
mously refused to sanction the appointment or to ha
anything to say to it, and by their direction the
solicitor was told to take the advice of The MacDermot
Q.C., on the following questions. Whether the Loca
Government Board were acting within their powers when
they authorised one officer of the union, the master, to
employ another officer, the temporary nurse. If counsel
was of opinion that the Local Government Board were
acting within their powers, in so doing, the guardians
desired to be advised whether the master was authorised to
continue the services of the nurse from week to week con-
trary to the wishes of the guardians, expressed in their
resolution; whether the guardians were liable to pay all or
any part of the remuneration due for the services of the
assistant nurse appointed; and whether, under all the circum-
stances of the case, the guardians were compelled to appoint
a permanent assistant trained nurse, or whether the guardians
had complied with all lawful requirements when they
appointed a probationer nurse, which appointment the Local
Government Board refused to sanction. The MacDermott
advises the guardians to contest the case and gives his opinion
that the guardians were correct in their action. He recom-
mends that a notice be served on the assistant
affirming her being, or having been, one of

informing her that no payment will be made to her by the guardians, a communication to the same effect being made in respectful terms to the Local Government Board The MacDermott says that the mode in which the question can be raised is by refusing payment, just as in the case of the temporary medical substitute recently decided by the Queen's Bench in Ireland adversely to the Local Government Board It was unanimously decided by the guardians that their solicitor should be instructed to carry out all the recommendations of The MacDermott, Q C The next move must be made by the Local Government Board The guardians are determined to fight

The Belfast Medical Students Association

The inaugural meeting of the Medical Students' Association of Belfast was held on Nov 30th, in the McMordie Hall of the Students' Union There was a large attendance The President, Mr Walter Phillips, B A, medical student, delivered an address in which he traced in a very literary way the relationship of magic, alchemy and astrology to medicine Afterwards Dr J A Craig, demonstrator of anatomy, read a paper on Some Impressions of the Vienna Medical School in which he gave an account of a visit to the school The President of Queen's College, Dr H O Neill Professor T Sinclair, Professor R O Cunningham, and Professor J A Lindsay subsequently addressed the meeting

The Bacterial Purification of the Drainage of Belfast

The corporation of Belfast have very wisely decided to obtain further advice as to the proposed scheme of purifying the Belfast drainage by bacteria beds, and they have appointed Professor G A Letts, D Sc professor of chemistry, Queen's College, Belfast, and Dr J Lorrain Smith lecturer on pathology in Queen's College Belfast as experts to examine and report at as early a date as practicable, on the scheme for purifying the main drainage and on its effect on the Belfast Lough They are to be paid 150 guineas each This course of action is the one which was recommended in THE LANCET of Sept 22nd, 1900, p 909

Health of Belfast

From the report presented to the city council at their monthly meeting on Dec 1st it appears that between Oct 21st and Nov 17th 1900 there were 334 cases of zymotic disease notified the largest number being 127 cases of typhoid fever 48 deaths from zymotic disease occurred The annual death rate from all causes was 18 5 per 1000, which is lower than is usual at this season of the year Scarlet fever of a mild type seems to be prevalent In the discussion which followed the presentation of the report some scepticism was expressed as to the working of the Notification of Diseases Act, it being stated that medical men in better class practices evaded the law in not reporting cases and that the same case was reported by several medical men I doubt these charges, but if they are true it only shows what inadequate measures are taken by the public health officials to see that the law is properly carried out

Extraordinary Rainfall in November

November has been in Ulster a very wet month, the rainfall reaching 6 06 inches, being 1 65 inches more than in the corresponding month of last year 1 50 inches more rain have fallen in the 11 months of this year than fell in the corresponding period of 1899, this being due almost entirely to the excess of the amount in last month Only 11 days in November passed without rain, and in one—Nov 24th—the amount of rain as measured was actually 1 40 inches.

Dec. 1 th.

PARIS

(FROM OUR OWN CORRESPONDENT)

The Drinking water Question

THE "water lords" have at length been moved by the protestations of the public and the press against the half rations system of the supply of spring water at certain times in the year Their works committee has brought forward a plan which will cost 300,000 000 francs, but which will for a long time at least do away with any fear of a water famine The first part of the scheme consists in as soon as possible utilising certain head waters of the Ayre which belong to the city and are at present used for nothing The existing main which carries water from the Avre is of quite sufficient diameter to carry the additional supply The second part of the scheme consists in making use of water from the Val d Orléans, which practically means the taking up of the sources of the Loiret for it is intended to make use of the subterranean springs in that district The city of Orleans, however, and all the towns which are carrying on a campaign in favour of making the Loire navigable, are up in arms against this proposal, but the engineers hope to overcome opposition by the promise that the water taken shall be given back by means of storage basins They hoped, too, that the Soissons greensand would be found to yield water enough to assist very considerably in supplying Paris, but the results of borings have not come up to expectation Before undertaking these expensive works which will necessitate as before mentioned, an expenditure of 300 000,000 francs, it would be as well to notice exactly what are the present conditions existing in the city of Paris and to consider whether this new and costly source of supply is necessary or whether that supply which the Parisians already have could not be better distributed, due precautions being taken to avoid contamination The estimated consumption in Paris averages 230 litres per head per diem but in times of drought this amount is very possibly reduced to 150 litres, which is all the same quite sufficient The scarcity of water is in great part due to the shameful waste of water which occurs in the cooling of "drinks" It takes about 200 litres of water to cool two bottles of water and one bottle of wine There must also be taken into consideration the idiotic custom of the authorities in making use of spring water for flushing water closets and working lifts The best remedy would be to supply houses with river water for such purposes but for this end pumps would have to be erected which would supply the water at sufficient pressure and the requisite piping would cost about 80,000 000 francs The next remedy would be that every water consumer should use a meter He would thus only pay for what he consumed and waste would be avoided, and he would no longer cool his wine with water which he would find to cost about six times as much as the ice necessary for the same end The establishment of meters would cost the city about 40 000 000 francs, and therefore the carrying out of these two schemes would only cost 120 000 000 francs as against the 300 000 000 francs which the taking up of new gathering grounds would cost In any case the watching committee of the Paris drinking water supply, after considering the report of M Duclaux, Director of the Pasteur Institute came to the conclusion that certain measures should be taken to avoid contamination of the sources of supply already in use These measures are as follows 1 Careful examination of the borings at the springs save in the case of those of the Loing where they have been carried out in the most modern style and with every precaution 2 A protection zone for the gathering ground which shall be in some cases at least 100 square kilometres in area Special medical surveillance is to be exercised within this area and in case of the notification of a case of typhoid fever within this area special measures of disinfection shall be taken as regards every sick person 3 General prophylactic measures such as disinfection of communal gutters and gullies situated within the protected zone and care to be taken that infected waters do not by earth filtration mingle with the springs These rules are of course to apply to any new source of supply which may be hereafter taken up as well as to those at present in use The committee has in hand the question of the admixture of water from different springs and that of the admixture of spring with filtered river water

Obituary.

The death is announced at the age of 83 years of Dr Jules Etienne Bergeron permanent secretary of the Academy of Medicine and Vice President of the Consulting Committee of Hygiene Dr Bergeron was born at Moret in the Department of Seine et Marne in 1817 In 1852 he was nominated, after public competition, as physician to the hospitals and commenced his career at the Rochefoucauld Hospital He also served at the St Antoine and the Trousseau Hospital Dr Bergeron made a great name for himself in the treatment of children and in 1865 he became a member of the Academy of Medicine He had held the post of Vice President of the Consulting Committee of Hygiene since 1884 and had been permanent secretary of the Academy since 1887 Dr Bergeron has left a number of works dealing with rabies, with tinea and with the diseases of children, and a very elaborate treatise upon the Repression of Alcoholism, which last was published in 1872. He was *Officier* of the Legion of Honour.

Dec. 11th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Koch on Malaria.

AFTER a long absence Professor Koch has now returned home, his investigations of malaria being for the present terminated. Following his practice in the case of his first reports which have been already referred to in these columns[1] he has published a final account in the *Deutsche Medicinische Wochenschrift*. His last researches were carried out in the Caroline and Marianne islands where he stopped while proceeding homewards by way of New Guinea and Hong-Kong. As I have already mentioned, Professor Koch insists on the necessity of examining the blood of children in places where the adult population is free from malaria, this being the only way of obtaining reliable results. He, therefore, in Ponape and Saipan examined 79 and 24 children respectively, the result being that neither enlargements of the spleen nor parasites in the blood were detected. Both islands were in fact free from malaria. In both islands he found a great many cases of frambœsia, a disease also termed "yaws" by English medical men. This disease being very little known and therefore often confounded with syphilis Professor Koch suggests that the Colonial Department should send a specialist for diseases of the skin to these islands. From Hong-Kong Professor Koch proceeded to Egypt to make himself acquainted with the contradictory opinions regarding malaria held in that country. He found several cases of malaria in Alexandria and foci of endemic malaria at Heluan, near Cairo, and at Wadi Natrun, situated in the desert in the west of the Nile Delta. In order to include the facts relating to malaria in Germany Professor Koch requested Professor Frosch of the Institution for Tropical Diseases to examine some of the places where the disease had formerly been endemic—as, for instance, on the coast of the North Sea in Schleswig-Holstein. According to the report of this gentleman the disease is rapidly decreasing in Germany, and only a few isolated cases, but no focus, could be detected.

Bactericidal Action of the Ultra-violet Rays of the Spectrum.

In a preliminary communication to the *Deutsche Medicinische Wochenschrift* Dr. Strebel of Munich announces that he has succeeded in ascertaining that certain invisible rays produced by a powerful induction coil are able to kill bacteria. Micrococcus prodigiosus, for instance, is destroyed by these rays in 20 minutes even when thick screens of quartz are interposed. The spark of the induction coil is in any case rich in ultra-violet rays, and by using certain substances as electrodes and a Leyden jar as regulator and accumulator of the electricity the amount of ultra-violet light is considerably increased. Dr. Strebel used aluminium and cadmium as electrodes; in this way he increased the invisible ultra-violet portion of the spectrum so much that it became four times longer than the visible part. The ultra-violet light was made visible by projection on a screen of barium platino-cyanide. Dr. Strebel has found that in the apparatus of Professor Finsen of Copenhagen for the treatment of lupus the ultra-violet rays are almost totally absorbed, so that its bactericidal power depends on the relatively feeble action of the visible blue and violet rays. By this new discovery a powerful bactericidal effect is obtained from light, and the method is made so simple that any form of Roentgen ray apparatus may be employed therapeutically as a source of light instead of the complicated and expensive apparatus of Professor Finsen. Dr. Strebel is now occupied in determining the permeability of certain media by the ultra-violet rays and their action on the different species of bacteria. He is also trying to ascertain whether the rays given off by uranium and radium, of which the action is similar to the x rays, are bactericidal and therefore capable of being used in the treatment of diseases of the skin. A more detailed account will be given by Dr. Strebel in a few weeks.

Some Reforms in the Army Medical Corps.

The Army Medical Department has decided to complete the organisation of the Kaiser-Wilhelm-Akademie, the training school for army medical officers, by the appointment of a "scientific council." According to the *Vossische Zeitung* the council will consist of 15 members under the presidency of the general staff surgeon of the army and its duty will be to advise the Army Medical Department in scientific questions of every kind. The council will deal with questions relating to the curriculum of the students of the academy, the organisation of its collections and laboratories, and the post-graduate study of military surgeons. In addition to questions connected with the academy the council will be consulted in matters of military hygiene, especially the prophylaxis of epidemic diseases, and in difficult judicial cases the council will give a professional opinion when a court-martial requires advice as to the state of mind of an accused person. The names of the members of the proposed council are not yet known, but probably they will consist not only of army medical officers, but also of prominent civilian medical men, hygienists, &c. As the general expenses will be 3000 marks (£150) per annum membership of the council will be an honorary position only. Another reform will be the abolition of the examination for the rank of Oberstabsarzt. This examination was on matters of special military interest only and had to be passed before a special commission in Berlin consisting of military surgeons and Professor Koch, Professor Bergmann, and Professor König of Berlin University. Those who wished to be promoted to the higher ranks in the active as well as in the reserve Army Medical Corps had to present themselves. The reason given by the War Office for the abolition of this examination is that the professional training of army medical officers has at present become so good that a special examination is no longer necessary. The duration of post-graduate courses will be extended from three to four weeks every year, and a greater number of military surgeons will have the opportunity of taking part in them. By these measures the War Office expects to induce civilian medical men in greater number than before to enter the active Army Medical Corps, the members of which have hitherto almost exclusively come from the Army Medical Academy.

Dec. 10th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Discovery of a Statue of Æsculapius in the Roman Forum.

AMONG the recent interesting finds in the Roman Forum is a statue of Æsculapius. It was lying face downwards under the central niche of the large arched space surrounding the Well of Juturna, which has lately been excavated under the direction of Professor Boni. The head of the figure and the middle of the right arm are wanting, but the other parts are well preserved. It represents the god, with a *volumen* (or roll of paper or parchment on a stick) in the left hand, leaning on his staff, round which is coiled the serpent, the symbol of prudence and renovation. Close to the staff is a child, supposed to be Camillus or Telesphorus, the genius of recovery, in the act of bringing the offering of a cock in his left hand and holding in his right hand a small knife with a pointed blade. The well enjoyed a reputation for the salubrity of its water, and this fact explains, no doubt, the presence in its precincts of the statue of the god of medicine, under whose special protection such wells were placed. The worship of Æsculapius is said to have been introduced into Rome from Epidaurus about 293 B.C., but this statue, which is of indifferent workmanship, belongs to a much later period, probably the first or second century of the Christian Era.

Antirabic Institute in Florence.

In this institution, founded through the initiative of Professor Grocci and inaugurated in January, 1899, the medical staff had subjected to the Pasteur treatment up to Nov. 15th, 1900, 591 persons who had been bitten by animals suffering, or suspected to be suffering, from hydrophobia. Advice was given in 957 cases at the request of private individuals or of communal authorities, and diagnostic experiments were carried out on 235 animals sent to the institute with the object of ascertaining whether or not they were hydrophobic. The institute forms a section of the General Medical Clinic of Florence and is under the care of Dr. Daddi and two assistants. The charge for a course of treatment is 50 lire.

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[1] THE LANCET, Oct. 14th, 1899, p. 1045, and Feb. 24th, 1900, p. 581.

(not quite £2), but the poor, wherever they may come from, are treated gratuitously.

Dec. 1st.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Housing of the Poor in New York City.

ONE of the most important commissions ever appointed in this city is now sitting. The problem of housing the poor in a sanitary and decent manner has for long been a stumbling-block to municipalities and philanthropists in all the large towns of the world. In New York, owing to the lack of space available, it presents itself in an aggravated form. In truth, too, it must be said that public and private enterprise has lagged strangely in trying to improve existing conditions. However, it seems now that the State authorities of New York have resolved to grapple with the difficulty in a serious manner, and as an earnest of this Governor Roosevelt some little time ago appointed a representative commission to inquire closely into the whole matter. The first of the hearings dealt with the question as to the bearings of the question on tuberculosis, and, as may well be imagined, came to the conclusion that the construction of airy, properly ventilated, hygienic tenements would go far towards checking the development and spread of that scourge. No more effective preventive measures than providing the poor with the means of living in a fairly healthy manner could be undertaken. The second hearing considered the construction of the tenements as regards size, dark hall-ways, badly built air-shafts, and the like. The commission for some months past has been collecting evidence from builders, sanitary experts, and others who possess views on the subject. As may be believed, the advice tendered has had an extremely wide range, the opinions of the various witnesses being in some instances as diverse as the poles. In fact, such a flood of advice has rushed in that it probably has been the cause of a certain amount of embarrassment to the commissioners The tenement laws of other countries have been carefully studied for the purpose of comparison. But, after all, the conditions in New York and in any American or European city are so different that while, doubtless, the commission will see fit to advise the adoption of some of the methods used in housing the poor in other large centres of population, in the main it will conclude that New York must strike out a line of her own and in erecting tenements must adapt herself to her environment. These remarks will be better understood when it is stated that Greater New York has more than 86,000 tenements with 2,250,000 tenants inhabiting them. The commission will also have regard to the subject from the moral standpoint. The overcrowding in New York is almost beyond comprehension, and the assertion is made that at the present time in the Italian quarter 40 families are existing in flats built to contain 16. Of course, this is as immoral as it is contrary to the laws of health. The *New York Sun*, in an editorial article treating of the Tenement Commission, says: "New York's housing problem is the problem of its metropolitan growth, not easy to solve, but to be solved at any cost, for at bottom it is the question of the home from which proceeds citizenship, good or bad as the home may be." London has been wrestling with the problem for many years, and although fairly successful has by no means yet reached a final solution. Consequently she will take an intelligent and kindly interest in the struggles of her big sister on this side of the water to improve the conditions of her poor. The prediction may be safely made that the New York Tenement House Commission will effect much towards this desirable end.

Separate Prisons for Consumptive Convicts.

In the United States it has long been recognised that neither the convicts who are suffering from consumption nor those who are compelled to live in close proximity to them are quite fairly treated. The hygiene of a prison is too often neglected. The offender against the law has, of course, no choice as to his accommodation but must live wherever the authorities wish, whatever the conditions may be. Dr. Rohe, a prominent writer on hygiene, says: "The mortality of convicts, even in the best regulated prisons where especial attention is paid to sanitary requirements of such buildings, is three times as great as among workmen in mines, confessedly one of the most dangerous occupations. More convicts die of consumption than of all other diseases combined." Dr. Rohe puts the mortality from this cause at from 40 to 80 per cent of these deaths. Dr. W. H. Blake, physician on the Board of Inspectors of Convicts for Alabama, has protested many times against this heartless treatment of prisoners, and recently he read before the Medical Association of the State of Alabama a paper treating of the matter. He states that in Alabama the record of deaths for State convicts covers a period of 18 years. For the first half of this period consumption caused 20 3 per cent. of the total mortality; for the last half it caused 42 per cent. In the penitentiaries of different States, of the total deaths the percentage caused by consumption is as follows: Mississippi, 20 per cent.; Arkansas, 20 per cent; Florida, 30 per cent.; Ohio, 31 per cent.; Michigan 33 per cent.; Alleghany County Workhouse, Pennsylvania, 33½ per cent.; Virginia, 41 per cent.; Kentucky, 42 per cent.; Joliet, Illinois, 70 per cent.; Huntsville Penitentiary, Texas, 66 per cent.; Rusk Penitentiary, Texas, 33 per cent.; Washington, 16 per cent.; Connecticut—1898, 60 per cent., and in 1897 every death that occurred in the penitentiary of Connecticut was caused by consumption." It is now an established fact that under favourable conditions tuberculosis can be transmitted from person to person, and, as Dr. Blake points out, prisons afford these conditions in a strikingly favourable manner. For example, in the prisons of Alabama convicts are not kept in separate cells, but from 50 to 100 are confined together in a single large 'cell.' Consumptive convicts, unless acutely ill, are confined in the same cells as the healthy convicts. Dr. Blake suggests as the only remedy for this condition the separation of the consumptive from the non-consumptive convicts. Something more is needed than separate wards in the same building or separate buildings on the same grounds. A separate camp should be provided for consumptive convicts, the farther from the other prisons the better, in order to give the non-tuberculous prisoners the greatest possible immunity from the disease. It is argued, and rightly too, that the State has a right to deprive the offender of his liberty but that it has not the right to deprive him of his health.

Mosquitoes and Yellow Fever.

It will probably be remembered by many readers of THE LANCET that several years ago—in 1882—a physician practising in Havana advanced the theory that a species of mosquito was the agent of transmission of yellow fever. Dr. Finlay, the medical man in question, who still strongly adheres to his belief, does not look upon the mosquito as the intermediate host of yellow fever, but he holds that the mosquito is capable of transmitting the disease directly to man. Other investigators since the time that Dr. Finlay broached his daring opinions have declared views more or less to the same effect. However, but little notice has been taken of these statements, and probably had it not been for the success attending the researches of Manson, Ross, and others in demonstrating to the satisfaction of the majority of scientific men that mosquitoes were chiefly responsible for the dissemination of malaria the matter would not have come to the front now. Encouraged by the favourable results attending the investigations of the malaria problem and anxious to drive out yellow fever from this part of the world a commission of United States army surgeons have for some time been working in Havana. The surgeons comprising the commission were Dr. Reed (surgeon, U S.A.) and Dr. James Carrol, Dr. A. Agramonte, and Dr. Jesse W. Lazear (acting assistant surgeons, U.S A.) Dr. Reed read a paper before the Public Health Association at its last meeting in Indianapolis, Ind., in which the conclusions reached by the commission were stated. These conclusions were as follows. Treating of the bacteriology of the disease: (1) The blood taken during life from the general venous circulation on various days of the disease in 18 cases of yellow fever successfully studied has given negative results as regards the presence of bacillus icteroides (Sanarelli); (2) cultures taken from the blood and organs of 11 yellow fever cadavers have also proved negative as regards the presence of the bacillus; and (3) bacillus icteroides (Sanarelli) stands in no causative relation to yellow fever, but when present should be considered as a secondary invader in this disease. As regards the part played by mosquitoes in the propagation of yellow fever the commission state their conclusions thus: "The mosquito serves as the intermediate host for the parasite of yellow fever and it is highly probable that the disease is only propagated through the bite of this insect." It should also be said that the singing mosquito, culex fasciatus (Fabr.), was identified. The space at my disposal is too limited to describe the experiments which led to the foregoing deductions, and it would be premature to express a definite opinion on the matter. This much, however, may be remarked without prejudice, that experiments will have to be conducted on a larger scale, and the whole question must be more closely investigated ere the assertion that "it is highly probable that the disease is only propagated through the bite of the mosquito" will be generally accepted. The commission have done excellent work and deserve well of their country. I regret to say that two of the members of the commission—Dr. Lazear and Dr. Carrol—fell victims to their unselfish devotion. Both contracted yellow fever while pursuing their experiments and Dr. Lazear succumbed to the disease.

Dec. 5th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Sanitary State of Sydney.

IF Sydney is not made a sanitary city it will not be for want of reports as to its condition. Quite recently reports were published from the medical officer of the Sewerage Board and from the city health officer, and now another has been presented by Dr. W. G. Armstrong, the Government officer of health of the metropolitan combined sanitary districts, and dealing with a much larger area, including not only the city of Sydney but 40 suburban boroughs and seven adjacent municipalities in the neighbourhood of Parramatta with a population of 456,320. The report deals with the year 1899, its publication having been delayed by the outbreak of bubonic plague, which engaged all the energies of the medical officer for the time being. The report states that all the local authorities are hampered in their administration of the Health Act by want of funds, as the Act does not give powers to raise the necessary means by a special sanitary rate and the ordinary incomes of municipalities are already ear-marked for other purposes. Sydney is one of the most lightly taxed of all large cities and could well support a tax for sanitary purposes. Dr. Armstrong has corrected the returns of the Registrar-General as to vital statistics by obtaining the domicile of all persons dying in the metropolis, and properly distributing them, and he finds that the proper death-rate of the metropolis is 12·39 per 1000. The deaths from typhoid fever were more numerous in 1899 than in the previous year, as were those from phthisis. There was a remarkable decline in the incidence of diphtheria, of diarrhœal diseases, and of scarlet fever. Nearly twice as many cases of typhoid fever occurred in the unsewered districts as in the sewered—viz., one case of typhoid fever to 160 sewered dwellings and one case to 84 unsewered dwellings, notwithstanding that poverty and overcrowding were greatest in the sewered districts, and that in the city of Sydney itself the connexions with the sewers were very faulty. Some improvement was noted in the condition of dairies and the number classed as "bad" had been reduced from 57 to 34, but the existence of 34 badly kept dairies out of a total of 503 is a serious reflection upon the manner in which the Dairies Supervision Act is administered by the local authorities. Concerning common lodging-houses, Dr. Armstrong reports that some were unfit for habitation altogether and others were unfit for use as lodging-houses. The chief faults found were insufficiency of ventilation, paucity of sanitary accommodation, and overcrowding The need of securing more efficient sanitary inspectors is strongly insisted upon. The first step is to give these men security of tenure and to pay them a fair salary, and for the Government to assume control over their appointment and dismissal. During the year Dr. Armstrong gave a series of 15 lectures on sanitation and sanitary law to sanitary inspectors, and at the end of the course an examination was held. On the whole the report is satisfactory.

The Australian Natives Association and the Profession in New South Wales.

The board of directors of the Australian Natives Association have had a conference with the council of the New South Wales Branch of the British Medical Association with reference to the recent resolution passed by the branch practically prohibiting its members from acting as medical officers to the Australian Natives Association. Four delegates were appointed by each side, and Dr. W. H. Coutie, President of the Branch, was voted to the chair. The delegates of the Australian Natives Association presented their views, claiming that the association should be placed on exactly the same footing as the other friendly societies with regard to medical services. The medical delegates agreed to consult with the council of the New South Wales Branch of the British Medical Association and to report the result.

Farewell to Dr. Laure.

Dr. Laure, after practising for 32 years in Sydney, is leaving for France, his native country. Before his departure he was entertained at a banquet by a company of representative citizens, including members of the medical profession, well-known musicians, and a large proportion of the "Colonie Française" in Sydney. The chair was occupied by the Acting Consul-General for France who, in proposing Dr. Laure's health, referred to his good work as a principal medical officer of the marine and his ability and self-sacrifice in the practice of his profession, especially during a time of epidemic, for which he was decorated. During 14 years at St. Vincent's Hospital in Sydney he had done splendid work, and as President of the French Benevolent Society since its foundation he had won the gratitude of all who had come under his care. He had a sincere love of the fine arts and had won the warm friendship of a wide circle. Dr. C. MacLaurin spoke on behalf of the medical profession, the members of which had nothing but the highest esteem for Dr. Laure, who was honourable, upright, and straightforward and a most desirable colleague. Dr. Laure was presented with an illuminated address from the French community expressive of their regard and good wishes.

Death of Dr. J. W. Hester.

Great regret has been felt in Sydney and Newcastle at the untimely death of Dr. J. W. Hester. Dr. Hester was born in 1865 and was educated at the Sydney University, where he graduated as M.B. and Ch.M., obtaining honours in every subject every year and winning the Renwick Scholarship and gold medal. He settled in practice at Stockton, where he remained for 10 years, during the greater part of which he was surgeon to the Newcastle Hospital. Upon the departure of his brother-in-law, Dr. R. Scot Skirving, for South Africa, Dr. Hester came to Sydney to carry on Dr. Skirving's practice and was appointed assistant surgeon to the Prince Alfred Hospital. He had hardly been established in Sydney before he was attacked with a serious affection of the heart which proved fatal. Dr. Hester was held in high esteem in Stockton and he took an active part in many public movements. He was especially a prominent figure in all kinds of athletics and was an officer of almost every amateur sporting and athletic club in the district.

A Case of Hernia into the Foramen of Winslow.

In the *Australasian Medical Gazette* for October is recorded a very interesting and rare case of intestinal obstruction due to hernia of the transverse colon into the foramen of Winslow. The patient, a woman, 47 years of age, was seen by Mr. H. J. F. Groves of Broken Hill, with symptoms of intestinal obstruction, and then by Dr. R. Humphrey Marten of Adelaide, in consultation. The symptoms began on May 10th, and on May 17th, as they had not improved, operation was decided on. The symptoms were: no action of the bowels since May 10th, vomiting, constant regurgitation of sour, frothy liquid, and slight but increasing distension, with borborygmi, stopping short on the right of the middle line below the liver, where there was tenderness. When the abdomen was opened dark red-coloured serous fluid escaped. The sigmoid and descending colon were empty, the cæcum and ascending colon were greatly distended, and on being followed up the distended transverse colon passed under the liver and under a band which was found to be the front wall of the foramen of Winslow, with the hepatic artery pulsating in it. The gut was easily withdrawn. The intestines were so distended and paralysed that a double enterotomy was performed. The small intestine was opened, emptied, closed with sutures, and returned; the cæcum was stitched to the wound and opened; and an artificial anus was formed which has remained permanent and at the request of the patient has not been closed, as it acts as a safety-valve in case of recurrence of obstruction, as has happened.

Nov. 4th.

Obituary.

GEORGE HUTCHINSON MILNES, M.D. CANTAB., L.R.C.P. Edin., M.R.C.S. ENG., LATE R.N.

DR. MILNES, who died on Dec. 3rd from the effects of an overdose of morphia administered by himself for the relief of toothache, was a well-known and respected practitioner in Derby. He received his early education at Repton School and afterwards studied at Cambridge and at St. George's Hospital. In 1880 he become a Member of the Royal College of Surgeons of England, and in June of the following year was appointed house physician at St. George's Hospital. In 1882 he obtained the post of house physician at Addenbrooke's Hospital, Cambridge, where he stayed till the end of 1884. A few months later he graduated at the University, first as Bachelor of Arts and subsequently as Bachelor of Medicine. In 1886 he entered the Royal Navy as surgeon. While in medical charge of H.M.S. *Starling* he took part in the defence of Suakim against the Dervishes (from October to December, 1888), and was present in medical charge of the Naval Brigade at the action of Gemaizeh on Dec. 20th, for which he received the Egyptian war medal with the Gemaizeh clasp and the Khedive's bronze star.

On his return to England in 1890 he was appointed surgeon to the Royal Naval Hospital at Haslar and assistant instructor in hygiene. This position he held but a short time, and on resigning his office gave up his commission. He then, in 1891, took the degree of Doctor of Medicine at Cambridge and four years later was appointed physician to the Derbyshire Royal Infirmary, a position which he held at the time of his death. He also hold the post of consulting physician to the Derbyshire Hospital for Women During his four years' service in the Royal Navy he specially interested himself in the study of fevers prevalent on the shores of the Mediterranean and Red Seas and contributed to THE LANCET some notes on this subject.

ALEXANDER DEAS DAVIDSON, M.A., M.D. CANTAB., M.R.C.S. ENG., L.S.A.

DR. ALEXANDER DEAS DAVIDSON died at his residence, Northampton-place, Swansea, on Dec. 7th, after a short illness, from acute phthisis. The deceased, who was educated at Clare College, Cambridge, graduated B A. with honours at Cambridge University in 1872, and three years later he was admitted M A He received his medical education at St Thomas's Hospital and took the M.R C S Eng. and L S.A. qualifications in 1877, and in 1880 graduated M.D. of Cambridge. After holding the appointments of resident clinical assistant at the Bethlem Royal Hospital and ophthalmic assistant at St Thomas's Hospital, Dr. Davidson commenced practice in Swansea in 1882 Shortly afterwards he was appointed medical officer to the out patient department of the Swansea General and Eye Hospital, and later ophthalmic surgeon to that institution. Dr. Davidson, who was only 51 years of age at the time of his death, will be much missed in Swansea, where he had gained a reputation as a skilful ophthalmic surgeon.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Henry D Noyes, Professor of Ophthalmology in the Bellevue Hospital Medical College, New York,—Dr. Podrez, Professor of Clinical Surgery in the University of Kharkoff.—Dr. Gustav Hartlaub, a well known Bremen practitioner, who was an authority on ornithology, has died at the age of 86 years.

MEDICAL ATTENDANCE ON SEAMEN.—At the Cardiff County Court on Dec. 6th, before Judge Owen, the committee of the *Hamadryad* Seamen's Hospital sued the Bristol Steamship Navigation Company for medical attendance upon a seaman in defendant's employ whilst in the hospital for 72 days. Evidence showed that the ship owned by defendants arrived at Cardiff on Feb. 3rd and that the man was injured whilst on board the following day His honour gave judgment for defendants with costs, holding that shipowners are not responsible for injuries received by a seaman whilst in port, but having regard to the importance of the question leave to appeal was granted.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, DEC. 5TH.

THE Council met again to-day, Sir WILLIAM TURNER presiding. For nearly two hours the proceedings were conducted *in camerâ*.

Inspection of the Final Examinations.

The PRESIDENT announced that Sir George Duffey had accepted the appointment of inspector of final examinations for the year 1901

The Examinations of the Apothecaries' Hall of Ireland.

The PRESIDENT also announced that Dr. W. Parker Herringham, M.D Oxon, F.R.C.P. Lond., assistant physician to St. Bartholomew's Hospital, had accepted the appointment of inspector of the examinations of the Apothecaries' Hall of Ireland.

Restoration to the Medical Register.

The PRESIDENT further announced that the Council had instructed the Registrar to restore the name and qualifications of Mr. Robert Ingram Robertson to the Medical Register.

The Examinations of the Apothecaries' Hall of Ireland.

The Council resumed the consideration of the motion that the reports of the Examination Committee on the Inspection of the July and October examinations of the Apothecaries' Hall of Ireland be received and entered on the minutes.

Mr. TICHBORNE took exception to several passages in the report on the inspection of the October examination and moved that they be deleted, and Mr. BROWN seconded the motion

Sir DYCE DUCKWORTH, speaking as Chairman of the Examination Committee, said that he objected to the omission of any part of the report. It was well known that this body had given the Council an immense amount of trouble and anxiety and that for years it was a body under considerable suspicion.

Mr. TICHBORNE objected to these observations because he said this examination body never did receive any condemnation; it was another examination body, conjoint with the Apothecaries' Hall, and he considered it extremely unfair of Sir Dyce Duckworth to make these observations.

Sir DYCE DUCKWORTH said it was this body in conjunction with another body whose examination came under the very severe condemnation of this Council, and as the result this body became subject to the authority of this Council. The examinations were held by order of the Privy Council under the ægis of this Council and therefore they had to watch very closely the work done. In these reports the Examination Committee had to do something more than merely reflect the opinions of their inspector. They had to analyse and to inquire and to put a clear and unvarnished statement before the Council. He was now speaking for the last time as the Chairman of the Examination Committee and he wished to say this most distinctly. The committee did not exist to please any body but to do their duty.

The proposal of Mr. TICHBORNE to delete certain passages was rejected by a large majority. Subsequent proposals to delete upon a smaller scale were also rejected and thereafter the motion to receive the reports and enter them on the minutes was adopted by the Council.

Dr. ATTHILL moved:—

> That the opinion of counsel be taken as to whether any examiner appointed to take part in the examinations held by the Apothecaries' Hall of Dublin for their registrable qualifications, other than the governor, deputy governor, and director of the said Hall, being the examiners authorised by the Act 31 Geo III, should not in accordance with the terms of the Medical Act (1886) be appointed by this Council.

He had no animus against Apothecaries' Hall and he did not wish to put it either to expense or trouble, but he desired the law made clear and the Hall complying with the law.

Dr. BENNETT, in the absence of Dr. LITTLE, seconded the motion.

Mr. TICHBORNE protested against this proposed waste of the Council's money. As for Dr. Atthill's statement about his good wishes to the Hall, he was afraid it would be received with smiles in Dublin. Mr. Tichborne then proceeded to argue that under certain ancient Acts the Hall had practically a free hand in the matter of appointing examiners.

Dr. McVail rising to a point of order asked the President whether this Council had anything whatever to do with any Act antecedent to the Medical Act of 1858. If anybody in Ireland thought that the Apothecaries' Hall was not acting legally and felt aggrieved then that body could take the matter before the Four Courts in Dublin.

The President said it was difficult for him to say whether from the point of view taken by Dr. McVail this matter was or was not in order. It raised a legal question and it was not for him to give an opinion upon a legal question.

Dr. Atthill said that he held that it was this Council who were aggrieved, whose rights were being infringed. So long as the Hall kept to its governors and directors this Council had no *locus standi*, but when the Hall went beyond them he contended it was for this Council to appoint the examiners.

Several members urged that the matter should be postponed until next session.

Mr. Tichborne said that the whole question had been thoroughly discussed and examined before the Privy Council and he assured the General Medical Council that in all they had done his body had acted within their rights.

The President said he would go so far as to say this, that if this motion, or any motion on the same lines, were sent to him by Dr. Atthill with a view to discussion on another occasion he would ask Mr. Muir Mackenzie to advise him as to its competency.

Dr. Atthill said that if it were understood that the President would ask the advice of Mr. Muir Mackenzie before next session in May that would satisfy him.

The President: You must send the motion to me.

On this understanding Dr. Atthill withdrew his motion.

Prevention of Personation.

On the motion of Mr. Horsley the following report of the Committee upon the prevention of personation was received and entered on the minutes:—

> In the opinion of the Solicitor the Council is fully empowered, under Section XIV, Medical Act, 1858, to frame and enforce the proposed regulation that applications for registration must be made in the handwriting of the applicant on an official form.

In making his motion Mr. Horsley regretted that he had to drop discussion of the personation question for this session because the business hours of the session had been squandered on what he should call squalid business. He promised, in answer to Dr. MacAlister, that he would see that the Council were supplied with the text of the case submitted to the solicitor and copy of the reply thereto.

Regulations for Diplomas in Public Health.

A report of the proceedings of the whole Council in committee on the regulations for diplomas in public health was brought up by Dr. MacAlister, as chairman, and was agreed to.

Mr. Teale then moved that the following be the General Medical Council's

RESOLUTIONS AND RULES FOR DIPLOMAS IN PUBLIC HEALTH FROM THE 1ST OF JANUARY, 1902.

I. The Council, having regard to the terms of Section 18 of the Local Government Act (1888) and of Section 54 of the Local Government (Scotland) Act (1889), and observing that under these sections special privilege is to be accorded to the holders of the diplomas granted under Section 21 of the Medical Act (1886), and therein described as diplomas in sanitary science, public health, or State medicine, thinks it essential to declare, with regard to its own future action under Section 21 of the Medical Act (1886), that it will not consider diplomas to "deserve recognition in the Medical Register" unless they have been granted under such conditions of education and examination as to insure (in the judgment of the Council) the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the public health; and the Council, in forming its judgment on such conditions of education and examination, will expect the following rules to have been observed:—1. A period of not less than 12 months shall have elapsed between the attainment of a registrable qualification in medicine, surgery, and midwifery and the admission of the candidate to any examination or any part thereof for a diploma in sanitary science, public health, or State medicine.

2. Every candidate shall have produced evidence that after obtaining a registrable qualification he has during six months received practical instruction in a laboratory or laboratories, British or foreign, approved by the licensing body granting the diploma, in which chemistry, bacteriology, and the pathology of the diseases of animals transmissible to man are taught.

3. Every candidate shall have produced evidence that after obtaining a registrable qualification he has during six months (of which at least three months shall be distinct and separate from the period of laboratory instruction required under Rule 2) been associated day by day in the duty, routine and special, of public health administration, under the supervision of

(*a*) In England and Wales, the medical officer of health of a county or of a single sanitary district having a population of not less than 50,000, or a medical officer of health devoting his whole time to public health work; or

(*b*) In Scotland, a medical officer of health of a county or counties, or of one or more sanitary districts having a population of not less than 30,000; or

(*c*) In Ireland, a medical superintendent officer of health of a district or districts having a population of not less than 30,000; or

(*d*) A medical officer of health who is also a teacher in the Department of Public Health of a recognised medical school.

⁂ The certificate of an assistant medical officer of health of a county or of a single sanitary district having a population of not less than 50,000 may be accepted as evidence under Rule 3, provided the medical officer of health of the county or district in question permits the assistant officer to give the necessary instruction and to issue certificates.

4. Every candidate shall have produced evidence that after obtaining a registrable qualification, he has attended during three months the practice of a hospital for infectious diseases at which opportunities are afforded for the study of methods of administration.

5. The examination shall have been conducted by examiners specially qualified; it shall have extended over not less than four days, one of which shall have been devoted to practical work in a laboratory and one to practical examination in, and reporting on, subjects which fall within the special *outdoor duties of a medical officer of health.*

⁂ The rules as to study shall not apply to medical practitioners registered, or entitled to be registered, on or before Jan. 1st, 1890.

II. The Council shall from time to time appoint an inspector or inspectors of examinations in Public Health, with special instructions to report to the Council whether the examination of each licensing body does or does not afford evidence on the part of candidates passing such examination of a distinctly high proficiency, scientific and practical, in each and all of the branches of study which concern the public health.

Sir Hector Cameron, noticing some remarks by Dr. Pye-Smith relative to the application of Anglo-Indians for the diploma in public health, pointed out that the burden the committee had to consider was the burden of time. Anglo Indian applicants, he said, had usually only a year in which to come from India, obtain the diploma and return to their duties. By the resolutions and rules now submitted the time required for the diploma was compressed into nine months, the last attendances on an infectious hospital being really meant to run concurrently with the rest of the requisite education. That meant a reduction of three months in the matter of time, but certainly the burden was somewhat increased by the new rules in the matter of education.

The adoption of the rules was agreed to, and it was further resolved that a copy thereof should be transmitted to the several bodies which grant diplomas in Public Health.

Education Committee's Reports.

On the motion of Sir John Batty Tuke, seconded by Dr. MacAlister, three reports by the Education Committee were received and entered on the minutes. These reports were on: (1) the steps taken for raising the standard of preliminary examination; (2) an application from an American university for the recognition of its arts examinations; and (3) the "Medical and Pharmacy Act Amendment Act, 1899," of the Cape of Good Hope.

The report on the steps taken for raising the standard of preliminary examination was as follows. The Education Committee, at the last meeting of the Council, was "authorised to take all needful steps to give effect to the recommendations and suggestions for the improvement of preliminary examinations" contained in the joint report of their expert advisers, and to report from time to time to the Council thereupon.

The committee, in pursuance of this instruction, have communicated the joint report to all the educational bodies which hold recognised preliminary examinations within the United Kingdom, and have invited them to inform the committee as to the steps they propose to take for the improvement, when necessary, of their examinations. From a large number of the bodies they have received answers which indicate that they are *anxious to coöperate with the Council in raising* the standard of preliminary education among medical students and that they are prepared to do what is necessary towards meeting the recommendations submitted to them.

The committee have forwarded the answers and the proposed changes in examinations therein proposed to Professor McCormick for his opinion and advice and they have pleasure in communicating to the Council the following passages from the interim report to the Chairman thereupon:—

To Sir John Batty Tuke, M.P. St. Andrews, Nov. 20th, 1900.

Dear Sir,—I beg to inclose communications received as to the report of the Education Committee adopted at the last meeting of the General Medical Council. In the terms of that report (p. 31) the various bodies holding examinations at present recognised by the General Medical Council were requested to state how far in their opinion their respective examinations met the requirements of the proposals contained in that report and how far it would be desirable or possible for them to make modifications in their examinations to that end. This request has already been complied with by the following bodies:—

1. Oxford and Cambridge Schools Examination Board.
2. Oxford Local Examination Delegacy.
3. Cambridge Local Examination Syndicate.
4. Senate of the University of Birmingham.

5. Scotch Education Department.
6. Senate of the University of Aberdeen (Local Examination Board).
7. Educational Institute of Scotland.

These communications contain certain questions of detail demanding the consideration of your committee; and I subjoin remarks as to these minor points, which might be embodied in answers to the several authorities, if they meet with your approval.

Many of the bodies from whom no communication has yet been received have been unable to hold a meeting since the report was issued, but I have little doubt that before the Spring Session communications from all the bodies concerned will be received.

Meanwhile, those already received may be regarded as giving promise of a successful issue to your committee's proposals of reform.

The three first-mentioned bodies (of Oxford and Cambridge) report upon their respective examinations in full detail under the five heads laid down in your committee's report, and also indicate their willingness to make such an arrangement as will raise the qualifications of medical preliminary candidates on the lines of the committee's recommendations.

The Senate of the University of Birmingham, in reporting upon its preliminary examinations, "begs to assure the General Medical Council of its sympathy on educational grounds with the general trend of the recommendations contained in the report, and its desire to see them carried out in practice."

Sir Henry Craik, in acknowledging for their lordships of the Scotch Education Department the proposals of the Education Committee, which are met generally by the lower grade leaving certificate in its present form, adds that, "should circumstances in the future render any modification of that form desirable, their lordships will not fail to keep the wishes of the General Medical Council carefully in view."

These and similar expressions of opinion which have been received informally from representatives of other bodies show that the proposals of the Education Committee are meeting with general approval among the educational authorities of the United Kingdom and that the committee will have their cordial help in promoting the desired reforms.

I may also add that I was present at a conference of the Education Committee with representatives of the College of Preceptors, at which proposals were put forward and discussed as to the lines on which that body might best meet the committee's recommendations.

I remain, yours truly,
W. S. MCCORMICK.

Communications from certain other bodies, including the College of Preceptors, have since the date of the above been received by the committee and are at present under consideration. A certain number of the recognised examinations held for other than medical purposes which the bodies concerned are not prepared to alter will with their full assent be omitted from the list of recognised examinations which the committee have in preparation.

The report in respect to the application from an American university for the recognition of its arts examinations was as follows:—

The committee have carefully considered the application of another American university for the recognition of its arts examinations. They have resolved that they are not at present prepared to recommend the Council to place these examinations on their list.

The report on the "Medical and Pharmacy Act Amendment Act, 1899, of the Cape of Good Hope," shows that the Act of the Legislature of the Cape of Good Hope, courteously forwarded by the Secretary of State for the Colonies, has been referred to the committee by the Executive Committee. They are of opinion that the Act contains many salutary provisions, of which not a few might with advantage be extended to other portions of the empire.

Medical Aid Associations.

Dr. GLOVER submitted a report by the Medical Aid Associations Committee which was as follows:—

In making an interim report your committee have to announce that they continue to receive from various parts of the country painful proof of a certain amount of friction between the profession and medical aid associations, especially such associations as are conducted on commercial principles, with the aid of canvassing, advertisements, &c. The loyalty of the great mass of the profession to the regulations of the Council with regard to such practices should be fully realised by the Council; the more so as in several towns it has entailed at least temporary loss on some practitioners who have resigned appointments rather than expose themselves to the charge of violating the wishes of the Council. One such case has been formally brought to the notice of the Council, in the form of a complaint against a practitioner who, it is alleged, accepted office where such practices are allowed. The case, unfortunately, was brought forward too late for consideration at the present meeting. The committee continue to believe that in regard to those medical aid associations, composed for the most part of the great friendly societies, the most promising method for removing differences is in the creation of a conciliation board. The Medical Council has done all in its power to recommend and promote the creation of such a board.

The success of such efforts must rest now with the profession itself, acting through its voluntary associations, and especially the British Medical Association, the Council of which a few months ago appointed a committee to treat directly with the friendly societies on this subject. Its resolution is in the following terms:—

"The Council appoints a committee to confer with the representatives of the friendly societies with a view to drawing up a scheme for the formation of regulations regarding the powers and duties of the proposed conciliation board."

The President of the British Medical Association is the president of this committee. We are kindly informed by him that the committee has met once and decided on some matters of principle. It is to be hoped that before the meeting of the General Medical Council in May your committee will be able to give a final report on this important subject.

At the instance of Mr. HORSLEY the phrase "a certain amount of friction" (which occurs near the beginning of the report) was altered to "a serious amount of friction."

The report as amended was received and entered on the minutes.

Mr. BROWN thought that the Council ought to make very clear to practitioners connected with medical aid associations their position as regards unprofessional conduct. There was ambiguity about all the past resolutions on the subject, and because of that there were districts of the country in which medical officers of such associations who were on the Medical Register had resigned good appointments and others in the same districts who remained in their appointments, apparently because they did not know exactly what the Council wanted the profession to do. Unless the Council made their position perfectly clear they would have practitioners coming to their Registrar saying that they did not understand what the Council meant. He had framed a motion whose terms he did think clear and at the same time not too strong, and it was this:—

> That notices be published by advertisement and otherwise to the effect that association with medical aid societies and clubs, which systematically canvass for patients may be regarded by the Council as infamous conduct in a professional respect, rendering any practitioner proved to be guilty thereof liable to have his name removed from the Medical Register.

He believed that if the Council passed this proposal they would be expressing the feelings of every man in the profession who was worthy of having his name retained on the Medical Register.

Dr. BRUCE seconded.

In the course of some conversation it was suggested by Dr. MACALISTER that the Council could not judiciously consider the proposal because it would affect a penal case now pending, and in the circumstances it would be indecent on the part of the Council to pass any such motion.

Mr. BROWN withdrew the proposal in the meantime.

Financial Condition of the Council.

The next business was the receipt of a report from the Special Finance Committee, re-appointed on May 31st, 1900, to consider and report on (1) the financial position of the Council and its branches as regards assets and liabilities; (2) the relations of the income and expenditure of the Council and its branches for the last 10 years; and (3) the measures that appear to be desirable to place the Council's finances on a satisfactory basis. The report was submitted by Mr. BRYANT and the following are extracts from it:—

The assets of the General Council, the Branch Councils, and the Dental Fund consist of the following:—

(1) The freehold property vested in the Council, which consists of the Council's building, the contiguous house in Hanover-square, and the site on which they stand; (2) consolidated stock, to the credit of the English and Scottish Branch Councils and the Dental Fund, which amounts to £23,773; and (3) cash in bank, £2696.

The English branch holds, as a security for a loan to the General Council, a mortgage on the freehold property for £25,007. This will be paid back to the branch in 1949 by the Alliance Company through the operation of the sinking fund hereafter mentioned.

The General Council and the branches have no outstanding liabilities other than those regularly incurred and met during each year in carrying out their statutory duties.

The freehold property of the Council is of a highly valuable character and is sure to become still more valuable as time goes on. At present a portion of the property—namely, the house in Hanover-square—produces a yearly rent of £241 13s. 4d. When the existing lease expires, at the end of five years, there is no doubt that a considerably larger rent will be obtained.

The annual charges involved are: (1) a sum of £720 payable as interest at 3 per cent. to the English Branch; and (2) a sum of £216 payable to the sinking fund, by means of which the mortgage on the property will be paid off in 1949.

Of this annual outlay of £935 the increased rent soon to be obtained will provide a considerable proportion. The General Council may therefore look forward in a few years to holding its handsome property at a comparatively small annual charge.

The English and Scottish Branches and the Dental Fund possess the following funds in consols—viz., English Branch, £10,573; Scottish Branch, £5260; Dental Fund, £7940—which are sufficient to enable them to meet any liabilities they are likely to incur. The capital of the Irish Branch at the close of 1899 amounted to only £62, which in all probability will shortly be exhausted.

With regard to the second clause of the resolution—"(2) The relations of the income and expenditure of the Council and its branches for the last ten years"—the income of the General Council consists (a) of the rent of the house in Hanover-square, mentioned above; (b) of the proceeds of the sale of Registers, which do not nearly cover the cost of printing; (c) of the fees for registering colonial and foreign qualifications, which amount to about £40 a year; and (d) of the proceeds of the sale of the Pharmacopœia and the Addendum, 1900, which in future will be entered in a separate account. Its income, therefore, apart from the contributions of branches, is small in relation to its expenditure.

It will be convenient if each branch is considered separately, and if the expenditure is also considered under the two heads of (I.) contribution to General Council, (II.) expenses of administration of branch office.

As to the English Branch. The income is practically stationary, the average being £4,667.

Expenditure.—(I.) The requisitions of the General Council have increased; the average of the first three years of the decade is £2900, while the average for the whole period is £3800, and the contribution in 1897 reached £5000. This was due to expenses in connexion with the

Pharmacopœia, 1898, the late Registrar's retiring honorarium, heavy law expenses, and interest on the increased mortgage. These are matters over which the branch has no direct control and the question of the expenses of the General Council will be discussed under Clause (3) of the reference to the committee.

(ii.) The expenses of the administration of the English Branch average £889, being 19·06 per cent. of the income, and the cost of administration per head of registered practitioners belonging to the branch is 10·35*d*. This is somewhat higher than the proportional cost of administration in Scotland, but is accounted for by the fact, first, that an election of Direct Representatives costs over £400 in England as against about £50 in Scotland, and, secondly, that a by-election (in 1897) is included; while the branch contributed one-third of the retiring honorarium to the late Registrar, in addition to what it contributed *pro rata* to the expenses of the General Council, in which the remaining two-thirds of the honorarium were included. The following table shows how these items affect the results:—

Total expenses for the 10 years			£8399 16 3
Less election expenses, 1891 ...	£489		
" " 1896 ...	404		
" " 1897 ...	426		
One-third of honorarium	330		
			1649 0 0
			£7250 16 3

Corrected percentage of expenses to income, 15·5.

As to the Scottish Branch. The income here, too, is almost stationary, the average being £2647.

Expenditure.—(i.) Here again the demands of the General Council are the chief item. Under this head the average contribution for the first three years of the decade is £1700, and for the whole period it is £2200.

(ii.) The expenses are moderate: the average is £380, being 13·63 per cent. of the income, which is 1·87 less than that of the English Branch, taking the latter at its corrected rate.

As to the Irish Branch. The income, the average of which is £820, has diminished by the interest which used to be received on consols, this asset having now been realised to meet current expenses; but apart from this there does not appear to be any serious diminution in the annual amount of fees received; indeed, 1899 showed a distinct advance over the two previous years, and this is being maintained during the present year.

Expenditure.—(i.) With an income of £820, of which the General Council requires 81·78 per cent., the residue in the hands of the branch does not suffice to meet its necessary expenses.

(ii.) The percentage of expenses to income (40·85) is higher than in the other two branches, but it must be remembered that there are certain expenses which cannot be cut down below a certain minimum, e.g., salaries and office rent. It is necessary to have an office and also to pay a salary to the registrar and clerk, so that it cannot be said that there has been an excessive expenditure in this branch. The fact, however, remains that the branch can only carry on its statutory duties this year by the aid of the special grant of £500 made to it by the Council. This will have to come as part of the Council's expenditure, out of the funds of all the branches, including the Irish Branch, so that the net gain to the Irish Branch will be only about £100 (since the General Council requires about 80 per cent. of the gross receipts of each branch). This is doubtless a very cumbersome procedure, but in view of the provisions of Section XIII. of the Medical Act, 1858, it is the only course which the statute allows.

In considering Clause (3) of the original resolution—

"(3) The measures that appear to be desirable to place the Council's finances on a satisfactory basis"—

it will be best to take the accounts of the General and Branch Councils as a whole as they appear on pp. 10–11 of App. I., Minutes of the Council, Vol. XXXVII.

A reference to the finance reports from 1890 to 1899 shows that during the last ten years the aggregate expenditure of the General and Branch Councils has exceeded the income, including the receipts from the Pharmacopœia, on the average by about £110 a year. The difference between this amount and that of £88 6*s.* 2*d.* on the first table is due to the fact that the first yearly payment to the sinking fund (£216 12*s.* 6*d.*) was not included, as it should have been, in the year's expenses of the General Council, and accordingly the branches were not called upon to pay their proportionate share of it. Had the Pharmacopœia accounts been eliminated, as will in future be done, the excess of expenditure over income would have averaged £232 a year. It is, however, right to say that the ratio of expenditure to income has increased during the latter part of the decade.

It must not be forgotten that a new cycle of inspection of examinations is about to commence and that next year there will be elections of Direct Representatives in England, Scotland, and Ireland, the aggregate cost of which in 1896 was £488.

With regard to the receipts, it will be seen that the great bulk of the income is derived from original registration fees, the other items being of much smaller importance.

The largest item of expenditure is the cost of the sessions of the General Council, which during the last five years has averaged £3317 4*s.* 4*d.*, while the length of each session during that period has averaged seven and three-quarter days.

Since the passing of the Medical Act, 1858, in which a fee not exceeding £5 was prescribed as the registration fee, Parliament has added eight members to the Council—five members elected by the profession in the three divisions of the United Kingdom (in accordance with the provisions of the Medical Act, 1886), one each for two new universities—viz., the Victoria University and the University of Birmingham in its special Act passed this year—and two additional members for the Scottish Universities, which have now each a representative. On the other hand, the Crown is represented by five members instead of six and the President is now elected from the members of the Council. The net addition to the number of the Council is therefore seven members.

The addition of these members has necessarily imposed on the Council additional charges since the maximum registration fee was fixed by Parliament.

Of late years the amount of legal business has greatly increased and the sum of £667 has been spent since January, 1897, in connexion with prosecutions and cases before the courts alone. Also, reports of committees continue to increase in number and the conduct and record of their proceedings have of late greatly added to the cost of the item of printing.

The analysis of the accounts of the Council now presented by the committee does not appear to furnish ground for any serious anxiety as to the financial position at the present time.

It must, however, be remembered that year by year the duties which the Council is called upon to perform increase and that in consequence a longer time is required for the transaction of its business than was usually sufficient a few years ago.

The addition to the number of its members already referred to also increases its expenses during its session, the increase for each week of the sitting amounting to about £337, or at least £674 for a year containing two sessions of a week each.

The committee would therefore suggest to the Council that in order to diminish, if possible, these sessional expenses the sittings of the Council should open on the Monday instead of on the Tuesday as at present, and that the consideration of penal business should commence on Tuesday instead of on Thursday. The Executive Committee would then meet on the previous Saturday. Time would also be gained were the Council to commence its business at 1 P.M. on each day of the session.

Unnecessary expense would also be avoided were it arranged that a Direct Representative elected at a by-election should vacate his seat at a general election, so as to prevent the possibility of having an election in three years out of five, as might easily be the case in England.

Recommendations.—The committee suggest that the following be submitted to the Council for its decision:—That the Executive Committee be authorised to amend the Standing Orders as follows: (i.) that the sessions of the General Council commence on the Monday; (ii.) that a meeting of the Executive Committee be held on the Saturday immediately preceding; (iii.) that the sittings of the Council commence each day at 1 P.M.

Mr. BRYANT, in submitting this report and in moving that it be received and entered on the minutes, said that he did not think that the Council would expect him to go into details about it. One of the most striking facts it showed was that the Medical Council were not in so desperate a condition as some persons imagined that they were. The Council certainly spent a little more than their income, but, after all, the sum so expended was a small one. Last year the balance on the wrong side was only £88 6*s.* 2*d.*, but when the bank account was looked at it was seen that there were so many thousand pounds to the Council's credit that it would take many years to eat up the sum if the excess of expenditure did not exceed £88 a year. Consequently, a slight sacrifice in the way of extra expenditure could be made, even in present circumstances, without detriment to the soundness of the Council's finances. He did not need to go into the question of the Irish Branch Council's position. The Finance Committee and the General Council had found a means of letting the Irish Branch go on on a basis that would not be described as unsatisfactory to the profession. The sum at which their freehold property was valued was not at all a bad sum, and they were paying off the debt in such a way that in the year 1949 the Council would not only have at its credit property amounting in value to over £25,000, but would be the better annually of the £1000 which they had now to pay for interest and instalments for the buildings which the General Council occupied and possessed. These buildings included a house in Hanover square, and not long ago they had had a very handsome offer for it, which included the exclusion of a 20-feet strip of ground on which the Council's present premises in Oxford street could be extended. He did not say that an equal offer would at any time in the future be made to them, but if ever the house were sold the Council would get a nice round sum for the property. Having directed particular attention to the paragraph in the report which shows that the funds have to bear the expense of seven members of Council additional to the number provided for in the Act of 1858, he asked the Council to adopt the committee's recommendations appended to their report.

Sir DYCE DUCKWORTH seconded, and the report was then received and entered on the minutes.

Mr. HORSLEY moved that the Special Committee be re-appointed, that the report be remitted back to them, and that they be instructed to further consider and report upon the several heads of the resolution submitted to them in May of last year. He urged that the committee presenting the report which was now before the Council had not fulfilled the duties entrusted to them. Their report under the first two heads was gravely misleading, and he submitted that they had made no recommendation whatever under the third reference. The report was optimistic in its character, but its recommendations consisted of only three small domestic economies. It was said that there was money in the bank. He protested against the assumption that the General Council were justified in embarking on over-expenditure simply because there was money in the bank.

As a matter of fact the General Council had no money in the bank. The branches had money there, but the General Council were nearly as poor as the Irish Branch Council. Practically, they were bankrupt. The branches had a certain amount of property in their hands which they had no right to hold. Members of the Council considered that satisfactory. He did not. The General Council as a council had no funds of its own. Their treasurers had the idea that because some of the branches had money the General Council were justified in spending to the last penny. That was not the rule in ordinary life. He held now, as he had held in previous sessions, that the only satisfactory way of dealing with the finance of the General Medical Council was to obtain an amendment of the Medical Act. With reference to the last paragraph of the report he wished to say that he was the unfortunate individual that was selected at a bye-election. In respect to that he would invite the members of the Special Finance Committee to refer to his address to the electors, for in that he set it forth to the profession that "they would be taxed in this particular way," but that he intended to resign his seat when his colleagues resigned their seats. This paragraph was the most humorous part of the committee's report.

The PRESIDENT said that one reason why the paragraph referred to was inserted in the report was on account of the very example Mr. Horsley had told them to take and they had taken it not as an example to Mr. Horsley but to others. Therefore the committee had given Mr. Horsley the credit.

Mr. HORSLEY: But my name does not come in. I do not see where the credit comes in. The reference to him in this report, he went on to say, was really a ridiculous one, and it seemed absurd that a committee of this importance should put it into their report. However, what he asserted was that the only satisfactory method of putting the General Medical Council's finances on a proper basis was to provide that all funds should be put into a central office, that all the expenses of the branch offices should be managed on ordinary financial lines, and that that could only be effected by securing an amendment of the Medical Act.

Mr. TOMES seconded the motion. He did not think that members realised the fact that their average deficit for the last three years was £1800 a year. He was desirous of remitting this report back to the committee because there was no time to thrash it out this session and because he did not think that the question had been fully met. He was quite prepared to say that it was nobody's fault and that because their accounts were a sham it was owing to the Act of Parliament; but he must contend that the relations of the Branch Councils to the General Council brought out the most ridiculous results.

Sir WILLIAM THOMSON moved the closure.

Dr. BRUCE thought the matter might stand over till next session.

Sir CHRISTOPHER NIXON intimated that he wanted to speak on the report now.

Dr. MACALISTER said that the report had been misconstrued.

The PRESIDENT declined to accept the motion for the closure, at the same time expressing an opinion that further consideration of the report might very properly be held over till next session.

Sir CHRISTOPHER NIXON, who was allowed to proceed, stated to the Council that their legal adviser had shown that the Council were in an illegal position as regards their finances and that they had been advised to get an amendment of the Medical Acts in order to get out of it. It was right that the Council should endeavour to get out of it by an amendment of the Acts, and in his view the only plan that would be satisfactory would be to give all the assets to the General Council and let that Council meet the expenses of the branch councils.

Considerable impatience was shown by the comparatively few members (13 out of 31) who still remained in the Council Chamber at any desire to prolong the sitting or the debate, but the PRESIDENT pointed out that it would not be well if after the opposition speeches the Special Committee had no opportunity to reply, and when another member rose to speak he called upon the chairman of the Business Committee.

Dr. MACALISTER thereupon said that it was impossible to discuss the matter at great length but he wished to say something in reply to what had been said. As a member of the Special Committee he must say that when he entered on the investigation he knew nothing about the Council's accounts and he had taken a much more serious view of his responsibility than Mr. Horsley or Sir Christopher Nixon appeared to think. He thought the question was whether the Council were in a sound financial condition and he had addressed himself to that rather than to mere matters of detail which did not seem to be of the slightest use if any proper elucidation of the question was to be obtained. Mr. Horsley had confused two things—accounts and finance. The report presented showed that the finances of the General Council and its branches were in a position which did not call for any anxiety whatever. The accounts, owing to the serious defects of the Act, were no doubt complicated, but to anyone of ordinary intelligence they were not at all difficult to understand. He had mastered the principle of them in from 15 to 30 minutes. With regard to the alleged illegality of the Council's position Sir Christopher Nixon had absolutely misread the Council's legal adviser's opinion. The very fact that the Council were advised to apply for a new Act showed that they were doing what the law asked from them. If they had been doing anything illegal their legal adviser would have said "stop." They were hampered and tied by an Act of Parliament and they must stick to it. That was not wrong. Was it more important to ascertain whether there was plenty of money to let the Council do their work or simplify the accounts? The investigation which had been made showed that if the Council analysed the finances it would be found that they were sound and that with the very small economies recommended they could meet the expenditure by the income except to a very small extent. If there was a good ground for bringing in a new Act, that might afford a good ground for a clause to amend the Council's financial machinery, but there was no justification for getting an Act to simplify the accounts. If the recommendations of the committee were adopted there would be a saving in expenditure of from £300 to £400 per year, and then there would be plenty of money forthcoming to carry on the Council's work. The Council, it was true, had very little income at present, but for whatever it wanted it could apply to the Branch Councils and get it, so that if in one year there was a certain "excess of expenditure" in its accounts, in the following year there would be an "excess of income," and so things were balanced. As a member of the committee he had to say that it was impossible to do more than had been done, and if Mr. Horsley's proposal were adopted he for one would have nothing more to do with the inquiry.

Dr. PETTIGREW, seconded by Dr. MCVAIL, moved the adjournment of the discussion till next session.

Sir DYCE DUCKWORTH said that the committee had done their best and he also declined to proceed further with the inquiry.

Mr. BRYANT concurred. To his mind it would be useless to send the report back.

The PRESIDENT pointed out that what the committee had brought before the Council was that it had in its own power an opportunity of diminishing its expenditure by adopting the recommendations which the committee had made, but the Council did not have it within its power to pass an Act of Parliament, and that was the most difficult thing they could attempt to secure. His experience was that it was practically impossible to pass any Act of Parliament on a medical subject through the Houses of Parliament; there was no subject the Governments fought more shy of than a medical one. What the Council had to consider now was whether it was not worth their while to adopt the recommendations of the committee with which the report concluded.

Dr. MCVAIL objected to adopt such recommendations and wanted the discussion adjourned. The recommendations meant much more than finance. They contemplated, for one thing, a change in their existing times and hours of meeting which would be most inconvenient if given effect to. The present arrangement was trying enough. Four-hour sittings after committees were quite sufficient when every member had to be in his place continuously. Parliament might have longer hours, with its library, reading-room, smoking-rooms, and lobbies, and an almost complete disregard of attendance in the House itself, but it was different in the Medical Council, where a member taking his seat for the day had to remain in it practically without interruption for four hours.

Mr. HORSLEY also desired to support the adjournment.

because he wished an opportunity to expose the unconscious misrepresentations of Dr. MacAlister.

After some further discussion Dr. Pettigrew's motion was unanimously carried (at the time it was put only 13 members remained), and the treasurers (who accepted the responsibility) were asked to secure before next session an investigation of the Council's finances and accounts with special reference to the matters included in the reference to the Special Finance Committee.

Length of Sitting.

A proposal that the Council should sit six hours a day instead of the present four, which had been given notice of by Sir John Batty Tuke, was dropped.

Sir DYCE DUCKWORTH said that the Council had sat six hours extra this session. That meant an additional day and a half added to the eight days' of regular four-hours' sittings and he hoped the fact would be recognised. He considered it exceedingly bad and exceedingly unwholesome in their present chamber to go beyond the regular hours, as he did not think any good work was done and that the work done in regular hours was best.

Midwives Bill.

On the motion of Dr. MACALISTER the following report from the Midwives Bill Committee was received and entered on the minutes, and the recommendation contained in it was adopted.

The committee has considered the following letter—remitted to the committee by the Executive Committee—received from the Coroners' Society of England and Wales, bearing on the proposed legislation for midwives :—

> 20, Lupus-street, London, S.W., June 15th, 1900.
>
> SIR,—I beg to inform you that at the last annual general meeting of this society (which numbers 263 members), held on the 31st ultimo, a discussion arose upon the Midwives Bill, and eventually the following resolution was unanimously passed, namely :—
>
> "That this society, although approving of the principle of the licensing of midwives, is of opinion that the Bill now before Parliament does not provide for the adequate control and supervision of midwives." I am, Sirs, yours faithfully,
>
> A. BRAXTON HICKS,
> Honorary Secretary, &c.
>
> The Registrar,
> General Medical Council.

It was resolved to report this letter to the Council and to recommend that it be sent to the Lord President of the Privy Council with a request that it be taken into consideration by him.

The Medical Register.

The following notice of motion by Mr. BROWN was on the programme of business :—

> That a supplementary Register be published as soon as possible after June 30th in each year, giving a list of names of persons removed from the Register since the preceding Jan. 1st, through death or otherwise, and also a list of names of persons added to the Register during the same period.

When this notice of motion was reached there was barely a quorum of members present, and on Mr. Brown's saying that he would proceed with it if it were allowed to pass without opposition some derisive sounds by which he was assailed had the effect of causing the postponement of the proposal meantime.

Exceptional Cases of Registration.

The Council proceeded to the

> Consideration of an application for registration of Mr. Leonard George Boor, Lic. Soc. Apoth Lond. 1851, Mem. R. Coll. Surg. Eng. 1852, a medical practitioner entitled to be registered under the Medical Act, 1858, but who neglected to effect such registration until after the coming into the operation of the Medical Act, 1886. This application, it was stated, was duly considered by the English Branch Council on Nov. 20th, when the following resolution was passed: "That the General Council be recommended by the Branch Council to direct the registration of Mr. Leonard George Boor."

On the motion of Sir DYCE DUCKWORTH, seconded by Dr. MACALISTER, the Council agreed to the recommendation of the Branch Council.

Sir DYCE DUCKWORTH submitted the usual report from the Examination Committee in respect to the manner in which exceptional cases of students' registration had been dealt with. It contained, he said, no special cases to call attention to.

This report was adopted.

Vote of Thanks to the President.

With a vote of thanks to the President, moved by Dr. GLOVER and seconded by Dr. WINDLE (Birmingham), the seventieth session of the Council was then brought to a close.

Medical News.

UNIVERSITY OF LONDON.—At the M.B. examination for honours held in October the following candidates were successful :—

Medicine.—First Class : Edward Alfred Gates, St. Thomas's Hospital; Olive McDougall (gold medal), London School of Medicine and Royal Free Hospital; and Donald Johnstone McGavin (scholarship and gold medal), Mason College and Queen's and General Hospitals, Birmingham. *Second Class :* Louisa Hamilton, Royal Free Hospital; Mary Hannah Frances Ivens, London School of Medicine and Royal Free Hospital; William Henry Willcox, B.Sc., St. Mary's Hospital; and Louisa Woodcock, London School of Medicine and Royal Free Hospital. *Third Class ;* William Fielding Addey, University College; William Payne, Westminster Hospital; and Alfred Bertram Soltau, London Hospital.

Obstetric Medicine.—First Class : Mary Hannah Frances (scholarship and gold medal), London School of Medicine and Royal Free Hospital; Donald Johnstone McGavin (gold medal), Mason College and Queen's and General Hospitals, Birmingham; and Alfred Bertram Soltau, London Hospital. *Second Class :* Louisa Hamilton, Royal Free Hospital. *Third Class :* Eugene Michael Niall, St. Bartholomew's Hospital; Miles Harris-Phillips, University College and Royal Infirmary, Bristol; William Henry Willcox, B.Sc., St. Mary's Hospital; and Florence Elizabeth Willey, B.Sc., London School of Medicine and Royal Free Hospital.

Forensic Medicine.—First Class : William Henry Willcox, B.Sc. (scholarship and gold medal), St. Mary's Hospital.—*Second Class :* Margaret Bernard Dobson London School of Medicine and Royal Free Hospital.—*Third Class :* Wilfrid Henry Coltart, Mason College; William Gough, B.Sc., Yorkshire College; Mary Hannah Frances Ivens, London School of Medicine and Royal Free Hospital; John Wishart Little, St. Thomas's Hospital; and Alfred Bertram Soltau, London Hospital.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only, and is not final until the reports of the examiners shall have been confirmed by the Senate.

OPENING OF THE NEW WING OF THE STOCKPORT INFIRMARY.—The new wing of the Stockport Infirmary, which was built in commemoration of the sixtieth year of the reign of Her Majesty Queen Victoria, was opened on Nov. 28th by Lord Newton and dedicated by the Lord Bishop of Chester. A large number of persons, including representatives of public bodies, were present. The Stockport Infirmary dates from the year 1792, when a dispensary for the treatment of the sick poor was started in Millgate by a Mr. Briscall, who was then a surgeon practising in the town. In 1832 the building was called the Infirmary and was rebuilt. It was enlarged in 1871, re-arranged in 1885, and finally further enlarged by the wing just opened. This includes wards, a mortuary and laundry, bathrooms, patients' day-rooms, and an operating theatre fitted up in the most modern style. The heating is done by hot water, and the lighting is electric. The total cost was about £12,000.

THE ALFRED HUGHES MEMORIAL.—On Nov. 24th a meeting of medical men was held in the Library, University College, Cardiff, to consider the exact form which a memorial to the late Professor A. W. Hughes should take. Dr. W. T. Edwards, Vice-President of the College, occupied the chair. On the proposition of Dr. Isambard Owen it was unanimously resolved that a medal should be founded and awarded annually in the medical school of the college and that a fund should be raised to endow the anatomical museum, which owes its origin to a gift of £350 from Professor Hughes. Since, in addition to the great services which he rendered to medical education in Wales, Professor Hughes lost his life in the discharge of what he considered a public duty, it was felt that not only his friends, but all patriotic countrymen, would take pleasure in assisting to establish such a suitable memorial. The coöperation and support of all patriotic Welshmen as well as of personal friends are therefore being invited, and the proceedings of a meeting of laymen held on the same day with the same object have already been mentioned in THE LANCET of Dec. 8th, (p. 1687). The committee hopes to raise a fund of from £1000 to £1500, the interest upon which will be devoted annually to the advancement of the museum, henceforth to be known as the "Alfred Hughes Anatomical Museum." Mr. J. Lynn Thomas, formerly senior surgeon to the Welsh Hospital, South Africa, Mr. D. W. Evans, honorary local secretary to the same hospital, and Mr. J. Austin Jenkins, registrar of the University College, have been appointed honorary secretaries to the Memorial committee and his worship the Mayor of Cardiff is the honorary treasurer. A sum of £400 has already been promised.

TYPHOID FEVER AT PLYMOUTH.—76 cases of typhoid fever have been notified in Plymouth up to Dec. 10th, with nine deaths. The mortality-rate amongst the patients treated at the Borough Hospital has been only 4 per cent.

VACCINATION GRANT.—Mr. Arthur G. B. Lory, L.S.A., public vaccinator of the Chudleigh District of the Newton Abbot Union, has obtained the special Government grant for successful vaccination.

UNIVERSITY OF CAMBRIDGE.—Dr. B. Anningson, Dr. W. Collingridge, Dr. J. F. W. Tatham, and Professor Sims Woodhead have been appointed examiners for the Diploma in Public Health; Professor A. Macalister and Dr. S. H. Habershon additional examiners for the Second and the Third M.B. examinations respectively. The Walsingham medals for biological (including physiological) research have been awarded to Mr. H. H. Dale (gold medal) and Mr. R. C. Punnett (bronze medal).

THE LATE DR. J. I. BEVAN.—Dr. John Iron Bevan, of Mumbles, Glamorganshire, died in London on Nov. 30th, in his fifty-second year, after having undergone a surgical operation. Dr. Bevan, who graduated at Edinburgh University in 1872, had been for many years in practice at Mumbles, where he held several public appointments, being medical officer of health of Oystermouth and district medical officer and public vaccinator for the East Division of the Gower Union. He was also surgeon to the Fourth Division of the Coast Brigade of the Royal Artillery.

THE SURGICAL AID SOCIETY.—On Dec. 10th the Lord Mayor of London presided at the annual meeting of the Surgical Aid Society which was held at the Cannon-street Hotel The report showed that the net income for the year was £17,000 and the subscriptions were £8942. The expenditure had been £14,695. A munificent bequest of £20,614 had been received under the will of the late Mr. Edward Mackeson of Hyde Park-square and the City guilds had supported the society liberally. During the year 25,219 appliances had been supplied.

FATAL ACCIDENT TO A MEDICAL MAN.—Mr. Edwin Thomas Griffiths, M.D. St. And., J.P., aged 77 years, of Washwood, near Birmingham, died from the effects of a fall on Nov. 27th. At the inquest it was stated that the unfortunate gentleman whilst crossing the road was knocked down by the shaft of a cart. From a statement made by the deceased just before he died it would seem that the driver of the vehicle (who has not been found) was not to blame, and the jury found that death was accidental, the result of a fall but that the evidence was insufficient to show how the fall was caused.

THE WEST KENT MEDICO-CHIRURGICAL SOCIETY.—Dr. Septimus Sunderland presided at a meeting of this society held at the Royal Kent Dispensary on Dec. 7th when the Purvis Oration was delivered by Dr. G. V. Poore. After the oration (an abstract of which will be found in another column of THE LANCET) a conversazione was held and the following exhibitions were given: Lantern Views of Historic Towns in Mediæval France and a demonstration of the Kromscop, by Mr. J. J. Vezey, F.R.M.S.; a demonstration of Wireless Telegraphy, by Mr. Leslie Miller; an Apparatus for the Production of Electrical Currents of High Potential and Great Frequency, and the Instruments used in applying the Currents, by Dr. Pepperdene; Pathological Specimens and Microscopic Sections of Eyes, by Mr. Ernest Clarke, F.R.C.S. Eng.; and Microscopic Slides and Drawings, illustrating Pathological Conditions of Diseases of the Skin, by Dr. Morgan Dockrell.

THE WATER-SUPPLY OF LEICESTER.—A suggestion having been made as to the possibility of diphtheria being conveyed by the Leicester water-supply the sanitary committee instructed Mr. H. G. H. Monk, the medical officer of health, to investigate the matter. A sample of water taken from a tap in the town was submitted to examination with the following result:—Physical: naked-eye appearances, *nil*; colour, *nil*; suspended matter, *nil*; deposit, *nil*; microscopic appearances, *nil*; odour, *nil*; reaction, neutral; temperature, 14° C. Bacteriological: 1. Quantitative examination of micro-organisms, 20 per cubic centimetre. This was the average on four experiments. 2. Qualitative examination of micro-organisms: (1) Several common non-pathogenic water bacteria were present; (2) no bacillus coli and no bacillus typhosus were detected; and (3) no bacillus diphtheriæ was detected. Remarks: The sample was excellent in every way. The number of bacteria present was very small, indeed, after 24 hours standing, there was no sign whatever of surface pollution and no organism of disease was detected.

NEWPORT HOSPITAL.—The total receipts of the recent bazaar given for the funds of the Newport (Mon.) Hospital amounted to £6068 and the expenses to a little over £200.

SEWAGE OF CAMELFORD.—At the Camelford (Cornwall) County Court, held on Dec. 6th, the Cornwall County Council applied for an order directing the Camelford Rural District Council to abstain from allowing the sewage of Camelford to fall into the river Camel. The judge made the order with costs

DIPHTHERIA IN GLAMORGANSHIRE.—At the meeting of the Sanitary Committee of the Glamorganshire County Council, held on Dec. 7th, the medical officer of health (Dr. W. Williams) reported that during the three months ended September last 882 cases of diphtheria had been notified in the county of Glamorgan, against 540 in the previous quarter.

WINSFORD COTTAGE HOSPITAL.—The Winsford (Devon) Cottage Hospital, which has been given by Mrs. Medley of Winsford Tower as a memorial to her late husband, is now finished. The hospital, which contains three wards, will accommodate ten patients and is intended to benefit more particularly the poor of the parishes of Harwill and Beaworthy. The entire cost of the institution has been borne by Mrs Medley who also intends permanently to endow the hospital

Parliamentary Intelligence.

HOUSE OF LORDS.

MONDAY, DEC. 10TH.

Treatment of Invalided Colonial Soldiers.

EARL CARRINGTON called the attention of the Government to the practice of sending home as steerage passengers in mail steamers wounded and invalided soldiers who have been brought to this country to recruit their health, and asked whether more suitable accommodation could not be provided for these men. His lordship spoke of the men being packed like herrings in a barrel, with steerage accommodation and steerage diet, when they were not in a strong state of health, and said that the amelioration of their lot had been left to private charity and to the generosity of the steamship companies.—Lord **RAGLAN**, the new Under Secretary of State for War, replied on behalf of the Government. The expression "steerage" he said, was somewhat unfortunate, for the men had a third class passage with a bunk in a cabin and a dietary that was varied and plentiful These soldiers had been brought home as invalids from South Africa in order to relieve the pressure on the base hospitals and the convalescent homes in South Africa. Wherever possible, of course, they had been sent straight to their homes in the colonies They were not really invalids; in far the greater majority of cases they had recovered their health and strength, and if they had not entirely recovered they were, at least, far advanced towards convalescence, and therefore it was no great hardship to ask them to travel third class Where a man was considered to be in a delicate state of health and needing more attention and perhaps more luxury he was provided with a second-class passage. If these men, on account of their superior social position, were all to be given a second class passage, the same reason would apply to the men of many other corps such as the Imperial Yeomanry and the City Imperial Volunteers.—Lord **MONKSWELL**, Lord **TWEEDMOUTH**, and the Earl of **ABERDEEN** expressed dissatisfaction and disappointment with the answer made on behalf of the Government Lord **ABERDEEN** thought that the medical officers should be encouraged to ascertain the true position of affairs in order that the men themselves might not appear to be over-particular.—The Marquis of **LANSDOWNE**, late Secretary of State for War, insisted that the picture had been overdrawn The accommodation given to these men was what was known as superior third class, and it was quite unfair to speak of them being packed like herrings in a barrel.—Lord **STRATHCONA** and **MOUNT ROYAL** said he had no doubt that there had been some shortcomings and he urged the Government to make further inquiry into the matter—Earl **CARRINGTON** said that he had never heard of this "superior third class" accommodation, and told the House that one man had a temperature of 104°F.; that others were in great pain from wounds, and that others again were recovering from enteric fever. He was so dissatisfied with the answer of the Government that on an early date he would move and take the sense of the House on the motion "That this House disapproves of the arrangements made by Her Majesty's Government in sending back invalided and wounded colonial soldiers."

HOUSE OF COMMONS.

FRIDAY, DEC. 7TH.

The Constituents of Beer.

Mr. **FREDERICK WILSON** asked the President of the Local Government Board whether he would take steps to define the word "beer," like bread, butter, &c., or whether beer was still to be made of any imaginable article grown, manufactured, or imported into the country.—Mr. Grant Lawson, replying for Mr. Walter Long, said: Legislation would be necessary to give effect to the wishes of the hon. Member and I am afraid that I could not undertake to introduce a Bill for the purpose. I may point out that adulteration of beer may be dealt with under the existing law.

Monday, Dec. 10th.

The Report of the South African Hospitals Commission.

Mr. Balfour, replying to a question addressed to him by Sir Walter Foster, said he was informed by the South African Hospitals Commissioners that they hope to be in a position to present their report early in the ensuing year.

Tuesday, Dec. 11th.

Medical Colleges and the Corporation Tax.

Sir John Tuke asked the Chancellor of the Exchequer whether he proposed to impose the corporation tax (1894) on the Royal Colleges of Physicians in London and Edinburgh, having regard to the fact that the two Colleges administer and regulate medical education and examination and maintain laboratories for original research, that they are consulted by Government and by municipal authorities in matters relating to public health and medical matters generally, and that each Fellow of the Colleges is required to pay a stamp duty of £25 on election as Fellow, whereas the Institution of Civil Engineers has, by a decision of the House of Lords, been exempted from payment of the corporation tax; and whether, in face of the fact that the corporation tax has never been levied, he proposed to make the Royal Colleges liable for five years of arrears, thus placing a strain on the resources of two bodies who perform the services indicated for the State.—Sir Michael Hicks-Beach replied: The question of the liability of the Royal Colleges of Physicians in London and Edinburgh to pay corporation duty was raised by the Board of Inland Revenue in 1894 and was disputed by the Colleges. It was allowed to remain in abeyance pending a decision on a similar claim made on the Royal College of Surgeons, which has since been decided in favour of the Crown by the Court of Appeal. Following this decision the Board of Inland Revenue feel compelled to press their claim on the Royal Colleges of Physicians of London and Edinburgh. The facts of the case differ from those in the case of the Institution of Civil Engineers.

Reserve Men and Medical Attendance.

Captain Norton asked the Secretary of State for War whether it had been brought to his notice that the wives of non-commissioned officers and men in the Royal Reserve in receipt of separation allowance have been refused medical attendance for themselves and their children in cases where they do not happen to live within a mile of a military medical man or civilian practitioner in attendance on troops; and whether, seeing that reserve men came forward voluntarily at a time of national danger, are only temporarily employed, and consequently cannot conveniently alter their domestic arrangements, steps would be taken to place the families of all of them upon an equal footing as regards medical attendance, irrespectively of their abode.—Mr. Powell Williams replied: The families of soldiers of the Royal Reserve are being treated on the same lines as those governing the medical attendance of the families of soldiers of the regular forces. The same privileges have been extended to them when separated from their husbands. It is not possible to provide medical attendance for those residing at a distance from military headquarters.

Typhoid Fever among the Troops in South Africa.

Mr. Powell Williams, in reply to Sir Walter Foster, said that the total number of cases of typhoid fever among the forces in South Africa from the beginning of the war to Sept. 28th, 1900, was 15,655, the number of deaths from that disease 3642, and the number sent home as invalids 9128.

The Beer Poisoning Cases.

Mr. Balfour, in reply to a question on this subject, said that he was informed by the President of the Local Government Board that his department had from the first outbreak of the epidemic had the matter under observation. One of the medical inspectors had been visiting the places affected and had been instructed to obtain all possible information on the subject, including the action that was being taken, both by those interested in implicated breweries and manufacturers of brewers' sugar and by the local authorities, for detecting arsenic in beer and other substances which contain chemically manufactured sugar. The Board were issuing circulars to local authorities recommending them to take samples, to be analysed, both of beer and articles of food in which glucose and other substitutes were used.

Medical Provision for the War in South Africa.

At this sitting of the House Mr. Brodrick, the new Secretary of State for War, introduced in Committee of Supply a supplementary vote of £16,000,000 for the conduct of military operations in South Africa and China Various aspects of the South African campaign were discussed, many references being made to the medical provision. With regard to the bringing home of sick and wounded Mr. Brodrick announced that he had given instructions that as many as possible should be returned in troopships and should not have to mix with other passengers, that they should be under the control of an officer who would attend to their comfort, that in any case of a man who was ill he should be returned second-class at a superior rate, and that there should be careful selection of ships. He had given instructions that all the sick and wounded, whether partially recovered or not, who had to be returned in mail-steamers should have a higher rate of accommodation.—Sir Walter Foster, in the course of his speech, expressed the hope that however long the war might yet last more efficient and effective steps would be taken to preserve the health and lives of the soldiers from the attacks of disease. He commented on the prevalence of typhoid fever and said that it was mainly due to the fact that proper precautions against the disease had not been taken from the beginning of the operations. He had discussed the subject with some of the eminent surgeons who had been at the front, and they all agreed that the one great thing wanted was proper sanitation in the camps. He hoped that the Secretary of State would take into his serious consideration the advantage of following the example of other great Powers and of having attached to our army some kind of sanitary corps which would prevent a repetition of the mistakes that had been made in South Africa with regard to the sanitation of the camps. Sir Walter Foster also referred to the treatment of invalids on their way home and to the insufficient strength of the Royal Army Medical Corps.—Mr. Brodrick assured Sir Walter Foster that his suggestion about a sanitary corps would be carefully considered along with other suggestions on the same subject. He hoped that it would not be supposed that he was either temporising or endeavouring to put off a decision upon this important matter, but it was absolutely impossible at this moment for him to enter into the question of what required to be done for the medical service in South Africa. It was a subject in which he in common with every Member of the House had the deepest possible interest. They had a commission sitting, and if anything that he could do would induce that commission to report at an earlier date than it would otherwise do he would only be too pleased to do it. It was impossible that the question of the medical service could be put aside, but it could not be dealt with until they had received the report of the commission. He would ask the House to have confidence that when the report was received the action of the War Office would be prompt and that no preconceived ideas of any sort or kind would interfere with their taking whatever measures might be necessary, however drastic, to put the medical service upon a proper footing. They did not wish to prejudge the matter in the least. In a campaign of this kind there must be occasions when men received less medical assistance than was desirable. A sanitary corps to inspect each camping-ground would be an ideal state of things, but he did not think it would be possible in the case of every small camp. However, their minds were open and there was nothing either in labour or in examination which would be stinted to give proper effect to the suggestions which might be adduced.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

Adams, E. G. B., M.B. Lond., F.R.C.S., has been appointed Medical Officer for No 1 B. Sanitary District by the Longport Board of Guardians and Rural District Council.

Anderson, D. E, M.D. Paris, has been appointed Visiting Physician to the Hertford British Hospital, Paris.

Bates, T., L.R.C.P., L R C.S. Edin., M.R.C.S., has been re-appointed Honorary Surgeon, Worcester General Infirmary.

Bathurst, L., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Ellesmere Union, vice J. Griffiths.

Bernard, G., M.D. Canada, L.R.C P., L.R.C.S. Edin., has been appointed District Medical Officer, Sunderland Union.

Bonner, T. J., M.B., C.M. Aberd., has been appointed Medical Officer of Health, Towyn Urban Sanitary District, vice B. M. Bone, resigned.

Brand, G. H., M.D. Brux., L R C.P., L.M. Irel., L S.A. Lond., has been appointed to examine Candidates for the Royal Navy and Royal Marines for the Northampton District.

Brickwell, J., M.R.C.S., has been re-appointed Medical Officer for the Stoke Pogis Sanitary District, Eton Union.

Brown, J. Walter, B.A., M B., B.Ch. Irel., has been appointed House Surgeon to the Children's Hospital, Forest House, Nottingham.

Budd, H. G., L.R.C.P. Lond., M.R.C.S, has been re-appointed Honorary Surgeon, Worcester General Infirmary.

Byford, W. F., L.R C.P. Lond., M.R C.S., has been appointed Medical Officer of Health for the Borough of Ruthin, vice D. Jones, resigned.

Cooke, R. P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed District Medical Officer, West Bromwich Union, vice C. Lyddon, resigned.

Drew, Douglas, B.S., M.D. Lond., F.R.C S. Eng., has been appointed Surgeon to the In-patients at the Hospital for Women, Soho-square, London.

Ellis, R. Sidney, M.B., Ch.B. Edin., has been appointed Resident Medical Officer to the St. Mary's Hospital for Sick Children, Plaistow, E.

Ensor, C. A., L.R.C.P. Lond., M.R.C.S., has been appointed District and Workhouse Medical Officer, Tisbury Union, vice J. A. Ensor, deceased.

Grace, Alfred, L S A. Lond, has been appointed Deputy Medical Officer for the No 1 District and the Workhouse of the Thornbury (Gloucestershire) Union.

Hadfield, P. Heywood, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer of Blackadon Asylum, Devonshire.

Haworth, J. T., L R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Filey District Council.

Hill, F. A., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Stroud Union, vice F. E. Gordon, resigned.

Hobhouse, Edmund, M.D. Oxon., M.R.C.P., has been appointed Physician to the Alexandra Hospital for Children, Brighton.

Hudson, O. H., L.R.C.P. Irel, M.R.C.S., has been appointed Medical Officer of Health for the Dronfield Urban Sanitary District, vice H M. Richards, resigned.

Hutchens, Harold J., has been appointed Medical Officer of Health to the Joint Board for the Prevention of Epidemic Diseases, Brisbane, and to continue to act as Medical Superintendent of the Plague Hospital.

Kirk, T. D., M.D., M.Ch. Irel., has been appointed Medical Officer of Health, Montgomery Urban Sanitary District, vice T. Morgan, resigned.

Manning, Ernest J., M.R.C.S., L.R.C.P. Lond., M.B. Durh., has been appointed Junior Assistant House Surgeon to the Royal Devon and Exeter Hospital, Exeter.

MAPLETON, H B, M D Edin, D P H Lond, has been appointed Medical Officer of Health Newton Abbot Urban Sanitary District vice W Harvey, resigned

MITCHELL, C M, M D, M Ch Irel, has been appointed District Medical Officer, Oakham Union, vice G Shields, resigned

RANDALL, WYNDHAM M R C S, L R C P Edin, has been re appointed Medical Officer of Health by the Penybont Rural District Council South Wales.

ROBB J B L., M D Aberd, has been appointed District Medical Officer, Burnley Union vice S Lawson resigned

RODERICK, SYDNEY JAMES, M B C M Edin, has been re-appointed Medical Officer of Health for the Borough of Llanelly, Carmarthenshire.

SHEAHAN, GERALD L R C P & S Edin has been appointed House Surgeon to the Royal Southern Hospital Liverpool

SOUTHEY A J M R C S, has been re appointed Medical Officer for the Colnbrook Sanitary District

TRUMPER, W A, M R C S, L R C P Lond, has been appointed Assistant House Surgeon to the Royal Devon and Exeter Hospital Exeter

WARBURTON, W P, M D Edin, has been appointed Medical Officer of Health, Skirlaugh Rural Sanitary District, vice C Soloman

WESTERMAN ARTHUR, M B, Ch B Aberd, has been appointed Senior Resident Medical Officer to the North west London Hospital Kentish Town road N W

WHITEHEAD, ARTHUR E L R C S, L R C P Edin, has been appointed Assistant Resident Medical Officer to the St. Mary's Hospital for Sick Children, Plaistow, E

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

ANCOATS HOSPITAL, Manchester —Resident House Physician Salary £80, with board, &c

BOOTLE BOROUGH HOSPITAL, Liverpool —Junior Resident Medical Officer Salary £80 per annum with board and washing

BRIGHTON HOVE, AND PRESTON DISPENSARY —Three House Surgeons, one for each Branch Salary £160 per annum, with furnished apartments coals gas washing and attendance Apply to Assistant Secretary 113 Queen s road Brighton

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square Chelsea.—Surgeon

CHELSEA HOSPITAL FOR WOMEN, Fulham road S W —Clinical Assistant for three months Fee £8 8s

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon for two years, unmarried Salary £45 per annum with board, lodging and washing

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY Chesterfield —Resident House Surgeon for two years Salary £100 per annum with board apartments, and laundry

CHESTER GENERAL INFIRMARY —Second Resident Medical Officer for six months. Salary at the rate of £80 per annum with residence and maintenance in the house

COUNTY ASYLUM, Gloucester —Junior Assistant Medical Officer, unmarried Salary commences at £120 per annum rising £10 yearly to £150 with board (no stimulants) lodging and washing

DEVON COUNTY ASYLUM Exminster —Junior Assistant Medical Officer Salary £125 rising £10 annually to £155, with board, furnished apartments and washing

DONCASTER GENERAL INFIRMARY AND DISPENSARY —Assistant House Surgeon Salary £40 per annum, with board and residence

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries —Assistant House Surgeon Board and washing provided.

GENERAL HOSPITAL, Birmingham —Two Casualty Assistant Physicians for one year Salary £50 per annum

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION, Gloucester —Assistant House Surgeon for six months Salary at the rate of £30 per annum, with board residence and washing

GOWER UNION —Medical Officer for the Eastern District of the Union Salary £40 per annum, and the successful applicant will be appointed Public Vaccinator for the District Subject to statutory deduction Apply to the Clerk to the Guardians, Victoria chambers Oxford street, Swansea

GREAT NORTHERN CENTRAL HOSPITAL Holloway road, N —Non resident Assistant House Surgeon for six months Salary at the rate of £30 per annum, with luncheon and dinner in the hospital

HOSPITAL FOR WOMEN, Soho-square, London —Assistant Surgeon

HULL ROYAL INFIRMARY —Junior Assistant House Surgeon for one year Salary £40 with board and lodging

LAMBETH INFIRMARY —Clinical Assistant for six months Salary at the rate of £50 per annum Personal application to the Medical Superintendent

LEEDS PUBLIC DISPENSARY —Two Resident Medical Officers for one year Salary £100 with board and lodging

LEICESTER INFIRMARY —House Physician for 12 months Salary £100 per annum, with board apartments, and washing

LONDON THROAT HOSPITAL, 204, Great Portland-street.—Assistant Surgeon

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich road S E —Junior Resident Medical Officer for six months Salary at the rate of £60 per annum, with board, attendance, and washing

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon, unmarried Salary £80 per annum, with board, residence, and washing

NEWCASTLE UPON TYNE UNION —Assistant Medical Officer at the Workhouse, unmarried. Salary £150 per annum, with furnished apartments, rations, and washing subject to statutory deductions Applications to the Clerk to the Guardians, Union Offices, Newcastle-upon Tyne

NORFOLK COUNTY ASYLUM, Thorpe Norwich —Junior Assistant Medical Officer Salary £120, rising to £150, with board (no liquors), lodging, and washing

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke upon Trent —Assistant House Surgeon for six months. Board, apartments and washing provided and at least £10 given as an honorarium

NOTTINGHAM GENERAL DISPENSARY —Assistant Resident Surgeon. Salary £140 per annum all found except board

ROYAL BOSCOMBE AND WEST HANTS HOSPITAL Bournemouth —House Surgeon Salary £60 per annum with board, lodging and washing

ROYAL COLLEGE OF PHYSICIANS Pall Mall East, London —Milroy Lecturer for 1902

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, London —Assistant Surgeon

ROYAL PORTSMOUTH PORTSEA AND GOSPORT HOSPITAL.—House Surgeon for one year, unmarried Salary £100, with board and residence

ROYAL SEA BATHING HOSPITAL, Margate —Assistant Resident Surgeon Salary £52 per annum with board and residence

SALOP INFIRMARY Shrewsbury —House Surgeon Salary £100 per annum with board, washing and residence

ST. MARYLEBONE GENERAL DISPENSARY, 77 Welbeck street, Cavendish square, London —Resident Medical Officer Salary 100 guineas per annum rising annually by 10 guineas to 120 guineas, with furnished apartments attendance coal, and light.

ST PAUL'S HOSPITAL FOR SKIN AND URINARY DISEASES Red Lion square London —Honorary Assistant Surgeon

SUSSEX COUNTY HOSPITAL, Brighton —Second House Surgeon and Anæsthetist unmarried Salary £70 per annum with board and residence in the hospital Also a Third House Surgeon unmarried Salary £60 per annum with board and residence in the hospital, and washing

SWANSEA GENERAL AND EYE HOSPITAL.—House Physician for twelve months. Salary £75 with board apartments and washing

TAUNTON AND SOMERSET HOSPITAL, Taunton —Assistant House Surgeon for six months Salary at the rate of £60 per annum, with board lodging and laundry

TIVERTON (DEVONSHIRE) INFIRMARY AND DISPENSARY —House Surgeon Salary £80 and all found.

TYNEMOUTH VICTORIA JUBILEE INFIRMARY —Resident House Surgeon Salary £100 with board, residence and attendance Apply to the Secretary, 43 Howard street, North Shields

UNIVERSITY OF EDINBURGH —Additional Examinerships in Medicine and Science

VICTORIA HOSPITAL FOR CHILDREN Queen s road, Chelsea —House Surgeon for six months Honorarium £25 with board and lodging in the hospital

WARRINGTON INFIRMARY AND DISPENSARY —Junior Resident House Surgeon Salary £100 per annum, with furnished residence and board

WESTERN GENERAL DISPENSARY, Marylebone-road London —Two Honorary Surgeons

WEST DERBY UNION —Resident Assistant Medical Officer for one year at Mill road Infirmary Everton Liverpool unmarried Salary £100 with rations Subject to statutory deduction, Apply to the Clerk to the Guardians Brougham Terrace, Liverpool

WEST KENT GENERAL HOSPITAL, Maidstone.—House Surgeon, unmarried Salary 100 guineas rising 10 per annum to 120 guineas with board and residence Also Assistant House Surgeon for six months Honorarium at the rate of £50 per annum, with board and residence

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton —Assistant House Surgeon for six months Honorarium at the rate of £75 per annum will be given Board, lodging and washing provided

Births, Marriages, and Deaths.

BIRTHS

CARRUTHERS —On Dec 9th, at Riverside, Batheaston, the wife of Alan Eskrigge Carruthers, M A., M B Cantab, of a son

COLLINS —On Dec. 1st at The Mall Wanstead, Essex, the wife of George W Collins, M R C S Eng, L R C P Lond, of a son

JAMES —On Dec. 6th at Sunnyholme, East Cowes Isle of Wight, the wife of Captain S P James I M S, M B Lond of a daughter

MUNRO —On Dec. 4th at Sweetbriar Cottage, Nantwich the wife of John Douglas Munro M D of a daughter

WEICHERT —On Dec 9th, at Rydal Mount, Penygraig Glamorgan, Constance wife of C J Weichert, M R C S, L R C P Lond, of a daughter

MARRIAGES

HILLIARD—HAZELL.—On Dec 8th at St George s, Bloomsbury, Harvey Hilliard, M R C S, L R C P Lond, of Wilton place, S W, to Charlotte Rippon younger daughter of Walter Hazell, of Russell square London

PERRY—GORDON —On the 19th Nov 1900 at Agra India, Francis Frederic Perry, F R C S, Lieutenant Colonel Indian Medical Service to Hilda Madeleine daughter of D Clunes Gordon, Esq

WARING—HILL.—On Dec. 10th at St. George s Church, Campden Hill W, Holburt J Waring M S, B Sc., F R C S, of Upper Wimpole street, W, to Annie Cassandra, daughter of the late Charles Johnston Hill of Holland park, W

DEATHS.

SMITH.—On Dec 6th at his residence, 23 Park road, Plumstead, John Smith M R C S Eng L S A. Lond, aged 69 years

TERRY —On Nov 24th 1900, at Daventry, May wife of John Terry, L R C P Lond, M R C S Eng Also on Dec. 2nd, 1900, at Reading John William, son of the above, aged 20 days

N B —A fee of 5s is charged for the insertion of Notices of Births, Marriages, and Deaths

Notes, Short Comments, and Answers to Correspondents.

"THE MEDICAL PROVIDENT LEAGUE."

To the Editors of THE LANCET.

SIRS,—Confidently relying upon the motto which THE LANCET has so well upheld during its distinguished career, "Audi alteram partem," I would submit that there is another side to the arguments advanced in your issue of Dec. 1st (p 1629) concerning the Medical Provident League. In the first place, and with reference to your statements concerning the National Deposit Friendly Society, you note that that society "is sincerely desirous to receive the active support and confidence of the medical profession." You doubtless approve of that desire, for THE LANCET has often and conclusively demonstrated how painfully different is the attitude assumed towards the profession by other provident societies. Yet you paraphrase that desire to mean—"in other words, the National Deposit Friendly Society will be much obliged if medical men will combine together to act as canvassers for the society" May I point out that the interpretation is scarcely logical, and as the honorary consulting physician for the London division of the society I am able to say that it is totally inaccurate. The society has never expected, nor does it desire, medical men to canvass for it. The society would be glad to have an organised medical body to deal with, through which any suggestions which may be advanced, perhaps any complaints which may be needed, from its medical officers all over the country might be brought directly and officially to the governing body of the society; instead of vague opinions filtered through official after official from one district, and often flatly opposed to equally vague opinions expressed from some other town. The society, in fact, desires to work in perfect harmony with the medical men who work for it; and it is indisputable that this would be assisted by official communication between bodies representative of both parties. I venture, therefore, to submit that, instead of being adversely criticised, the society deserves the greatest credit for attempting to obviate by such friendly understanding any chance of the friction and the misunderstandings which are so rife between other provident bodies and their medical officers; for assisting, in fact, to institute a most practical conciliation scheme for its own workers—the very system which THE LANCET has so eloquently advocated, which medical authorities have approved, but which seems at present unlikely to be generally adopted.

Permit me to point out that you are in error about the insurance scheme of the society. It was sanctioned last May; it has a *clientèle*, to commence with, of 56,000 members; it is only waiting for Jan. 1st to formally commence its work. I must enter a very respectful protest against your description of local secretaries of the new League as "touts." Their duties would be to work for the objects of their professional association exactly as many now work in every district for the British Medical Association or the Medical Benevolent Fund. By parity of argument the latter gentlemen are "touts"—a description which I can quite imagine they might fairly disapprove of. Finally, you advise the National Deposit Friendly Society that "it should coöpt as acting members of its general committee representatives chosen by several hundreds of the medical practitioners" who now work for the society. That is precisely the very thing the society has offered to do. But it not unnaturally asks for a representative medical body to nominate those representatives. It will scarcely be suggested that the society should ask some 1500 practitioners to meet in a casual way, in some place of assembly, somewhere, for the sole purpose of choosing representatives on the governing body of the society; or that it would be humanly possible, without an enormous expenditure of time, trouble, and money, for candidates to be selected, and representatives finally chosen, merely by correspondence with 1500 busy men.

Will you next permit me, Sirs, to point out that this friendly society is distinguished from others by certain remarkable features. It has no contract work. It pays practitioners promptly for every attendance on its members, on a scale of fees drawn up and agreed to by, and modified from time to time at the desire of, medical practitioners. It is in no sense a commercial undertaking striving for the profit of shareholders, but a mutual benefit society for the working classes. By general acknowledgment, the society treats its medical officers with courtesy and respect. It is extending with such great rapidity amongst the working classes in this country that it is safe to predict that at no distant period it will be one of the foremost friendly societies in the United Kingdom. Of its own free will—merely to prevent friction and misunderstandings, merely in order to work with the medical profession in the future, as in the past, with harmony and mutual good feeling—the society has offered to do all in its power to welcome, and to officially recognise, an organisation of medical men willing to work for its members.

So far as the Medical Provident League—now definitely formed—is concerned, its position is equally defined. Quite independently of this friendly society, or of any other, the League proposes to devote its energies to work for reforms which none have proved more conclusively than THE LANCET are most urgently needed for the welfare of general practitioners and for the good name of the medical profession. I am, Sirs, your obedient servant,

Upper Wimpole-street, W., Dec. 4th, 1900. BEDFORD FENWICK.

To the Editors of THE LANCET.

SIRS,—I read the most extraordinary circular which appears in THE LANCET of Dec. 1st (p. 1629), referring to the above society, and think that in your strictures on it you have just hit the right nail on the head. You pick out the two weakest points—I quote your words: "Rate of remuneration for medical service and the wage limit above which medical service cannot be rendered; there are other things which might be discussed." A few years back I was called on by an agent of the above society, shown the rules, told that other medical men in the town would act for it and accept the rate of payment, and assured that this was no common club, that while working-men would be admitted it was for a class above that; the names of several prominent well to-do business men, each employing a considerable number of hands in the place, were mentioned to me as members, and I was asked would I act for it and accept the stipulated rate of payment. I declined, pointing out my reasons to some of my opponents, but failed to convince them, and the society got a footing here. Now, I am trusting to my memory, which is fairly good, but if I am wrong I will gladly admit it, and some of the rules may have been altered since then, yet, if you allow me the space—and I feel sure in the interest of the battle with the clubs, you will—I will point out the weak points of this society's rules and actions. A handbill was issued, which I sent you at the time, calling a meeting; a baronet was to take the chair, members were invited to join, and it was specially stated in this printed issue that position in life would be no bar to membership. The rules stated that for the fee of 1*s.* a member would be passed by the medical officer (and not only passed, but he had to be classified in a certain category according to his state of health at the time, all for 1*s.*); a fee of 2*s.* 6*d.* (two shillings and sixpence) would be paid for visit and medicine to last two days. I could see no provision for payment of visits at night or those required at times oftener than once in two days. I was told, when I pointed out that there was no wage-limit, that higher fees would be paid for those who join for higher sick pay, but my experience has been that very many of the better class who join this society and other clubs want the doctors cheap and do not pay to these societies at such a rate as to bring in to the medical attendant a remuneration in any proportion to his services and their own income. As an illustration, I was once asked, earlier than the establishment here of the National Provident, to allow the "honorary" members of the Rechabites to be placed on my list with the ordinary members and attend them for the club fees paid for the latter. I need not say that I declined to accept this but their names were mentioned to me and these were in most instances those of the very men whom I objected to as joining the National Provident; they were still bent on getting a cheap medical attendant—thrifty to meanness. If the National Provident and other benefit societies would only stick to the working and keep out the middle classes they would find it best for their own interests. We have now established a strong union in this and an adjacent county, taking in those medical men living on the borders of another as well, and hope to do good service in weeding out "sweating" by medical aid and other kindred institutions and level up to a higher plane contract work. Thanking you in anticipation,

I am, Sirs, yours faithfully,

Eckington, Derbyshire, Dec. 1st, 1900. WALLACE B. CROSKERY.

THE YOUNG LADIES' SCHOOL OF ARTS.

A CORRESPONDENT sends us a page cut from a little book with the above title printed presumably about the end of the last century and bearing internal evidence of being the composition of a Scots-man or -woman. The page contains recipes or prescriptions which would be considered scarcely suitable nowadays for the perusal of "sweet seventeen." One of them is headed "For Barreness," and runs as follows: "The man and the woman are to drink a teacupful of clove water before they go to bed; this is a sovereign remedy in Egypt in these cases, and Dr. Hasselquist says that he was told at Cairo that a woman who had been barren for many years had conceived by using this simple medicine. A midwife told himself that she had often prescribed it with success." Miss Pinkerton would have been horrified had such a prescription found its way inside the chaste gates of the Academy on Chiswick Mall.

"THE BATTLE OF THE CLUBS: A SUCCESSFUL PRECEDENT."

To the Editors of THE LANCET.

SIRS,—The answer to Mr. C. B. Townshend's inquiry in THE LANCET of Dec. 1st (p. 1630), is that our collector is paid a nominal salary of 1*s.* a week (which makes him legally our servant) and 10 per cent. on the collections. At first canvassing was not only permitted, but we considered that it was necessary, for otherwise the existence of our association could not have become so generally known amongst the working classes and without it we could not well combat the large medical aid society which was opposing us. Our committee did not, under the circumstances, hesitate to canvass, for it must be remembered there is a very great difference between canvassing in the interests of an individual practitioner and canvassing for an association which represents practically the whole of the medical profession in the town For some little time, however, our collector has not been allowed to canvass, partly because we did not feel that latterly anything was gained by it, but principally because we were anxious to observe the letter as well as the spirit of the resolution passed by the General Medical Council in June, 1899 And practically, though there is no absolute guarantee that the collector does not and cannot canvass, yet when it is remembered that he makes a very good income without canvassing, that canvassing is contrary to our express instructions which he can only infringe at his peril, and, lastly, that we never receive complaints from any source of canvassing having occurred, I think we are justified in concluding that Mr Townshend's apprehension that our instructions will prove "futile" is not likely to be realised One positive advantage in paying the collector by commission is that he is stimulated to collect "arrears" with regularity, which is of course, very important in the interest of both medical men and members

I am Sirs, yours faithfully,

Dec. 1st, 1900 A HARPER, Hon Sec

TREATMENT OF CONSUMPTION BY ARSENIC

To the Editors of THE LANCET

SIRS,—I should feel much obliged if you or any of your readers could kindly inform me whether anything is known in this country of Professor Gautier's treatment by the use of cacodylate of soda as described by the Paris correspondent of the *Daily Telegraph* of Dec. 1st as the result of an interview with the professor According to this Professor Gautier has been employing this remedy for some considerable time and with large, though not invariable, success I should also like to know where it is to be obtained and whether it is administered by the mouth as well as hypodermically and if so in what doses and in what form.

It appears his method of administration is to inject two centigrammes the first day and five on the second and subsequent days for a week and then to stop for a week, and so on every alternate week

I am, Sirs, yours faithfully,

Dec. 4th, 1900. L R C P & S I

*** The subject is dealt with in an annotation this week, and frequent references have been made to the subject in our columns See THE LANCET of June 17th (p. 1667) and Nov. 18th (p 1408), 1899, and March 10th (p 736), April 7th (p 1037) and Nov. 17th (p. 1446), 1900 —ED L.

A SUGGESTION FOR THE UNIVERSITIES OF OXFORD AND CAMBRIDGE

To the Editors of THE LANCET.

SIRS,—The University of Durham is open to any medical man who has reached the age of 40 years and has been over 15 years in the practice of his profession and who passes the necessary examinations What is really wanted is for the other universities in Great Britain to open their portals a little wider and to admit any registered practitioner to offer himself for the degree of Doctor in Medicine. There would be a direct inducement for post graduate study during the early years of waiting for practice, the standard of examination should not be lowered in any way and the age might remain as at present, not lower than 25 years In this way the universities would hold out the truest inducements for continued study and I do not think that they would in any way injure their residential graduates and at the same time they would replenish their empty money chests The University of Cambridge has for years past been appealing to the public for subscriptions, which appears to me to be a far more undignified position than would be the acceptance of fees from London and other diplomates for the degree of M D The University of Cambridge already confers a diploma in Public Health upon qualified medical men who have never given any residence in Cambridge, Oxford also does the same, surely they could be induced in conjunction with a little persuasion from the Royal Colleges of Physicians and Surgeons of London to swing their portals a little wider and thus take away a bone of contention from those who are so eager to call themselves "Doctor"

I am, Sirs, yours faithfully,

ONE WHO HAS PASSED THE EXAMINATIONS AND TAKEN THE DEGREE OF DOCTOR OF MEDICINE AFTER HAVING COMPLETED HIS FIRST HALF CENTURY.

Dec. 2nd, 1900

"MOTOR CARS FOR MEDICAL MEN"

To the Editors of THE LANCET

SIRS,—Permit me to give my experience of 12 months use of a motor-car Having had serious losses with horse-keeping I determined as an experiment to try a car. I sold out and bought a "Benz and started running it in October, 1899 My coachman soon dropped into its management. We have run it every day with, perhaps two or three exceptions at the most, since, and I have never had occasion to hire, although I quite reckoned upon having to do so at one time or another I have also used it in fine weather when not busy for making excursions into the country, sometimes going 40 miles in an afternoon Our only troubles have been due to our own want of knowledge and not to any fault in the engine. They consisted of a hot bearing on two occasions due to our own fault in not properly looking after the grease boxes, and of short-circuiting of the electric current, generally at a point on the top of the battery under the seat, the result of imperfect insulation. This is remedied (when discovered) by inclosing coil in an old piece of hose-pipe split down the middle and sprung upon the coil

The initial outlay on purchase of car was £230, which included hood, apron, electric light to lamps, and one inside, &c. The expenses for the 12 months have been: repairs, painting, &c (engineer and coach-builder), £12 10*s* 6*d*, petrol, £10 17*s*; carriage, &c, £1 10*s* 2*d*, pair of new chains, £3, re-charging cells five times, 7*s* 6*d*, total £28 5*s* 2*d* I can quite understand a motor-car giving trouble to an owner who has no taste for, or much knowledge of, mechanics, for it wants learning, but when thoroughly understood a great deal of expenditure for repairs, &c., is saved, and in my experience there can seldom be any difficulty I have travelled through water about two feet deep and through snow when my professional brethren were unable to take their horses out. My troubles with the car have been as nothing compared to those of a brother practitioner, who to my knowledge has changed horses three times, with the usual losses accompanying such transactions, and has been thrown with his man, out of his gig by reason of his horse stumbling and smashing both shafts, all within the 12 months The slight smell of exploded petrol left behind in the street is not to be compared in disagreeableness to the aroma of the stable and all its offensiveness The habits of horses in the streets are particularly offensive before ladies, but because we are accustomed to these they are apt to be forgotten when weighing the *pros* and *cons* Once only have I been "hung up," and had I only had the "gumption" to lift up the seat and look at the battery I would have seen the spark flitting across from the coil into the battery again and so saved myself much wasted time and some of the above expenditure and have proceeded on my journey within the space of three minutes

I am, Sirs, yours faithfully,

East Molesey, Nov 25th, 1900 W. W HARDWICKE, M D St And.

P S — A man is indispensable to look after a motor car and he is useful also in his spare time about the house and garden

To the Editors of THE LANCET

SIRS,—It is, perhaps, natural that in a journal devoted to the "frailties of human nature," the morbid anatomy of auto-cars should find a place also Be this as it may, it appears tolerably certain that some of your correspondents have passed through sundry trying experiences There is one thing in particular that I take exception to, however, in Mr Lupton's letter in THE LANCET of Dec. 8th (p 1705) He says: " . *I know nothing of pneumatics*" and having made the admission that he is not qualified to speak from practical experience of them, he proceeds to warn all and sundry against them as "one having authority" Now, is this quite fair? Fortunately, my experience has been widely different from his, though I profess to be nothing but an amateur with the most ordinary capabilities and of quite average intelligence in matters mechanical Nevertheless, I am still using a motor tricycle over town and country roads, some of which are simply bogs of mud and wildernesses of newly laid metal I have travelled in various cars over 4000 miles, have never had a puncture, and have never kept a patient waiting Moreover, although riding a tricycle in the present weather, I can arrive anywhere without any outer crust of mud At this time of the year I find that I can only run about three miles for a penny, but in the summer I can manage 10 for the same sum I make these remarks after a year's experience of most kinds of motor-cycles and motor-cars I am, Sirs, yours faithfully,

CLAUDE A. P TRUMAN,
Honorary Secretary, Reading Automobile Club

Reading, Dec 8th, 1900

ERRATUM —In Mr Lupton's letter on "Motor-cars for Medical Men" published in THE LANCET of Dec. 8th (p 1705) the words "about 3*d* per mile" ought to be *0 3d* per mile

"HOSPITAL ABUSE A SIDE THAT IS SOMETIMES OVERLOOKED"

To the Editors of THE LANCET

SIRS —The concluding sentences of "A Hospital Surgeon's" letter in THE LANCET of Nov 3rd (p 1320), wherein he makes a tilt at general practitioners, seem rather unintelligible without some elucidation. Hos hospital abuse might affect a hospital surgeon's "right to a living" in some cases the following incident may show I was lately attend ing a young woman for anæmia and casually remarked that her eye, sight must be attended to, meaning to see to the matter myself when she was stronger However, she understood that I referred her to an oculist and presented herself at a certain eye hospital Though only belonging to the working class she was apparently "spotted" as a hospital abuser and was told by an official that she was not a proper case for gratuitous treatment and that she could not be attended to there. On inquiring what to do she was given the name and address of one of the hospital surgeons She attended at this gentleman's house and he very kindly agreed to see her for a fee of 5*s* at each consultation When I saw her she had paid him two visits, her pupils were widely dilated, but her eyes had not been finally tested By the time the affair was finished I daresay the hospital surgeon had earned h guinea. I am stating the facts as related to me by my patient and do not wish in any way to bring a charge against hospital surgeons, who have generally been most kind and courteous to me, at the same time these facts may throw a little light on the occasional connexion between hospital abuse and the "right to a living"

I am, Sirs, yours faithfully,

GENERAL PRACTITIONER (2).

Nov 3rd, 1900.

A CURIOUS POSITION.

To the Editors of The Lancet.

Sirs,—A and B are friends. A goes for a holiday and leaves his "friend the enemy" B to look after his work. *Inter alia* B is called to a case C, treats it, and on leaving at the end of about 10 days asks whether C is A's patient. The answer is: "Oh, no; I went on an emergency, was redirected to you, and refused my name at A's to prevent any bother. If I am anybody's patient I am D's (a practitioner at a distance)." A says B should take the fees. B says he thinks, under the circumstances, he should send in the bill and hand over the amount to A. Of course B cannot prevent C coming to him on another occasion. It may interest some of your readers to know what The Lancet thinks. I am, Sirs, yours faithfully,

Dec. 11th, 1900. B. A. H.

*** We think that B should send in the account and retain the fees. We also think that such excellent understanding between professional brethren is good for the welfare and dignity of all medical men.—Ed. L.

"MY CHEMIST."

A correspondent has sent us an advertisement put forth by an enterprising druggist. We reproduce a portion. Opposite to each stanza of the "poem" is a short description of some preparation or article supposed by the advertiser to be good for the particular pathological condition indicated in the stanza, the price being also stated.

When helpless in my cot I lay,
And screamed for bottle night and day,
Who sent the foods that made me gay?
My *chemist.*

When through my hard and swollen gum
The tardy tootsey would not come,
Who with his powders made things hum?
My *chemist.*

When headlong down the stairs I fell,
And bumped my brow and made it swell,
Who bandaged me and got me well?
My *chemist.*

Who helped me when I coughed and sneezed,
And my poor throat and bronchials eased,
And with sweet dose my palate pleased?
My *chemist.*

When on the pudding and the cake
Too vigorous assault I make,
Who takes away my stomach-ache?
My *chemist.*

And when, to keep a birthday up,
Too oft I drain convivial cup,
Who rights me with a pick-me-up?
My *chemist.*

And when I limp with many a corn
Into his shop with look forlorn,
Who heals my toes before the morn?
My *chemist.*

Who keeps my hair from turning grey,
And will not let my teeth decay,
And charms my wrinkles all away?
My *chemist.*

So with his praise where'er I go,
I'll burden all the winds that blow,
Till everyone around shall know
My chemist is

Here follows the name of the druggist. It hardly seems worth while for a man to spend five years and from £1000 to £1500 in getting qualified without getting some sort of protection from this kind of chemist.

"HAVE MATERNAL IMPRESSIONS ANY EFFECT ON THE FŒTUS IN UTERO?"

To the Editors of The Lancet.

Sirs,—So far as I am aware this controversy has hitherto consisted of the quotation of apparent instances of this marvel and of the reply that wars are not followed by an unusual proportion among the births of infants congenitally deficient in a limb and of similar counter arguments. If, however, any systematic and scientifically conducted experiments upon the lower animals have been tried already I should be much obliged by having my ignorance corrected.

I am, Sirs, yours faithfully,
Charles G. Stuart-Menteath
Upper Bedford-place, W.C., Nov. 23rd, 1900.

To the Editors of The Lancet.

Sirs,—In The Lancet of Nov. 3rd (p. 1266) there appeared an interesting article on the above subject by Dr. W. Duncan, but surely it scarcely requires the name of this eminent authority in order to convince the medical profession generally that so-called maternal impressions—the powerful ones, at all events—do exert an appreciable and visible result on the child in utero. The instances brought to light and published are now far too numerous to allow us to doubt what to my mind has been long an established fact. Probably there are few general practitioners who have not had at one time or another absolute evidence of the result of these powerful impressions. Two examples are clearly in my remembrance. A young mother had a boy a year old who had hypospadias. She was on a sea voyage with him and was so ill that she was not able to bath the child herself. A friend who was two months pregnant undertook the task for many days. When in due course of time her own child (a boy) was born he was found to be suffering from the same abnormality and exactly to the same extent as the child she had so diligently nursed. The second case is that of a lady friend of mine who in the early days of pregnancy had her eyes fixed often and earnestly on the well-known picture of "Bubbles" which, hanging in her bedroom, seemed to possess a peculiar attraction for her. In due time a beautiful boy was born who gradually developed into an exact image of the boy in the picture. But, further, it is my firm conviction that not only powerful maternal impressions which have their origin in physical causes may and do affect the physical form of the child, but that impressions which owe their origin to purely subjective thought in the maternal mind will induce a certain condition corresponding to, and on parallel lines with, the particular train of thought uppermost in the mind of the mother—in other words, a fixed and continuous maternal idea without the extraneous aid of a material object may have the same result as when the mother has the object or model continually before her physical sight. "Nothing is, but thinking makes it so." I "go one more" and maintain that a strong and continuous current of thought in a fixed line and having for its object the definite purpose of affecting the mentality of the child in a certain direction will not be void of result. The reason why so little proof in support of this statement is forthcoming is due to the fact that in the first place so few have the necessary concentration of thought; and secondly, because the great mass of people are still so crassly ignorant of the wondrous power of mere thought. Thought radiates from us all and at all times for good or evil; it moulds and alters matter and is transferred from one mind to another more or less easily. All this is now acknowledged and preached by scientists, philosophers, and religionists. Granted, then, that thoughts are actual (potent) things, and that maternal impressions produce impressions both physical and psychical on the unborn child, what a tremendous responsibility, what a power for good or ill, expectant mothers exert! As a matter of fact, they should hold firmly before their mental vision and carry out in their actual life all which is truest, highest, and best, so that their truer, higher, and better life will be reflected on the physical, mental, and spiritual being of their children. The consummation of this happy state of affairs would go far to alter the natural trend of hereditary evil influence, and given a father who lives a life of extreme "moderation in all things" and who has learnt that man is a spiritual being and not a mere animal, the resultant of mutual love (not lust), in spite of all hereditary tendencies, would blossom into something bright and beautiful. As it is, parents are guilty of a great crime in sending forth into the world countless helpless children who are nothing but the reflexes of their own animalism. I am, Sirs, yours faithfully,

Hastings, Nov. 26th, 1900. J. Stenson Hooker, M.D. Durh.

To the Editors of The Lancet.

Sirs,—In support of Dr. W. Duncan's proposition in The Lancet of Nov. 3rd (p. 1266) I can mention a case strongly pointing to the influence of maternal impression. About 15 years ago I attended the wife of a publican with her first child. The child when born was found to be completely minus a left hand, the forearm terminating in a rounded stump at the wrist. As soon as the birth was over the mother made anxious inquiries as to whether the child was "all right," but I had to tell her of the deformity, at which she expressed no surprise as she felt certain that something would be wrong. She then gave me the following account which I had no reason to doubt. One day in her early months of pregnancy while behind the bar two men came in for refreshment, one of them said that he had recently met with an accident necessitating amputation of his left hand; to support his words he uncovered the stump, which was scarcely healed, and exposed it to view. The sight, as the woman said, gave her "quite a turn" at the time. Now, one can scarcely accept this as a mere coincidence; the fact of the complete absence of the hand, and, stranger, the *left* one, coupled with the anxiety of the mother to know the condition of her child immediately after birth, negatives such a theory. I am, and for some time have been, a believer in maternal impressions, but I think such impressions would only operate in an early stage of fœtal development, as it is scarcely conceivable that, supposing a woman advanced to her middle or later stage of pregnancy, nature would deliberately amputate a hand already formed in utero. As to *how* nature works in such a case in building up the fœtus I offer no theory.

I am, Sirs, yours faithfully,
Reading, Nov. 27th, 1900. J. G. Braden, M.R.C.S. Eng., &c.

◆

Fairplay.—The matter is purely legal and A must consult his solicitor as to the interpretation of his agreement.

R. W. W.—Reports appeared in The Lancet of June 18th, 1898, page 1697, and May 5th, 1900, page 1290.

B. will find the subject dealt with in an annotation in the present number.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m by Steward's Instruments.)

THE LANCET Office, Dec 13th, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain fall	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8 30 A.M.
Dec. 7	29 95	WSW	0 17	59	52	45	44	45	Overcast
" 8	30 16	S	0·02	60	55	45	50	51	Cloudy
" 9	30 04	WSW	..	66	65	51	52	55	Cloudy
" 10	30 36	WNW	0 02	60	49	42	42	43	Hazy
" 11	30 16	S W.	..	56	53	43	47	49	Cloudy
" 12	30 10	S.W.	0·02	62	57	49	52	53	Cloudy
" 13	29·97	S.W.	..	58	55	52	53	54	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS

MONDAY (17th).—London (2 P.M.), St Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1 30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2 30 P.M.), London Throat (2 P.M.).

TUESDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1 30 P.M.), St. Thomas's (3 30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2 30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9 30 A.M. and 2.30 P.M.)

WEDNESDAY (19th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9 30 A.M. and 2.30 P.M.), *Gt.* Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

THURSDAY (20th).—St. Bartholomew's (1 30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2 30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9 30 A.M. and 2.30 P.M.).

SATURDAY (22nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (17th).—SOCIETY OF ARTS.—8 P.M. Prof. J. A. Fleming: Electric Oscillations and Electric Waves. (Cantor Lecture.)

TUESDAY (18th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.)—*Paper*:—Mr. F. T. Paul (Liverpool): Chronic Mastitis and its Relation to Tumour Formation (lantern demonstration). Card Specimens:—Dr. J. H. Drysdale: Broncho œsophageal Fistula.—Mr. Scholberg: Hæmorrhagic Pancreatitis with Fat Necrosis.

WEDNESDAY (19th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.)—8 P.M. Mr. Barton: Demonstration of Lantern Projection in conjunction with the Microscope.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

MONDAY (17th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—4 P.M. Mr. M. Morris: Consultation. (Skin.)

LONDON TEMPERANCE HOSPITAL.—3 P.M. Dr Addinsell: Some Abdominal Tumours.

TUESDAY (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. T. Williams: Consultation. (Medical.)

WEDNESDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—5 P.M. Clinical Lecture:—Dr. B. Yeo: The Treatment of Tubercular Peritonitis.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton)—4 P.M. Dr. Habershon: Emphysema.

THURSDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S Fenwick: Clinical Demonstration.

FRIDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—4 P.M. Dr. H. Tilley: Consultation. (Throat.)

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. P. Parkinson: Case of Tricuspid Regurgitation.

EDITORIAL NOTICES.

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A Lecture

ON

PULMONARY TUBERCULOSIS IN EARLY CHILDHOOD.

WITH SPECIAL REFERENCE TO ITS PREVENTION AND TO ITS DIAGNOSIS FROM OTHER WASTING DISORDERS.

Delivered at the Brompton Hospital on Nov. 21st, 1900,

By ARTHUR LATHAM, M.B., B.Ch. Oxon., M.R.C.P. Lond.,

ASSISTANT PHYSICIAN TO ST. GEORGE'S HOSPITAL AND TO THE BROMPTON HOSPITAL FOR CONSUMPTION.

Gentlemen,—Pulmonary tuberculosis in young children is a common disease—in fact, according to Baginsky, no less than 8 per cent. of all cases of pulmonary tuberculosis occur during the first ten years of life.

Etiology.

We have not sufficient time at our disposal this afternoon to make anything like a comprehensive study of this disease; still I think our best plan will be to glance briefly, in the first instance, at the etiology of the disease. Our knowledge on this part of the subject is not as definite as we could wish and forms an insufficient basis for the dogmatic assertions of the present day. There can, however, be no doubt that predisposition—the hereditary and acquired character of the soil—is a most important factor; thus healthy infants reared in tuberculous surroundings are not so liable to become infected as are the children of tuberculous parents, although these latter children may have been removed to healthy surroundings. As regards the infection itself there is also no doubt that in the vast majority of cases the tubercle bacillus reaches the lungs of young children either by an infected air-supply, or by an infected milk-supply. A very large proportion of pathologists hold that an infected air-supply is much the more common cause. Their view is mainly based on post-mortem evidence and on the fact that a tuberculous lesion of the bronchial glands is the most constant lesion found, and, further, that in the majority of cases the tuberculous process, viewed from the pathological standpoint, is more advanced in these glands, more especially on the right side, than it is elsewhere. I have studied a large number of reports giving relative statistics of the seat of the most marked lesions as observed at post-mortem examinations. These cases, which number over 3000 and which on the whole agree fairly closely, show that the above statement holds good. The deduction that tuberculosis of the bronchial glands is therefore always due to an infected air-supply does not, however, in my opinion necessarily follow.

In a lecture of this kind I cannot go into as much detail as I should wish or do more than give you a general idea of my own views and an outline of the evidence upon which these are based. I believe that an infected milk-supply plays a far more important rôle in the production of pulmonary tuberculosis than is allowed by most observers. I do not, however, in the least deny that air-infection is responsible for a certain proportion of cases. The bronchial glands are undoubtedly the chief seat of the disease, and this, I believe, is largely due to the fact that they form the most favourable ground for the growth of the bacilli, however these may be introduced, just as the valves of the heart may afford the best ground for other micro-organisms in infective endocarditis. My impression is that both in the adult and in the child the primary infection is by means of the lymphatic system, and up to the age of three and a half years is often dependent upon the tubercle bacilli, of an infected milk-supply, passing through either the upper or the lower portion of the alimentary tract, and eventually setting up changes in the bronchial glands. We know that the milk lies in contact with the upper part of the alimentary tract, which is common to the respiratory tract, or with the stomachic or intestinal mucous membrane. The tubercle bacilli do not rest here, but pass on by means of the lymphatics, leaving traces on their way, to the bronchial glands. Here they find what is usually called a nidus, and the glands undergo tuberculous changes of varying degree; the tuberculous process then not infrequently spreads from these glands to the lung tissue (1) by direct continuity; (2) by means of the lymphatics, but against the supposed lymphatic stream; (3) by ulcerating into a blood-vessel and in this way disseminating the bacilli all over the body; and (4) by ulcerating into a bronchus. When infection takes place by means of the respiratory tract it follows the same path—i.e., it passes through the lymphatics of the *upper* portions of the respiratory tract, and by means of them to the bronchial glands. It does not seem probable, on both anatomical and experimental grounds, that the air carries the tubercle bacilli by a tortuous path to the smaller bronchioles of the apex or other portions of the lung and then deposits them free to set up tuberculous changes. There is some evidence to show that the infection in the adult is also due to lymphatic absorption from the upper portion of the respiratory tract, and the observation that the apex of the right lung is affected more commonly than the bronchial glands may be due to the different lymphatic relations which obtain in the adult and in the very young child, differences which may in part be accounted for by the atrophy of the thymus gland. In this connexion I would remind you that, as in the adult the right apex is most commonly affected, so in the child the right set of bronchial glands is more commonly the seat of tuberculous disease than is the left.

If we argue on *a priori* lines we find that in adults, where, in the majority of instances, we undoubtedly have to deal with an air infection, the lungs are affected before, and more extensively than, the bronchial glands; consequently, if in children the primary affection is also through the air-supply we would expect to find a similar condition of things. We find the direct opposite; in fact, if post-mortem appearances in young children teach anything, they teach that tuberculous disease of the lungs does not often occur unless the tubercle bacilli first of all establish a hold on, and produce more or less advanced pathological changes in, the bronchial glands. The whole picture of adult pulmonary tuberculosis differs from what we find in the young child; in the former case the process is usually chronic and accompanied by a production of fibrous tissue, and an effort towards repair; in the latter the process is usually acute, there is seldom much fibrotic change, and the stage of cavitation and breaking down of tissue is comparatively seldom reached. In children we often find tuberculosis, sometimes advanced, in the bronchial glands, whilst the lungs are practically unaffected, a condition that is hardly ever met with in the case of adults. This difference in the course of pulmonary tuberculosis in the adult and in the child is more marked if we limit the age of the child to three and a half years, and may no doubt be partly accounted for by the more rapid growth of the tissues which takes place in the child. If we continue this *a priori* line of argument we may point to the fact that tuberculosis is, in numbers of cases, undoubtedly transmitted from the cow to her calves by means of the milk, and this in spite of the calves undergoing what is to all intents and purposes the open-air treatment. Or we may point to the striking fact that the curve of tuberculosis in children commences at the age of six months, reaches its maximum about the second year, and undergoes a remarkable fall between the third and fourth years—that is to say, tuberculosis is most marked at an age when infected milk would have most play, and becomes less frequent as the children begin to leave what may be called their milk life. Again, during the last 20 years the number of tuberculous cases has been very considerably diminished by better hygienic conditions in every period of life except early childhood. We know that, although great improvement has been made in our hygienic conditions, no improvement has been made with regard to the sale of tuberculous milk. We know that tuberculosis of cows is extremely common and we know that tubercle bacilli are to be found, not only in ordinary milk, but also in many specimens of condensed milk. We know, further, that in very young children, on account of the frequency with which they are fed, milk is practically always in contact with the upper part of the alimentary tract, and that it is an uncommon thing to perform a post-mortem examination on the body of a young child without finding semi-digested milk in the stomach or intestines; so that although the number of tubercle bacilli in a given sample of milk may not be great, yet such bacilli as there are have every opportunity for passing through the mucous membrane of the alimentary tract.

The whole question really turns on the circulation of the lymph. Our knowledge of this is very limited, for the circulation of lymph does not always follow the course we should expect, if we confined ourselves to our gross anatomical knowledge. In the case of animals it is a common thing to be able to watch the spread of tuberculosis by means of the lymphatics against the supposed direction of the lymphatic stream. Further, as I will point out in a moment, it is not always the case that the lymphatic glands in the immediate neighbourhood of the part with which the bacilli first come in contact are the first to be affected, nor is it true that the glands which show the most marked changes are necessarily the glands first attacked.

With regard to infection from the alimentary canal we know that tubercle bacilli can pass through the intestinal membrane without leaving any trace of their entrance and yet cause tuberculosis in more distant parts Much has been made of the absence of ulceration of the intestine, except when the tuberculosis of the mesenteric glands is extreme. My impression is, that when the tuberculosis of the mesenteric glands—which appear to be less susceptible to tubercle in the human subject than the bronchial glands—is extreme, it is due in many cases to a secondary infection back against the lymph stream. Further, it is a noticeable fact that tuberculous ulcerations of the bowels nearly always have a vascular rather than a lymphatic distribution. That other bacilli can pass through the intestinal walls is shown by the number of cases recorded of typhoid fever in which there has been no lesion of the intestine or mesenteric glands. Bollinger, many years back, showed that on injecting dilute solutions of phthisical sputum into the peritoneum and intestine the peritoneum remained sound in two-thirds of the cases, although the lungs became tuberculous. Durham, again, has shown that in cases of peritonitis the most important of the lymph channels which drain the peritoneal cavity are those which pass up along the anterior mediastinum, and that the glands which are affected are the anterior mediastinal group, of which the most constant are those in the first intercostal space. It is a common surgical experience in the case of other organisms to find lymph glands unaffected by the passage of the virus to favourable tissues It is not uncommon in malignant disease within the abdominal cavity to find that the only lymphatic glands secondarily affected are situated above the left clavicle A number of experiments which I have made confirm the statement of Delépine, that if guinea-pigs are inoculated in the leg, the seat of inoculation, the popliteal gland, the subcutaneous tissue from the popliteal region, and the spleen become infected at the end of four days, and that the superficial inguinal glands are not affected until the eighth day As the superficial inguinal glands are always infected before the deep set this means that with a primary infection of the leg the spleen becomes tuberculous four days—and here we are dealing with a considerable source of infection—before the glands in the inguinal region are affected.

With regard to infection by means of the milk-supply through the lymphatics of the upper portion of the alimentary tract I would point out that there is very considerable evidence to show that tubercle bacilli are frequently to be found in this region. To emphasise this, I may mention that in a careful investigation, by means of inoculation, of the central portions of the tonsils of 45 consecutive cases—the ages of the children varying from three months to 13 years—which were removed by operation or in the post-mortem room I was able to demonstrate the presence of tuberculosis in no less than seven cases, and in this I have merely confirmed the work of Dieulafoy, Gottstein, Woodhead, and many others. Bacilli may pass through the mucous membrane in this region without leaving any trace and so get to the deep glands of the neck From these the bacilli may pass to the bronchial glands, if we believe the authorities who assert that the deep cervical glands consist of two sets, one which runs along the carotid sheath and drains the mouth, palate, lower part of the pharynx, &c., and one which, lying in the supra-clavicular fossa, drains the upper set of glands and the lower part of the neck, and in addition communicates with the lymphatics of the axillary and mediastinal glands.

I have seen several cases where the primary infection was obviously in the tract common to respiration and alimentation. One of these cases was that of a young child, three months old; both tonsils were ulcerated; one was undoubtedly tuberculous; the glands on the same side of the neck were tuberculous; the bronchial glands were tuberculous, and there was general tuberculosis. The importance of this case lies in the fact that the mother of the child died from phthisis, that the child was fed practically all its life from the mother's breast, and that the most advanced disease was in the bronchial glands. Infection such as this may, of course, be due to respiratory causes and, in my opinion, often is. I am, however, convinced that the milk-supply is a more common source than is generally allowed, and though my evidence may not be convincing it is, I think, suggestive.

It is clear, then, even from our present knowledge that in taking steps to prevent pulmonary tuberculosis in young children we must not confine our attention to tuberculous sputum and hygienic surroundings, but must also insist that our food be free from tubercle bacilli There can be no doubt that this disease is a preventable disease and that, from a national point of view, our present methods for limiting its scope are far from what they should be.

CLINICAL VARIETIES.

The clinical varieties of pulmonary tuberculosis in young children are numerous, and very divergent classifications are given by the various authors on this subject. There is one fact, however, which is beyond dispute—namely, that the characters of pulmonary tuberculosis in very early childhood are radically different from those which obtain after the age of six years. Until the child is three and a half years of age tuberculosis is mainly dependent upon the infection of the bronchial glands and spreads from these glands to the lungs, rather than from the lungs to the glands as is the case in the adult. After the age of four years the lesions found are more and more comparable with the types we are familiar with in adult life. The varieties which are found up to the fourth year may be classified as follows:—1. Tuberculosis of the bronchial glands. This, of course, should not, strictly speaking, be included under the heading of pulmonary tuberculosis, but in view of what I have already said it is convenient to do so. 2. Miliary tuberculosis of the lungs. This may be dependent upon (*a*) a rapid primary infection without any discoverable old focus; (*b*) the rupture of a tuberculous bronchial gland into a blood-vessel with rapid dissemination throughout both lungs, more especially of the lower lobes; and (*c*) pulmonary infection secondary to other and older lesions, such as tuberculous disease of the testis, bone, &c. 3. Tuberculous broncho-pneumonia. This may be dependent on (*a*) the tubercle bacilli obtaining a hold upon a simple persistent broncho-pneumonia; and (*b*) direct spread by the lymphatics of the bronchi from a previously diseased bronchial gland. This third variety may go on, especially in the confluent form of broncho-pneumonia, to what Goodhart has aptly called cheesy consolidation, or it may in rare cases go on to a fibroid condition of the lung. In children who have reached the age of six years we may have in addition to any of these varieties: 4. Pulmonary tuberculosis which approaches the adult type but differs somewhat in its distribution and in the fact that there is a diminished tendency towards the formation of fibrous tissue.

TUBERCULOSIS OF THE BRONCHIAL GLANDS.

Uncomplicated tuberculosis of the mediastinal glands gives rise in the large majority of cases to no distinctive symptoms. As we have seen, tuberculosis of these glands frequently leads to secondary infection of the lung; these cases are associated with the usual constitutional symptoms, but in very many instances the glands may undergo changes, such as enlargement, caseation, calcification, fibrosis, and the like, without giving rise to any signs or symptoms during life. Thus it occasionally happens that the first indication of the disease is the perforation of a bronchus by a softened gland, an accident which not infrequently has a fatal result Enlargement of the bronchial glands, to a sufficient degree to cause symptoms, must be on a comparatively extensive scale. General symptoms, such as rise of temperature, may or may not be present; they may or may not precede the local ones which in the nature of things are mainly mechanical. In fact, in an uncomplicated case of enlarged tuberculous bronchial glands, if we get any signs at all they are those of a mediastinal tumour, and are usually more marked on the right side of the chest. Percussion may give dulness over the upper portion of the sternum or posteriorly along either side of the spine from the second to the fifth dorsal vertebræ. On auscultation we may have the tracheal or bronchial sounds transmitted to the ear and so may hear, more especially behind, cavernous, or, in marked cases, amphoric, breathing together with bronchophony; or if the enlargement is less pronounced exaggerated breathing together with prolonged expiration. It sometimes happens that we meet with a case in which there is compression of some part of a bronchus; we then hear either a very feeble respiratory murmur, or no murmur at all, over one lung or over one lobe of a lung. This sign, as Holt points out, is of great diagnostic value, but it is not often present. Large moist râles may be heard and we may be tempted to diagnose the presence of a cavity. Eustace Smith lays stress on the fact that even before the enlargement of the glands has become sufficiently great to cause obvious signs a venous hum may sometimes be heard over the upper part of the sternum if the child be made to bend the head back so that the face becomes almost horizontal. Other pressure symptoms vary according to the seat of pressure. Thus we may have pressure on the vagus or recurrent laryngeal nerves leading to paroxysmal cough, dyspnœa, and sometimes change of voice; pressure on the trachea or large bronchi causing dyspnœa; pressure upon the superior vena cava causing cyanosis and œdema of the face and upper extremities, with prominence of the veins and occasionally hæmoptysis or epistaxis.

DIAGNOSIS.

Enlargement of the bronchial glands due to tuberculosis must be diagnosed from enlargement due to other causes, such as syphilis, Hodgkin's disease, and malignant disease. These diseases are very much less frequent than tuberculosis; still in an individual case we have to depend upon the associated signs or symptoms of these diseases in other portions of the body. The paroxysmal cough sometimes suggests whooping-cough or asthma; these diseases may usually be excluded if we have definite evidence of a mediastinal tumour, or if we have the associated symptoms of tubercle, or in the case of whooping-cough by the characteristic whoop which sooner or later makes its appearance The alteration in the voice, the presence of the venous hum, or the existence of other pressure symptoms often gives us definite information.

MILIARY TUBERCULOSIS OF THE LUNG.

Miliary tuberculosis of the lung seldom occurs in young children except in cases of general tuberculosis. It is, however, these cases of general tuberculosis which are most frequently met with in very early childhood. The disease may occasionally be due to an acute infection without any old focus being discoverable, but it is much more commonly due to a primary infection of the bronchial glands or other tissue, and is caused by the dissemination of the tubercle bacilli by means of the blood stream. The symptoms may be divided under two heads: (1) general and (2) localising. The general symptoms always precede the localising ones; indeed, many cases show no localising symptoms at all, or only towards the closing scenes of the disease. The onset is usually insidious—the child gradually wastes, although he takes his food fairly well. This wasting is followed by general malaise, anæmia, want of appetite, and so on, but as a rule digestive disturbance is not a marked feature. Eustace Smith lays stress upon a slight pitting of the skin combined with a dry inelastic condition of the skin. Sooner or later, there are febrile symptoms; but the temperature is seldom above 102° F., and though irregular is not of the hectic type. So far, then, we have nothing characteristic of tuberculosis, and in fact, we have nothing upon which we can give a decided diagnosis. The progressive wasting with slight fever makes us suspicious, and our suspicions become a certainty when we find, as we do towards the later weeks of the disease, more or less definite localising symptoms. Thus we find hurried respiration, cyanosis of the lips and face, together with râles and diminished resonance all over the chest, or the presence of an occasional pleuritic rub; perhaps we may find some enlargement of the spleen, or more rarely of the liver, or evidence of the involvement of the bronchial glands, or it may be we discover tubercles in the choroid together with slight intolerance of light and other symptoms of meningitis.

DIAGNOSIS.

We have to diagnose this variety of tuberculosis from, amongst other things, simple debilitated conditions, from marasmus, typhoid fever, congenital syphilis, and in some cases malaria. The diagnosis is always difficult, and it is best to be always on the look-out for tuberculosis whenever we have to deal with a child in whom there is progressive wasting, but on the other hand to be in no hurry to make a positive diagnosis one way or the other. As long as there is an obvious and adequate cause for the wasting there is no necessity to make a diagnosis of tuberculosis. In the absence of definite or localising symptoms the surroundings, and, in fact, every available piece of evidence, must be duly weighed; a strong family history of tubercle or obvious tuberculous surroundings are in favour of a diagnosis of tuberculosis, just as an epidemic of typhoid fever in the neighbourhood is in favour of one of enteric fever. The demonstration of the presence of tuberculous deposit elsewhere, especially in the bronchial glands or testis, or the development of tubercles in the choroid, is decisive. Again, debilitated conditions and marasmus usually have a very definite relation to food and, unlike tuberculosis, are nearly always accompanied by diarrhœa and digestive disturbances; further, cases of marasmus respond very readily to an improved dietary. Typhoid fever may be distinguished by the more continuous fever, the presence of rose spots, together with an enlarged spleen, and, most valuable of all, by Widal's reaction, provided that this is obtained by a competent observer. Congenital syphilis may usually be distinguished by the family history, by the characteristic appearance of the child, and by the fact that other symptoms of syphilis are rarely wanting. The diagnosis from malaria must rest on the examination of the blood.

TUBERCULOUS BRONCHO-PNEUMONIA.

Tuberculous broncho-pneumonia may be due to a previous infection of the bronchial glands spreading into the lung by means of the lymphatics, or it may follow upon a simple broncho pneumonia such as we sometimes have in whooping-cough, measles, and the like The disease may be acute or it may run a more chronic course. In the acute cases there may be nothing in the symptoms or signs to justify a definite diagnosis of tuberculosis; but in many cases, towards the end, we have evidence of meningitis. In the more chronic form we may have an initial stage in which we have only the general symptoms of tuberculosis; this is followed by the development of pulmonary signs and symptoms. These vary markedly, often from day to day, and are essentially those of simple broncho-pneumonia, save for such differences as I shall point out in connexion with the differential diagnosis. The fever is moderate as a rule and in no case is it persistently high; there is seldom hæmoptysis, whilst definite signs of associated pleurisy are uncommon. The disease is rarely arrested, but reaches a fatal termination in from one to six months' time. Cheesy consolidation, especially of the lower lobes, or marked fibrotic changes, such as we find in the adult, may in some cases be the result of tuberculous broncho-pneumonia.

DIAGNOSIS.

The diagnosis of tuberculous from simple broncho-pneumonia is always difficult. Simple broncho-pneumonia may follow measles or whooping-cough and persist for some months, and we may be almost tempted in these cases to make a diagnosis of tuberculosis, only to find that all the signs and symptoms disappear. No disease teaches us so emphatically the necessity for the careful investigation of every detail connected with the case and the danger of making a diagnosis except after repeated examination. As a general rule tuberculous broncho-pneumonia has an insidious onset; in fact, if an attack begins with acute symptoms in a child who has enjoyed previous good health and has had the benefit of good surroundings the broncho-pneumonia is, nine times out of ten, of a simple form, no matter, as Holt in his excellent account of this disease insists, what the physical signs are, no matter how prolonged or irregular a course the disease may run. On the other hand, we must remember that in tuberculous broncho-pneumonia we often have intervals of what appears to be comparatively good health, and that the symptoms may abate for a time, only, however, to reappear in an aggravated form. The diagnosis here, as elsewhere, must rest largely on the associated conditions. The appearance of the child may help us, but it is seldom wise to place too much reliance upon this. It is, nevertheless, a fact that a copious crop of downy hair is frequently found on the backs of children who become tuberculous. Tubercle is strongly suggested if there is marked evidence of a tuberculous family history or of tuberculous surroundings; or again, if we find that the child has some other tuberculous lesion, such as testicular, spinal, or hip disease. Associated enlargement of the bronchial glands is convincing, as, of course, is any evidence of softening in the lungs. An occasional pleuritic rub may help us. Little stress can be laid upon the character of the temperature; still if this is taken at frequent intervals we may find comparatively large excursions which are more suggestive of a tuberculous than a simple form of the disease. Our difficulties may be solved if we can obtain the sputum. Young children, however, mostly swallow their sputum—in fact, any child under six years of age who expectorates profusely is probably suffering from pulmonary tuberculosis. It is worth while to mention that the sputum may sometimes be obtained by giving the child a gentle emetic; failing this it will sometimes be found possible to pick out little masses of purulent material from the fæces; these represent the swallowed sputum, and on examination may yield definite evidence of tuberculosis.

Pulmonary Tuberculosis Resembling the Adult Form.

I have already said that after the age of four years, and still more after the age of six years, the type of pulmonary tuberculosis conforms more and more with what we commonly meet with in adult life. We find, however, some characteristic differences. There is not the same tendency for the tuberculous process to begin at the apices of the lungs and to extend gradually downwards which we find in the adult; there is not the same tendency to the formation of fibrotic tissue. Extensive excavation is less common; hæmoptysis and laryngeal complications are seldom met with; pneumothorax is rare; and, finally, the child not infrequently succumbs to meningitis or other acute infection. Remember that in children physical signs are not to be depended upon as strictly as in adults; for instance, a cracked-pot sound may be of no importance at all.

Prognosis.

The question of prognosis in any form of tuberculosis is always difficult, and this is especially true in the case of children. The immediate outlook is naturally grave in uncomplicated tuberculosis of the bronchial glands when there are marked pressure symptoms. When the associated conditions are not so prominent both post-mortem observation and experience teach us that we may expect most excellent results in many cases from careful treatment, provided that this treatment is carried out under medical supervision for a sufficiently protracted period of time. We must never forget that tuberculosis of the bronchial glands is a fertile source of further infection, and in these cases we must constantly be on the alert for any symptoms which may indicate that the lungs are becoming involved, and consequently must pay more attention to any apparently trivial and incidental illness in such a child. The prognosis in miliary tuberculosis of the lung—which is due to a blood, and therefore extreme, form of infection—is most grave. Cases usually reach a fatal termination in from three to six weeks after the onset of acute symptoms. In the tuberculous form of general broncho-pneumonia, which is so largely due to infection through the lymph stream, the prognosis is again a grave one. Acute cases may terminate fatally in a few days or they may run on for from two to six weeks. In the more chronic cases, as a rule, the patients gradually become worse, sometimes regularly, sometimes irregularly, and they die in from two to six months. When the condition in this form of the disease is comparatively circumscribed the outlook is much more favourable and the reaction to suitable treatment is much more marked. Cases in which the process starts during the acute stages of measles or of whooping-cough are unfavourable; when, however, the tubercle bacilli become grafted on a simple broncho-pneumonia which follows an attack of measles or pertussis the outlook is a brighter one. Always be guarded in your prognosis, for you will occasionally meet with patients who seem hopelessly ill but who eventually get well and possibly remain well; on the other hand, you will see cases in which the disease appears to have become quiescent but in which the patients succumb to some acute exacerbation following upon what is often thought to be a trivial and incidental illness. In the adult type of pulmonary tuberculosis in young children the prognosis is more favourable. Children who come under medical care in the initial stages of the disease in very many instances do remarkably well. This clinical experience is supported by the frequent observation after death of healed tuberculosis. In some cases the disease may apparently heal completely, but sometimes some trivial incident causes the disease to light up again and to follow an acute course. Therefore do not be in a hurry to pronounce that the disease is cured, and always insist that your cases be kept under medical observation and direction for a long period of time. In later stages of the disease I do not think that the prognosis in children is as good as it is in older people, and no doubt this is largely due to the absence of fibroid and localising change. In making a prognosis you must, as in the adult, take into account the family history and the surroundings of your patient; his general appearance, constitution, and previous history; and you must search carefully for tuberculous lesions elsewhere.

Treatment.

The first thing to do in the case of a child who is threatened with tuberculosis or who has developed definite signs of the disease is to take care that there is no further possibility of infection either through the air or through the food-supply. The measures to be adopted are the ones you are familiar with in the case of an adult patient; it may, indeed, be said at once that our treatment of tuberculosis in young children must follow the general lines of our treatment of this disease in the adult. The treatment of miliary tuberculosis, general tuberculous broncho-pneumonia, and advanced forms of tubercle is mainly symptomatic. In the case of a child who seems to be threatened with tuberculosis, or who has definite symptoms of bronchial infiltration or of the commencement of tuberculous changes in the lung comparable to what we see in the adult, we must be guided by the following principles. The most important is attention to detail; nothing is so small but that it should receive attention. The patient must have fresh air with plenty of sunlight, a sufficiency of good, nourishing, digestible food; precautions must be taken against catching cold and against becoming tired. This last is very important and is often overlooked, but you will find not infrequently that the advance made by a child, after the expenditure of much anxious care on your part, is altogether neutralised because he is allowed to over-exert himself. On the other hand, the child must be made as hardy as possible.

With regard to climate, the chief necessities are an equable temperature and a dry soil. Large variations of temperature and a moist atmosphere are harmful; high altitudes are better avoided; cold, if dry, is preferable in many cases to warmth. Details as to a proper form of clothing must not be forgotten; careful attention must be paid to any apparently trivial illness which may arise, and the condition of the tonsils and the throat must be carefully scrutinised. You will find in many cases that small amounts of stimulants do good, and that massage often leads to considerable benefit. Of drugs, the most beneficial in children is cod-liver oil; this is really a food and may sometimes be replaced by cream. Too much must not be given; indeed, in dealing with tuberculosis of young children our best plan is to begin with small doses in the case of nearly all drugs and then gradually to increase the daily amount. Give half a drachm of cod-liver oil twice a day to a child of two years of age and gradually increase the amount. From time to time inspect the stools to see that this fat is absorbed; if it is not, diminish the dose or give in addition some pancreatic preparation. If a child will not take the oil in this way give it in the form of an inunction. Of other so-called specifics, preparations of creasote, commencing with half-minim doses, guaiacol, calcium chloride, and the hypophosphites in gradually increasing doses, are often of undoubted benefit. The syrup of iodide of iron or vinum ferri are useful preparations in anæmic cases and in uncomplicated cases of enlargement of the bronchial glands. Symptoms must be treated as they arise, on the principles with which you are already familiar. In advanced cases our efforts must be directed towards the relief of distress and finally towards euthanasia.

Notification of Infectious Diseases.—At the meeting of the Torquay Town Council, held on Dec. 5th, it was agreed, on the recommendation of the Sanitary Committee, that the medical officer of health should be authorised to pay half a guinea for each notification received from medical practitioners of cases of infectious diseases existing on farms sending milk into Torquay.

ON SOME DISAPPOINTMENTS OF SURGERY.[1]

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THE art of surgery has improved so rapidly during the last quarter of a century that we are perhaps a little too much inclined to consider a surgical operation as the simplest and most certain method of curing a patient In many cases the operation actually cures, in other cases it relieves the particular condition for which it was undertaken, whilst in others, again, the result by no means fulfils the expectations of the surgeon or even of the patient These surgical disappointments are quite distinct from surgical calamities, the number of which can be lessened by care, though no foresight can wholly abolish them from the practice of the most competent operator I mean death during trivial operations serious hæmorrhage, unavoidable injuries to vital structures and the physiological peculiarities of individual patients which embarrass the surgeon to the detriment of the patient With such calamities I have nothing to do at the present time They occur with greater or less frequency in the practice of every surgeon and are necessarily independent of the care which he bestows upon his art They have been treated most ably by Sir James Paget in an essay on the "Calamities of Surgery" published in his volume of clinical lectures I am concerned rather to day with the minor unsatisfactory results of operations—the true surgical disappointments, not the surgical mishaps—disappointments which are due to two main causes Either the surgeon did protest too much, in which case his patient is disappointed, or else he carried to extreme the wholly admirable teaching of Hippocrates, *Μη βλαπτειν, Non nocere*—Not to do harm It is the surgeon who is then disappointed that his timidity prevented him from reaping the full benefit of the operation Every surgeon sings the praises of his art and the benefits to be derived from operation, but such songs of hope and success should be sung in the early days of spring and in the long warm evenings of summer The winter afternoon of a December day in London is, I venture to think no unfitting occasion to consider some surgical disappointments for by knowing the cause we may sometimes avoid the disappointment I propose to illustrate my remarks by cases which have come under my own observation, though I have very little doubt that many of my hearers will supply parallel instances and we may thus obtain texts for a very profitable discussion

Beginning, as we should do, with the early days of life, there are few operations more often performed than those of circumcision and for hare-lip yet there are few which may give more disappointing results The aim of a perfect circumcision is to remove just so much of the foreskin as is necessary to liberate the glans penis and to avoid removing so much as to leave the patient a '*curtus Judæus*' Such a perfect operation is rare but I do not recollect that the difficulties were ever pointed out to me The disappointment which I have most often felt is that the cut surface of the prepuce has contracted adhesions to the glans—an accident which is especially likely to happen when the penis is ill developed If the mother is careless and the child is not seen for some days after the operation the adhesions may become so dense that it is impossible to break them down and the child is then in a worse condition than he was at birth I was somewhat troubled at first by the occurrence of this accident, but now I make it a practice to see the patient at short intervals, and if there is any tendency to retraction of the glans I adopt the ritual plan of pulling back the foreskin until the corona is exposed and keeping it thus retracted by passing the penis through a slit in the gauze dressing The constriction of the penis by the prepuce sometimes causes a little swelling of the penis but I have never seen any ill results follow In the operation for hare lip the bugbear of the surgeon used to be the formation of a notch at the bottom of the scar in the lip This error has now been so long brought under our notice and so many plans have been devised to avoid it that I venture to think it never occurs at the present time. A much more common fault is the neglect of accurate apposition of the two red edges of the lip, which gives rise when the healing is complete to an unsightly irregularity in the red border of the lip Every precaution, therefore, must be taken at the time of the operation to get the two upper margins of the mucous surface of the lip exactly upon the same level and to secure them by passing the first suture at that point There is no difficulty in obtaining accurate apposition in many cases, but the proceeding is by no means easy when the cleft is uneven and one side of the lip is higher than the other

The recurrence of adenoids is a fertile source of disappointment to parents whose children are so unfortunate as to suffer from these growths The operation for their removal may be carried out with perfect success, but the predisposition remains Adenoid tissue grows quickly and the original condition is soon reproduced if reliance be placed too entirely upon operative measures Too much, therefore, should not be promised as a result of removal, for there is a growing disinclination amongst the more observant mothers to submit their children to operation

In all these instances the disappointment can be avoided if due care be taken but I well remember the chagrin with which I watched a baby upon whom I had operated for an imperforate anus where the rectum opened into the vagina The bowel ended in a well defined cul de sac which it was easy to open from the perineum, but do what I would the aperture closed and the fæces continued to come through the vaginal opening The recto vesical fistula was well defined and the defective front wall of the rectum was nicely rounded off by mucous membrane continuous with the back wall of the vagina, yet the parts were too small to allow of complete closure and any incomplete union of the edges soon broke down I do not know how such a disappointing result can be avoided except by waiting until the patient has attained to years of maturity

The greatest disappointments undoubtedly occur in connexion with abdominal operations and in no operation perhaps more often than in those carried out upon the kidney This, indeed, is so well recognised that in many cases the surgeon contents himself with speaking of an exploration of the kidney and is content to treat the condition which he finds when the kidney is exposed Before exposure it is often impossible to detect the presence of one or more renal calculi when they are small and embedded in the substance of the kidney, nor is it always easy to distinguish a renal inflammation caused by a stone from one produced by tubercle Even when nothing is found to explain the symptoms from which the patient suffered an exploratory operation often does good and the patient is freed from pain or discomfort in a most remarkable manner, This satisfactory result is due in part to the effect of local blood letting, in part to the freeing of the kidney from adhesions, and in part to the division of the tense and perhaps chronically inflamed tissues surrounding it

Disappointments sometimes await the surgeon and the patient after an exploration of the kidney Such an one occurred lately to me A female patient had long suffered from obscure symptoms of renal disease which had quite prevented her from following her occupation and seemed to point to the presence of a stone I exposed the kidney opened it on the convex border, and passed a probe along the whole length of the ureter in order to assure myself that no stone was lodged in it The patient did excellently for some days after the operation and the lumbar incision healed perfectly by first intention On the eighth day, however, her temperature suddenly rose to 105° F and she had a sharp attack of pyelitis This has become chronic, and whereas her urine before the operation was clear and free from pus it is now pus laden On the other hand she is free from pain and is able to perform her daily work in comfort She is satisfied, but I am not, for I suppose that the operation set fire to a latent tuberculosis The patient, however is sometimes disappointed when the surgeon is satisfied—as in the case of the very troublesome people who complain of numbness or hyperæsthesia along the course of the last dorsal nerve after a lumbar exploration of the kidney Again both patient and surgeon may be equally disappointed—as happened in the early part of this year when I had operated for the relief of a movable kidney. I anchored it with three stout kangaroo tail tendons passed through the whole thickness of the lumbar wall deeply into the substance of the kidney, and again through the body wall with the exception of the skin. For the sake of extra security I kept the patient in bed for a month instead of the usual three weeks, and by so doing I undid the good which she had received. She increased rapidly in weight, and whilst she was lying in bed her kidney once again detached itself, the result. I suppose, of a great increase of the perinephric fat. In other renal cases, again (but of these I have fortunately had no personal experience hitherto), much disappointment results from the formation of a small but troublesome fistula, although the operation is perfectly successful in every other way.

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[1] A paper read at a meeting of the Harveian Society of London on Dec 20th 1900

The formation of fistulæ is by no means confined to renal operations. There is no surgeon with any considerable experience in abdominal work who has not had occasion repeatedly to study their formation after laparotomies which at first promised success in every way. I have had them after excision of the spleen, after strangulated hernia, after removal of the appendix, after ovariotomy, and after opening the gall-bladder. They occur, of course, under two conditions—immediately after the operation when the escape of pus or other fluid has prevented the wound from healing, and, at a period more or less remote from the operation, when the wound has healed soundly. A fistula of the first kind can hardly be called a disappointment, as its occurrence is anticipated from the time the wound is left to granulate. The more remote fistulæ are really disappointing; for what can be more troublesome than that a wound which has healed well and soundly should inflame after a week, a month, or even a year, at first without any apparent cause, until at length a small abscess forms at or near the scar and a ligature presents? It is not always easy to explain why this happens after the longer intervals, though I have a shrewd suspicion that the cause is the same in every case and that it is due to the use of an infected ligature. The infection may be quite mild and may be situated so deeply in the strands of a stout silk ligature that the leucocytes have first to find their way into the depths of the ligature, where they become infected, die, and so cause the abscess. If this be the cause and the only cause the cure is plain—boil your ligatures. I am not quite sure, however, whether the general health of the patient has not something to do with the formation of an abscess in the more remote cases, for in the interval between the healing of the wound and the first sign of inflammation the patient appears quite well and there is no evidence of any septic absorption.

Internal strangulation of the bowel, like hernia, is fertile in disappointments. There is the wretched condition in which, after the strangulation has been relieved, the patient, as Paget says,[2] "is too exhausted to be conscious of relief and goes on dying though he be carefully fed and nursed." I had a miserable example of this a few months since in the person of a fine and otherwise healthy young man, aged 21 years, who had been allowed to suffer from intestinal obstruction beginning suddenly a week before he was sent to the hospital. I opened his abdomen and found that a Meckel's diverticulum had attached itself to the rectum and that several feet of intestine had passed under the arch thus formed and had become strangulated. There was no difficulty in relieving the obstruction by dividing the diverticulum, but the bowels were so paralysed and the septic intoxication was so deep that he died in spite of all that careful nursing could do for him. The post-mortem examination showed that he was well anatomically, for I had removed the whole diverticulum and the scar in the intestine scarcely showed. The moral taught by this case is that which nature is never tired of pointing. An operation at the earliest possible moment is demanded imperatively in every case of acute intestinal obstruction.

I have met with the same disastrous disappointment after relieving an intussusception. The following is such a case. A child, aged eight months, who had been ailing for some time, began to suffer suddenly from the symptoms of intussusception on April 7th. I opened the abdomen 13½ hours after the onset of the acute symptoms and reduced an ileo-colic invagination. The child passed a moderately good day on the 8th. His abdomen was flaccid, there was no vomiting, but his bowels were not relieved. On the night of the 9th the patient had two good motions, the first of a reddish-brown colour, the second of a natural yellow colour. The food was well taken on the 10th and the temperature fell to normal. The child appeared to be progressing favourably and I had good hopes that he would recover, for he had two more natural motions during the day. At 8 P.M. on the 10th (69 hours after the operation) the child again begain to vomit a brownish fluid. He refused his food, became drowsy and cold, and fell into a condition of profound collapse. The abdomen was supple, the wound was aseptic, but the abdomen gradually distended until coils of intestine could be seen moving beneath the abdominal walls. Matters went from bad to worse, and on the 13th the abdominal wound was gaping widely and the intestines had prolapsed. They were replaced under an anæsthetic, but the child died on the following day. The necropsy showed that the small intestines were distended with flatus to within 12 inches of the ileo-cæcal valve. The distension suddenly stopped at this point, although there was no visible cause for the arrest either outside or within the intestine or abdomen. The colon, like the lower part of the ileum, was collapsed. The thickened ileo-cæcal valve projected a short distance into the cæcum. The valve and the mucous membrane for about two inches beyond it were congested, but there was no intussusception and there were no visible signs of peritonitis. Microscopical examination of a portion of the ileum which had been invaginated showed a slight extravasation of blood into the whole circumference of the submucous coat. The glands, the adenoid tissue, the circular muscular coat, and the serous coat appeared to be healthy in every respect. The individual fibres of the longitudinal muscular coat stained less deeply than they should do, and in many cases appeared to have undergone some degenerative change, for they were unduly granular and more highly refracting than usual. The extravasation of blood in the dilated part of the intestine immediately above the point of constriction was slight, but was distinctly visible between the serous and the muscular coats. The layer of external longitudinal muscle presented changes similar to those described above as occurring in the invaginated portion of the gut. The other coats of the dilated intestine were normal.

The case is instructive, for it shows that the symptoms of obstruction may re-appear and even progress to a fatal issue although an intussusception in a young child has been completely reduced. The operation in this case was not difficult, no undue force was used, the intestine was not injured, there was no peritonitis visible, and the wound at first showed every disposition to heal kindly. The digestion of food and the normal motions of the intestine for two days after the operation showed that the alimentary canal was able to carry out its physiological functions. Yet in spite of this the patient fell into a condition of what the older writers called "ileus paralyticus"—a condition which we now believe to be always the consequence of peritoneal infection or septicæmia. It is sometimes found after the successful reduction of a strangulated hernia or the successful reduction of a volvulus of the colon, and it is marked by increasing feebleness, passing into collapse, undiminished tympanitic distension, increasing vomiting, and usually, says Mr. F. Treves, but by no means necessarily, a continued inability of the bowels to act. The meteorism was not due in this case to any obstruction, and although the pathologist found no evidence of peritonitis I fear the child died from septic poisoning.

Operations upon the vermiform appendix afford so many surgical disappointments that I think that it is never wise to promise the patient or his friends too much beforehand. The great and immediate disappointment at the time of the operation is inability to remove the appendix, either because it cannot be found or because its attachments render it unsafe to complete the operation. In two of my operations for removal of the appendix it has been quite impossible to find the appendix by any reasonable amount of dissection. The appendix in each case seemed to be packed away behind the cæcum and was apparently lying parallel with it in such a dense mass of adhesions that even a prolonged search failed to find it. In another case the appendix was attached to the bladder in such a manner that its tip had ulcerated through the walls and had caused the appearance of pus in the urine. It was considered inadvisable in this case to attempt any removal of the whole appendix, which was therefore divided, the distal end being left attached to the bladder and the proximal end being removed. The patient made a good recovery and the urine was soon free from pus. Small abscesses are often found in separating the adhesions which have formed round an inflamed appendix and in these cases it is not unusual to find that the wound does not heal by first intention but that a troublesome sinus is left. In other cases the scar of a wound which has united kindly at the time of the operation afterwards yields and a ventral hernia is produced, which is as disappointing to the surgeon as it is annoying to the patient.

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[2] Clinical Lectures and Essays, p. 149.

Mental disturbances following upon a surgical operation sometimes form a remarkable series of surgical disappointments, as they often occur in patients who have passed through life without any suspicion of mental unsoundness, though the event shows them to have been in a state of unstable nervous equilibrium. The disturbances show themselves in many ways. The following cases have come under my notice during the last year. A woman, aged 60 years, came under my care with cancer of the liver associated with attacks of intense pain. She was perfectly rational and collected when I saw her at home, though her husband said that she was very obstinate and had a most domineering temper. She was admitted into hospital for an abdominal exploration, when the novelty of her situation and the bustle of a large ward at once caused her mind to wander. I waited a day or two until she had recovered herself, and then I exposed the gall-bladder and set free many adhesions which had formed between the surface of the liver and the parietal layer of the peritoneum, and thus gave her great relief from pain. Another case was that of a worthy domestic servant, aged 35 years, who had lived in the same situation for many years and had always seemed to be of average mental calibre. I tied many varicose veins in both legs and, amongst others, the internal saphenous vein high up in the thigh. The wounds had been closed, dressings had been applied, and the patient was ready to leave the operating theatre, when the spica bandage was suddenly soaked with blood. The dressings were hastily removed, the wound in the groin was re-opened, and a large hole was found in the femoral vein. The vein was at once exposed and ligatures were passed round it above and below the rent. The vein was then divided, its walls being little thicker than a piece of tissue paper, and the wound was again closed. All the wounds healed by first intention and the patient afterwards declared that the leg the femoral vein of which had been tied was the more satisfactory of the two. She showed, however, a decided inclination to the formation of bedsores and her mental condition was clearly impaired from the time of her recovery from the anæsthetic. She was garrulous and constantly talked nonsense. Another case was that a man, aged 59 years, but looking much older, whose right upper jaw I removed on account of a carcinoma which had invaded it. Directly after the operation the patient began to suffer from hallucinations and it was necessary to have him watched continuously to prevent his escape from the ward. He died a month later from septic pneumonia. These cases of mental disturbance are always distressing, for they occur as often after slight as after severe operations, and they are said to be especially frequent in the practice of gynæcologists and ophthalmic surgeons. They are quite distinct from delirium tremens and traumatic delirium and the failure of power often seems to be general, for when mental disturbance occurs the wounds very frequently suppurate even when every care is taken to prevent interference with them by the patient. Dr. S. R. Macphail[3] says that in his experience at the Derby Borough Asylum he has seen 40 cases of insanity occurring after surgical operations in a total of 990 admissions. 13 of the cases were those of men and 27 were those of women. In only nine was there any hereditary predisposition to insanity. On an average the mental symptoms first showed themselves upon the tenth day after the operation. 24 of the patients recovered, eight became chronically insane, and eight died, four of the deaths being caused by malignant disease. Sir William Mitchell Banks[4] in his recent Lettsomian Lectures has also called attention to the occurrence of acute mania after operations on the breast and points out that the mental confusion and hallucinations depend upon an unstable mental condition and not upon septic absorption or upon the use of such drugs as iodoform and carbolic acid.

Perhaps the most disastrous, but at the same time some of the best-known, surgical disappointments occur in connexion with injuries to bones. Who is there who has not seen trouble after a Pott's fracture which has been well set shortly after the accident? The slight eversion and the accompanying flatness of the foot are always causes of annoyance to the patient. But even when there has been a seemingly good result and time has been allowed to obtain firm union the original deformity may recur if the patient be unusually heavy or if for any reason the amount of repair has been miscalculated. The remedy is an easy one in theory, though it is sufficiently difficult to apply it in practice, for it consists in restraining the natural desire of the patient to get about and to attend to his business at the earliest possible opportunity. It is far better for him, and in the end shorter, to wait until the union is thoroughly sound.

Colles's fracture is fruitful in disappointments and especially when it occurs in old people. Union takes place readily enough, but the connective tissue surrounding the joint becomes so infiltrated with the products of chronic inflammation as to leave a stiff and useless wrist for many months after the accident. It is of the utmost importance, therefore, to shampoo the injured part and to begin passive movement at the earliest possible time, and this is usually on the fourth day.

Non-union is more than disappointing after the fracture of a long bone, for, in children at any rate, it leads to the most disastrous results since it is often necessary to amputate the limb. There is no means of knowing what cases are likely to end in this manner, though the absence of crepitus or muffled crepitus in an unimpacted fracture may lead to the suspicion that some of the soft tissues intervene between the ends of the bone. When there is no mechanical obstacle the tendency to non-union can be reduced by taking care to keep the two fragments of bone absolutely at rest. Thus Mr. Pickering Pick recommends that the shoulder as well as the elbow should be fixed during the repair of a fractured humerus, and in a child I certainly prefer not to trust to a plaster-of-Paris case when both bones of the leg are broken, unless the patient can be carefully watched. It too often happens in the out-patient practice of hospitals that a plaster case is applied to the broken leg of a child, who is then sent home. The mother or relative omits to bring the patient back to the hospital for a fortnight or three weeks and allows the child to sit in a chair swinging his legs or permits him to crawl about the floor. The plaster case becomes soft or the injured leg wastes a little from disuse, and the case, which fitted well enough at first, soon becomes too loose. In either case the two fragments of bone move upon each other in such a manner as to prevent the production of callus and non-union is the result. The remedy is simple, for the child has only to be kept under observation, and non-union, at any rate in children, is a very rare accident.

The formation of a conical stump after amputation is always annoying and may be disastrous to the reputation of a surgeon. It is well recognised that conical stumps rarely occur in adults if sufficient care be taken to fashion the flaps properly and to saw the bone at a sufficiently high level. Yet they do occur sometimes when every precaution has been taken and more particularly after primary amputations in largely built and robust individuals whose muscles and connective tissues shrink much more quickly than their bones atrophy.

It is sometimes quite impossible to prevent the formation of a conical stump in children and young adults, especially after amputation through the upper arm and the leg. The humerus, the tibia, and the fibula chiefly grow in length from their upper epiphyses. It may happen, therefore, after amputation that these bones grow more rapidly than the surrounding tissues and the end of the stump may taper more and more until ulceration takes place and the bones protrude. Such a conical stump is seen occasionally after an intra-uterine amputation.

Injuries of nerves are another source of disappointment in connexion with fractures either on account of the pain or because of the paralysis which is produced. Implication of the musculo-spiral nerve in a fractured humerus, compression of the ulnar nerve after an injury to the elbow, and injury to the external popliteal nerve from a fracture involving the neck of the fibula have given me considerable trouble at various times. The results of operative interference in these cases have never been very satisfactory, for though the patient is relieved he is never as well as he was before the accident and he is certainly never as well as I should have liked to see him.

Operations for the relief of chronic neuralgias are always most disappointing, for the cerebral cortex seems to become so impressed with the sense of pain that as soon as one source is removed another is made. Two such cases are under my care at the present time, the one a woman with coccygodynia, whose coccyx was fixed almost at a right angle with her sacrum, so that it pressed inwards upon the rectum; the other a man with violent pain referred to the ends of the right fifth nerve. The woman is convinced that her pain, if anything, is worse since I removed her coccyx; the man, who had a few weeks' relief after I had cut away a part of his inferior dental nerve, now suffers agonies in the terminal branches of the superior division.

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[3] Brit. Med. Jour., 1899, vol. ii., p. 751.

[4] THE LANCET, March 24th, 1900, p. 844.

Dislocations are perennial sources of disappointment, more especially when they involve the larger joints, such as the hip. The text books on surgery teach us so glibly about the methods of reduction by manipulation that it is only by bitter experience we learn that there is another side to the question—that some dislocations cannot be reduced, that others can only be partly reduced, and that others, again, when they have been reduced, leave a useless joint. When it is impossible to reduce a dislocation it is better, I think, to wait for a time and to see what provision nature will make, rather than proceed to the performance of any surgical operation, but if the pain is very severe and the limb is very useless operative interference at an early period seems to be fully justifiable.

These, gentlemen, are some of the disappointments which attend the practice of surgery. I have no reason, however, to suppose that we have a monopoly of them as general surgeons. The ophthalmic surgeon, I know, has his troubles after operations for strabismus, or when a troublesome piece of capsule mars the effects of an otherwise perfect operation for cataract. The orthopædic surgeon is not always contented with the results of his operations for talipes. The gynæcologist too often lands himself in a sea of trouble after an apparently simple operation; whilst the general practitioner himself is soon disillusioned of the glamour of his profession and is apt to become the most disappointed of any of us, for he sees the failures of all. But in spite of this we should agree with Goethe that the most successful man is he who cares least for disappointments, though he is ever learning from his failures.

Chandos-street, W.

OBSERVATIONS ON COMPRESSED AIR ILLNESS.

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THE opportunities afforded for the observation of the pathological effects of high atmospheric pressure have been relatively very few and the testimony of every additional observer may be of value in aiding in the elucidation of a rather obscure subject. It is for this reason that I venture to publish these remarks, which embody my experience and the conclusions at which I have arrived as the result of that experience. It is not my purpose to discuss the physiological effects of compressed air on the human economy, for in my opinion observations along this line made during the progress of an engineering work of great magnitude would not afford trustworthy results, there being so many factors apart from the actual air pressure which would tend to render one's conclusions inexact. Neither is it possible within the limits of this paper to give an account of the history of the use of compressed air in engineering operations from the invention of the diving bell in the sixteenth century up to the present time. A very complete account of the subject has already been given by Dr. E H. Snell in his excellent little book on "Compressed Air Illness," together with his own experience while acting as medical officer to the Blackwall Tunnel.

It seems probable that in the future compressed air will be used to a much greater extent than it has been in the past and the knowledge as to the best means of reducing to a minimum the suffering inseparable from this class of work will be of value not only to the workmen employed but also to the employers themselves. At the Baker-street and Waterloo Railway tunnel works we had, considering the pressures employed and the length of the shifts, remarkably few cases of illness. The opinions which I hold as to the reason of this comparative immunity I will endeavour to express later.

It is a matter for regret that so much work under compressed air has been done in which no medical records were kept, and this is not only the case with undertakings carried out many years ago, for even in so recent a work as the St. Clair Tunnel, under the St. Clair river in America, there seem to have been no accurate medical records, though I gather from a general description of the tunnel that there was much illness and that several deaths occurred. Among the best records of the last 30 years are those of Dr. Jaminet of the St. Louis Bridge and Dr. A. H. Smith, the medical officer at the construction of the Brooklyn Bridge. But while admitting the value of their observations I totally disagree with their conclusions as to the pathology of the condition and also as to some of the factors which are instrumental in its production.

For the better understanding of the conditions under which the men employed in the compressed air worked it will be well for me to give a short description of the tunnel. It was only in a certain portion of the tunnel that the use of compressed air was necessary—that part of it which ran through the ballast in the bed of the river Thames. The tunnel was reached by two shafts sunk through a staging erected in the river, the top of the tunnel being a few feet below the bed of the river. Before the shield had reached the ballast the river-crossing section of the tube was cut off from the other part by a brick diaphragm into which a lock, with doors closing airtight, was fitted. At each end of the lock was a tap for the purpose of admitting the air from the pressure section when entering or for allowing it to escape into the other portion of the tunnel when leaving the compressed air. It was possible to fill the lock up to 30 pounds per square inch in one and a half minutes and to empty it at the same pressure in one and three-quarter minutes.

A few remarks regarding the astonishing rise in temperature when "locking-in" may be of interest. I have noted the mercury rise, when "locking-in" with a "full tap" at 30 pounds pressure, from 60° F. to 115°. During "locking-out" I have seen it fall from 90° to 46°. Foley assigned a very important place to this cold misty atmosphere in the production of the illness. While quite admitting that such sudden variations in temperature are not advantageous I do not consider that they play the smallest part in the etiology of the condition. The air was conducted from the air compressors to a large tank beneath the water, passing through this before being delivered into the tunnel, the idea being to cool it to some extent. I doubt whether this plan was very effectual, for on several occasions I took the temperature of the air as it left the supply pipe and found it to vary between 110° and 120°, according to the speed at which the air compressors were running. As it passed along the tunnel and escaped at the face it cooled to about 85°.

The pressures in the tunnel varied with the state of the tide and the nature of the ballast met with. As a general rule at low water the pressure was from 23 to 25 pounds per square inch, at high water from 28 to 30 pounds, and on several occasions it was as high as 35 pounds per square inch It is to be remembered that these figures refer to pressures over and above the 15 pounds per square inch normal atmospheric pressure.

VENTILATION.

When it became necessary to use the air pressure the river-crossing tunnel had already progressed so that the face or shield end was 123 feet from the lock. Thus, to begin with, there was a fairly spacious chamber for the men to work in. The ventilation during the whole time that the shield was in the ballast was excellent, on account of the very free escape of air through the gravel at the face. I was in the habit of estimating three times daily the amount of air pumped into the tunnel, and found that it gave an average amount per hour of about 6000 cubic feet for each man. This amount was well distributed, for, on my recommendation, the supply-pipe emptied just at the lock, thus causing the air to sweep from one end of the tunnel to the other in order to escape at the face. Before this was done the air at the face had shown 0·06 per cent. carbonic acid gas and at the lock end 0·09 per cent. After the alteration in the pipe the whole tunnel showed the same amount, varying between 0·06 and 0·07, which degree of purity was maintained until Oct. 4th. On this latter date, the shield being again in clay, the air could not escape at the face and we had to depend on artificial ventilation. The percentage of carbonic acid gas rose at once to 0 081, then to 0·1, and could not be brought below 0 075 till Oct. 28th when the compressed air was dispensed with. How this difference in purity affected the amount of illness I will point out further on. The tunnel was lighted by electricity which, by obviating the necessity for the use of candles or gas, materially improved the conditions. The men were divided into three gangs, each gang doing a "shift" of eight hours. The men working in the face, and who were exposed to wet, were provided with clothes which they changed on leaving the tunnel and which were dried before being again used. A well-warmed room was also provided for the use of the men to induce them to rest before going home, but of this they never took advantage. Hot coffee was supplied to them on leaving the tunnel and was much appreciated by them. I have no doubt that it was of benefit after the cold atmosphere of the lock. Smith states that it appeared to relieve to some extent "the nervous prostration which marked the return to the open air." I was never able to detect the smallest sign of nervous prostration in the men coming off a "shift," so I cannot offer any opinion as to the value of coffee in the condition. Before allowing any man to commence work in the compressed air I subjected him to a physical examination, paying particular attention to the condition of his heart and arterial system. Very stout men and those advanced in years were not accepted, though considerable latitude may be allowed in these conditions Alcoholism, I consider, should debar a man from this class of work, and I rejected any man who on presenting himself showed signs of recent excess. Of the 120 men passed 88 had previously worked in compressed air, while 32 had no previous experience The youngest man was 19 years of age and the oldest was 52 years, the average age being just over 30 years.

In all, during a period extending from May 23rd to Oct. 28th, 1900, 47 cases of illness due to work in compressed air came under my treatment. These cases occurred in 40 different men, two having three attacks each and three having two attacks each. In these figures I include only those cases which were of sufficient severity to call for treatment. I do not believe that a single man escaped a slight twinge of pain at some time or other to remind him of the nature of his occupation, but these were very evanescent and they cannot be dignified by the name of illness.

PATHOLOGICAL EFFECTS.

The pathological effects of compressed air are manifested at two distinct times and are due to entirely different conditions. The first class is purely mechanical and is noted when going into, or when actually in, the pressure The second class comprises those symptoms which are only seen after leaving the compressed air.

The symptoms consequent upon mechanical pressure *per se* consist of pains in the ears, frontal and maxillary sinuses, and in carious teeth. Pain in the ears is common when "locking-in" for the first time, especially if the pressure be rapidly admitted, but is rarely met with afterwards unless there be a condition of "cold in the head," pharyngitis, &c., which interferes with the normal patency of the Eustachian tubes. The pain has all grades of severity, from a mere sense of oppression to the most acute agony. It is, of course, due to the fact that if the Eustachian tubes are blocked the pressure outside the drum is greater than that in the middle ear and the membrane is pushed forcibly inwards. If the Eustachian tube remains closed and the pressure be sufficiently great rupture of the tympanum may ensue. This actually occurred in two cases which came under my notice, in one of which I myself was the patient. The injury had no permanent ill-effects in either case. Apart from actual rupture the relative vacuum in the middle ear brings about a congestive condition of its lining membrane which, according to Dr. Snell, may result in inflammation which may be followed by suppuration. I had no case of this kind brought to my notice. The pains in the frontal and maxillary sinuses do not call for special mention. In my experience they were very infrequent, and I never observed them apart from a catarrhal condition of the nasal mucous membrane. In these cases, during "locking out," there may be a discharge of blood-stained mucus from the nose. The foregoing conditions are, as before stated, dependent on mechanical causes, and cannot well be considered as part and parcel of compressed air illness. Furthermore, in my experience, they never occurred apart from an abnormal condition of the mucous membrane of the nose or pharynx, therefore I cannot regard them as a necessary accompaniment of exposure to an atmospheric pressure above the normal.

In the second class are those symptoms which are only manifested after leaving the pressure. These symptoms, though perfectly distinct from each other, are, I believe, all due to the same underlying pathological condition. The most frequent and characteristic manifestation is pain, usually occurring in the joints, less frequently in the muscular structures of a limb. In only one of my cases were the muscles of the trunk affected. The pain may be confined to one joint or may be present in two or more joints, the latter condition being the more usual one. In my series of cases the knee was the only joint to be affected singly and this only occurred in four cases out of the 47. The knee-joint is more frequently attacked than all the other joints combined, and in 19 of my cases the knees were the seat of pain apart from any other manifestation, and in 16 cases pain in the knees co-existed with other symptoms. Next in order of frequency came the elbow-joint which was affected in 11 cases, then the shoulder with seven cases to its credit. The hip joint was the seat of pain in five cases, the wrist in three cases, and the ankle in one case. Any number of joints may be simultaneously affected. The pain varies from a mild ache to the most severe suffering, and in well-marked cases I know of no condition which produces a greater degree of physical agony. The patient becomes pallid and perspires freely, the pulse is hard and rapid, and unless he is possessed of a considerable amount of self-control the man cries and groans. The pain has been described to me as "a feeling as if the joints were being twisted off" or "as if a dog were gnawing a bone" If untreated the pain may disappear in five or six hours or it may persist with diminished intensity for several days or even weeks. The onset of the pain may be at any time after coming out of the compressed air. In some cases it comes on immediately, in others not for several hours. The longest interval in my own cases was five hours, but Dr. Snell gives notes of a case in which 14 hours elapsed between leaving the pressure and the appearance of the pain. As a rule not more than two hours elapse. I have almost invariably found that the sooner the symptoms appear after leaving the pressure the more severe they are. Swelling is not common in the joints, but is invariably present if the pain is situated in the muscles. I have never found any tenderness present, even vigorous friction relieving, rather than aggravating, the pain. I am aware that on this point my experience is directly contrary to that of most other observers. Epigastric pain and vomiting may occur and are usually very severe and refractory to ordinary treatment. In well-marked cases the pain is intense and the vomiting is persistent. This condition only occurred in about 10 per cent. of my cases and Dr Snell only found it in a small percentage. On the other hand, Dr. Jaminet describes it in 78 per cent. of his cases and Dr. Smith in 24 per cent. Formication or itching of the skin followed by redness may occur; only one such case came before my notice

Cerebral symptoms.—Headache and giddiness are not uncommon as following exit from the compressed air. In four of my cases giddiness was very pronounced, the patients reeling and falling down. Pain in the head is not necessarily present but may exist along with the giddiness. Vomiting is not uncommon in these cases, being cerebral in character and quite apart from any gastric disturbance. Visual troubles, such as diplopia and flashes of light, may be present. As a usual thing these symptoms are of short duration and they yield very quickly to appropriate treatment. Dr. Snell gives notes of nine cases of vertigo occurring after exit from compressed air. The onset in all the cases was sudden, and in six of them some amount of deafness was present, tinnitus occurring in four cases. In some of these cases the vertigo lasted for many months. No case of auditory vertigo due to working in compressed air came under my notice, so I am unable to speak of it from personal experience.

Paralysis.—Paralysis only occurred in one of my cases, the condition being one of paraplegia with involvement of the bladder and rectum. Dr Snell only had two cases at the Blackwall Tunnel, while in New York Dr. Smith observed it in 15 per cent. of his cases, and at St. Louis it was present in 61 per cent. Dr. Smith says that the paralysis most often affects the lower half of the body but may include the trunk or arms. According to him pain may or may not be present in the limbs even when tactile sensation is lost. In my case the only pain felt was on each side of the spine in the lower lumbar region.

Death.—Death is not a very uncommon sequence of work in compressed air, and it may occur suddenly on leaving the pressure or after previous paralysis or other symptom. Out of 76 cases of illness at St. Louis Bridge there were 12 deaths. Dr. Smith had three deaths in 110 cases, and four deaths occurred in sinking the caisson for the Londonderry new bridge and this with a pressure of only 28 pounds. As far as I can discover, the Forth Bridge and Blackwall Tunnel were the first works using high pressures which were put through without a fatality. At the Baker-street and Waterloo Railway Tunnel works we had no fatal case.

DIAGNOSIS.

When we consider the devious workings of that peculiar statute known as the Employers' Liability Act it becomes a matter of some importance that these cases should be carefully diagnosed and differentiated from other conditions having somewhat similar symptoms. It must also be remembered that the pains may possibly be assumed. the man hoping thereby to be a financial gainer. I agree with Dr. Snell that the most important points in the diagnosis are the time and manner of the onset. Physical signs being rarely present in any form, there is little else to go upon. Personally I would not admit a case to be due to compressed air where twelve hours had elapsed from the time of leaving the pressure till the onset of the symptoms. Rheumatism, osteomyelitis, and arthritis deformans are not likely to be mistaken for the joint pains of compressed air illness. The absence of any rise of temperature in the latter, together with its sudden onset and freedom from physical signs, will serve to distinguish it. I here insert a note on one of my cases which was interesting, not only from the point of view of diagnosis, but also because I am unable to find a similar case recorded in any of the writings on compressed air illness which I have been able to consult.

CASE 1.—The patient, a strong, healthy man, aged 50 years, rather inclined to be stout, had worked in compressed air before coming to the Baker-street and Waterloo railway tunnel works and had been employed at these works for some time. On August 29th, 1900, he came out of the tunnel at 6 A.M. after doing an eight-hour shift. At about 6.30, when he reached home, he felt a pain "in the front of his chest." He at once got very short of breath and felt very distressed though the pain was very slight. He had a feeling of impending death. He managed to return to the stage, stopping every few yards to get his breath, and he reached there at 10 15 P.M. and I at once saw him. He was then in great distress and was unable to speak more than a few words at a time. His face was very dusky. I have never seen more severe dyspnœa. The pulse was 120 and very feeble and the respirations were 45. I at once auscultated his chest and found a most peculiar state of affairs. Posteriorly there was nothing abnormal and the supraclavicular regions were negative. But all over the front of the chest a most unusual sound was heard, audible throughout the whole respiratory cycle. I have never heard anything like it before, consequently I am unable to give any comparative description of it. It was very harsh and creaking, sometimes tearing, in character, and most marked between the third and seventh costal cartilages on the right side. I then percussed the chest with absolutely negative results, and on applying my stethoscope immediately afterwards I found that all the auscultatory phenomena had disappeared. There was no cardiac displacement and there were no murmurs, but the sounds were very distant and feeble. As the man was evidently in a serious condition I at once put him into the medical lock and re-compressed him up to 18 pounds, at which point all dyspnœa had gone and he felt perfectly well. This pressure was allowed to "leak out" in 70 minutes and the patient came out of the lock feeling quite well. There was no return of the symptoms. No physical signs could be discovered after coming out.

Now, in this case there might have been considerable difficulty in the matter of diagnosis. The mode of onset certainly pointed to compressed air as the causative factor, but it was hardly possible to be certain until the immediate cure of the condition by re-compression removed all doubt as to the nature of the trouble.

ETIOLOGY.

The one essential for the production of this illness is, of course, a sojourn in an atmospheric pressure above normal. This, however, does not in itself cause any of the symptoms given above but only brings about the conditions necessary for their development after the subject returns into a lower pressure. It must be thoroughly understood that there are no manifestations of this illness so long as one remains in the compressed atmosphere; it is my belief that a man might live in a pressure of three atmospheres for an indefinite time without necessarily experiencing any ill-effects. In addition to the essential cause there are others factors which are very important, the first two in order of importance being the length of stay in the pressure and the amount of carbonic acid gas present in the condensed atmosphere. The influence which the latter has upon the former of these two factors is so great that it is hard to separate them in considering the share which each one has in the production of the illness. Dr. Snell has enunciated a law that the amount of illness varies inversely with the amount of fresh air supplied. With this I thoroughly agree, and when considering the length of time spent in the pressure the carbonic acid gas factor must be thought of, and, within certain limits, it may be laid down that the time which may be spent in the pressure without resulting bad effects depends very largely on the percentage of carbonic acid gas present.

Leaving aside the question of ventilation for the moment and assuming the percentage of carbonic acid gas to be a fixed quantity, then the length of stay in the pressure is, in my opinion, the most important accessory in the etiology of the disease—far more important than the time employed in leaving that pressure. At the Baker-street and Waterloo railway tunnel there was no case of illness occurring in a man who had not been at least three consecutive hours in the pressure. In addition to the regular eight-hour workers there were many men, such as fitters, plate-layers, gangers, &c., who spent variable periods of time in the condensed atmosphere, so that I had an excellent opportunity of proving this point.

Regarding the relative importance of the length of stay in the pressure as a factor in the production of the disease opinions have differed. Dr. Jaminet recommended short shifts at the St. Louis Bridge, but nevertheless he considered the time spent in "locking-out" as of primary importance. According to Dr. Snell, Mr. Eads, the chief engineer of the bridge, was the first to call attention to the fact that the length of stay was more concerned in the production of the illness than the rapidity of "locking-out." Dr. Smith attached great importance to the length of stay in the pressure and he formulated the law that the danger is as the degree of pressure to which the person has been exposed multiplied by the duration of the exposure. At the Brooklyn Bridge the pressures rose gradually, with the depth of the caisson, from 18 pounds to 36 pounds per square inch, the length of the shifts being four hours at first, gradually reduced to two hours as the pressure increased. Even with these short shifts Dr. Smith reports 110 cases of compressed-air illness as occurring in four months. At the Baker-street and Waterloo railway tunnel, where eight-hour shifts were worked, there were only 47 cases in five months. At first sight these figures would appear to show that the length of stay does not play a rôle of any importance in the production of the illness. But it is precisely here that the carbonic acid gas factor comes in and proves itself to be of such importance. At the Brooklyn Bridge caisson the air contained 0·33 per cent. of carbonic acid gas, while at the Baker-street and Waterloo railway tunnel, as has already been stated, the percentage up to the last three weeks was kept at from 0·06 to 0·07. Dr. Smith seems not to have considered ventilation as of any importance, and he makes the remark that "this amount (0·33) of vitiation was found not to affect the men unfavourably." In my opinion it was just that vitiation which was responsible for his large number of cases. No doubt it also had much to do with the "nervous prostration" which he observed in men coming out of the pressure. It is true that Dr. Smith had a larger number of men than were employed at the Baker-street and Waterloo railway tunnel, but had we worked in four-hour and two hour "shifts" instead of in "shifts" of eight hours the number of our cases would, in my opinion, have been insignificant.

Dr. Snell claims to have been the first to point out the relationship between the amount of illness and the fresh air supplied to the compressed air-space, and he gives some very interesting tables from his experience at Blackwall in support of his views. My own observations on this point were necessarily limited as the air-supply was large and constant up to nearly the end, but the figures I am able to give are, I think, sufficiently striking. From May 23rd to Oct. 4th, with an average of 6000 cubic feet to each man per hour, there were 34 cases, say, eight cases per month. Following this with an average of 1700 cubic feet to each man per hour there were 13 cases in a period of 12 days. I found also that the cases occurring during the latter period came on sooner after leaving the pressure and were of greater severity than those occurring during the time of good ventilation.

I do not assign a very important position to rapid "locking-out" as a cause of the illness, though I am firmly of the opinion that could this process be sufficiently prolonged it would probably altogether prevent subsequent symptoms. But in order to achieve this result three-quarters of an hour at least would be required to be spent in coming out of a pressure of 30 pounds to the square inch, and this, from an economic point of view, would be impracticable. Some observers have laid down very precise mathematical rules as to the length of time to be spent in reducing given pressures, though it is difficult to see on what these rules are based. Dr. Smith says that five minutes should be allowed for each additional atmosphere, while Dr. Jaminet gives one minute for each additional six pounds of pressure. At the Baker-street and Waterloo railway tunnel it was possible to "lock-out" of 30 pounds pressure in one and three-quarter minutes during the first three months. After that the exit tap was altered so that to leave the same pressure required at least six and a half minutes. This alteration did not in the slightest degree affect either the number or the severity of the cases.

There are some minor predisposing causes which have been assigned different degrees of importance by various authorities. Among these newness to the work, age, alcoholism, and obesity are the chief. With regard to an old hand being less liable to compressed air illness than a newcomer opinions differ. Dr. Smith strongly adheres to this view, though admitting that some very severe cases occurred among old hands. Dr. Snell does not admit the increased liability of a new hand to the disease, but says that it is very difficult either to prove or to disprove it. Personally it is a point upon which I am uncertain, though my figures would tend to show that a man is more susceptible when he first begins this class of work than after having been engaged in it for a greater or less period. Of 88 men who had previously worked in compressed air 25 were affected, or 28 4 per cent, while of 32 men who had had no previous experience of such work 15 were affected, or 46 8 per cent. Of the 40 men who were affected, in 16 the illness occurred after the first "shift"—that is to say, in 40 per cent.

Age has been considered to be an important factor, the amount of illness varying in proportion to the age. The only statistics which I can find are those given by Dr. Snell from his own experience, and covering, as they do, a large number of men of all ages they have an especial value. He concludes that below the age of 20 years men are singularly exempt from this illness; between the ages of 25 years and 45 years the liability to illness does not vary to any great extent, but is about twice as great as between the ages of 20 years and 25 years, and that after the age of 45 years the liability increases very considerably. My own conclusions, though based on a much smaller number of men, agree with those of Dr. Snell, and I am of the opinion that young men stand compressed air better than do those of more advanced years. But it is only in the very young ones that a marked immunity is observed, the amount of illness from 25 years to 40 years not varying much according to the age.

Fulness of habit has been noted by many observers as specially predisposing to the untoward effects of compressed air. Dr. Smith made a strong point of this in his essay on caisson disease, and he gives figures in support of his views which show that of 86 cases of illness the spare men were responsible for 28, the medium for 22, and the heavy for 36. He adds, "Considering that among labourers below the age of 45 (and none were above that age) the class described as heavy are very much in the minority these figures are sufficiently striking." As I excluded all men who were conspicuously stout I have not been able to form any opinion from observation on this point. But I am quite sure that the cases occurring in moderately large men were neither more numerous nor more severe than those in men of light build.

Alcoholism has been said to strongly predispose to compressed air illness, a man who has been drinking heavily being frequently a sufferer, and certainly some of my most severe cases occurred after a too free indulgence. But this is a point upon which it is hard to come to a satisfactory conclusion, for the reason that, with two exceptions, all the men used alcohol, the majority freely, so that no comparative statistics could be obtained. But I am inclined to the view that alcohol is a predisposing factor of considerable importance.

Muscular exertion following upon exit is insisted on by Dr. Jaminet as being of importance in bringing about the symptoms, and he noted a diminution in his cases when the men were drawn up instead of reaching the top of the caisson by climbing the ladders. Dr. Smith also supports this view, but admits that he has no figures to offer. At the Baker-street and Waterloo railway tunnel the men were drawn up in a cage and were forbidden to mount the ladders, but always hurried away as soon as they reached the top. Two of the men used bicycles, riding home a distance of six miles immediately after coming out of the compressed air, neither of them having an attack throughout the whole five months. I have never been able to see any reason for supposing that muscular exertion after exit increases the liability to the illness though I do not deny the possibility of its being so.

PATHOLOGICAL THEORIES.

Very many theories have been put forward in an endeavour to explain the manner in which compressed air causes the symptoms for which it is responsible. But possibly even more surprising than their number is the fact that so many of these elaborate theories do not in any way harmonise with the observed symptoms and conditions. In many cases it appears as though, so long as the theory happened to be vague and abstruse, its sponsor was perfectly indifferent as to whether or not it could be reconciled to the facts. The symptoms have been variously ascribed to exhaustion, hæmorrhage, rheumatism, congestion of various parts, carbonic acid gas poisoning, and supersaturation of the blood by the compressed atmosphere. It would be quite impossible within the limits of this paper to give, with any sort of completeness, the arguments put forward by those who happen to pin their faith to one or other theory. All that can be done is to examine them in a general way and to attempt to point out where, in my opinion, they appear to fall short.

The exhaustion theory is based on the hypothesis that an increased metabolism follows a stay in compressed air owing to the greater amount of oxygen present. This is purely hypothesis, for, as Dr Snell points out, no experiments have as yet proved that any such increased activity of the vital processes does occur. On the contrary, many observers have arrived at the conclusion that there are no grounds for such a belief. Personally, though my observations were clinical and not experimental, I have not been able to find any reason for holding that work in compressed air is associated with increased metabolism. Appetite has been said by many to be increased and Dr. Smith says in regard to this that it "seems to point to an increased waste of tissue to be supplied by a greater consumption of food," though he would not accept the explanation as conclusive, believing that this could not occur without increased temperature. I do not presume to doubt those who say that appetite is generally increased, but in my own experience I have not found such to be the case. I carefully questioned some 30 of the more intelligent of the men regarding their appetites when working in compressed air. Only two said that they ate more, the majority that they noticed no alteration, while a few stated that they did not use as much food. Neither is there any rise in temperature. But let us admit, for the sake of argument, that this increased tissue metamorphosis does occur, can we account for the symptoms in this way? Dr. Jaminet held an affirmative opinion, and in fact his treatment consisted altogether of stimulants and nourishment, but by what process of reasoning he arrived at this conclusion it is beyond my power to conjecture. My own opinion so thoroughly agrees with that of Dr. Snell that I cannot do better than quote his own words: "......But if severe and often excruciating pain in the limbs, and elsewhere, paralysis of the legs, bladder, and rectum, and sudden death, are each and all to be ascribed to 'exhaustion,' this term must surely be employed in some more special and technical sense than is usual." Furthermore, this theory offers no explanation of the fact that the illness depends largely on the amount of carbonic acid gas present—i.e., the less oxygen the more illness. Neither does it account for the curative action of recompression in these cases nor for the complete absence of symptoms so long as one remains in the compressed air.

The theory that carbonic acid gas produces the illness by direct poisoning requires no more refutation than the statement that the symptoms of poisoning by this gas bear no resemblance to those met with in compressed-air illness.

Congestion of the brain, spinal cord, and other organs is considered by Dr. Smith in his essay on caisson disease, by Dr. Moxon in the Croonian Lectures in 1881, and by many other observers to be the cause of this illness. Dr. Smith says that "it is probable that the pathology of this disease is not entirely uniform in all cases," but does not doubt that congestion is the chief element in it. But in his further elaboration of this theory he assigns congestion the chief and only place, although not bringing forward a single fact which goes to prove his contention. He begins by making the statement that the centres will be congested at the expense of the periphery in a compressed atmosphere, and having laid down this law in no uncertain manner deduces a second law "that firm and compact structures will be congested at the expense of those more yielding," and on top of this a third law "that structures within closed bony cavities are congested at the expense of all others." Now it is the easiest thing in the world to deduce a law from a statement, the difficult matter being to be quite certain that the statement is correct. Does the blood, as Dr. Smith says it does, pass from a place where the pressure is greater to one where it is less, and if so, where does it go to find a place which is not already filled with matter, either fluid or solid, or how can it increase the tension in these central parts when, as Dr. Snell well puts it, "blood-pressure is everywhere raised and every one part of the body presses with greater force on every other part"? The only compressible parts are the free gases in the alimentary canal and I can corroborate Dr. Snell's opinion that this potential space is principally occupied by the abdominal wall being pressed in, as, from my own observations, the latter is the case when one goes into a compressed atmosphere. If the blood under pressure leaves, say, the periphery of a limb, how does it do so except as a result of compression of that limb? Dr. Smith says that solid structures resist compression. How, then, are the fluids contained in the solid structures going to be driven out of them? It would seem as reasonable to say that one might by compressing a glass bottle squeeze water out of it without altering its shape. In order for the pressure to act on the blood it must necessarily do so by compressing surrounding structures. But in compressed air there is not the least evidence of this taking place. The limbs are not altered in the least degree either in size or in shape. Dr. Smith says that superficial veins are obliterated and that the skin is anæmic, and he even makes the statement that the hands are shrunken and shrivelled owing to the blood being squeezed out of them. Now I have repeatedly examined the men while in the pressure in order to ascertain to what extent I could corroborate these observations of Dr. Smith's. In my experience I can emphatically say that these phenomena did not occur. The skin does not become anæmic, the veins are not effaced, nor are the hands altered in appearance in the slightest degree. But on other grounds it is difficult to admit the engorgement of the internal structures assumed to occur by the exponents of this theory. Is it reasonable to suppose that a man could work, and work hard, for eight consecutive hours with his brain, spinal cord, liver, &c., in such a congested state, and could do his work without the slightest feeling of discomfort and keep it up, on and off, for years without discoverable ill-effects? To my mind it is most unreasonable. Again, how does this theory agree with the actual symptoms of the illness? Dr. Smith holds that the vessels both in the congested and anæmic parts will suffer from a loss of tone which will bring about a lowering of tension in the vascular system. He also appears to believe that while in some cases the pains are of local origin in most cases they are spinal. I believe all the joint and muscular pains to be local and not spinal in origin. And in any case will the fact that the vessels are suffering from loss of tone be sufficient to give rise to a pain of such intensity? Can the case of cardiac dyspnœa to which I have referred be put down to congestion, spinal or otherwise? Although Dr. Smith did not use recompression as a therapeutic measure he was impressed with the fact that when a man returned into the pressure the symptoms vanished. He says that he would expect recompression to be of special value in "paralysis not dependent on extravasation of blood." But if paralysis in common with the other symptoms were dependent on congestion, how would re compression be of service? It would simply bring about congestion of the cord once more. Dr. Smith does not attempt to explain why he thinks re compression would act beneficially, and if one were held to the congestion theory it could not be satisfactorily explained.

In the *New York Medical Record*, 1890, Dr. Corning attributes the symptoms to anæmia of the cord. But it is only in exceptional cases that there are any symptoms which can properly be referred to the cord, and it is perfectly justifiable to suppose that the same cause is at the bottom of all the symptoms, depending altogether for its effect on the part of the body upon which it acts. Finally, neither of these theories explain why carbonic acid gas should be a factor in the production of the illness only second in importance to the pressure itself.

Supersaturation of the blood.—Now we come to the theory which has for its foundation the law of Dalton, which enunciates that fluids absorb gases in direct proportion to the pressure. Water dissolves at 10° C. and under one atmosphere pressure oxygen 0·028 part, nitrogen 0·014 part, carbonic acid gas 0·90 part. It is held that during a sojourn in compressed air the blood becomes charged with the atmospheric gases proportionately to the pressure and that after exit, the pressure being removed, the blood is no longer able to hold the air in solution and it may become free in the vessels and surrounding tissues and thus give rise to the various symptoms met with. We have in this argument an adequate explanation of the symptoms not only of joint pains but of paralysis and other manifestations. I am of the opinion that the case of cardiac dyspnœa which I have recounted can be explained very reasonably as being due to extravasation of air into some situation where it caused pressure on, and consequent embarrassment of, the heart, though what that exact situation was I confess that I am not able to say. Now regarding the absorption by the blood of gases under pressure it has been shown by Bert that such absorption does take place although not exactly according to the rule laid down in the law of Dalton. Hoppe found that in animals killed by a rarefied atmosphere there were bubbles of free air in the blood. He concludes that the same effect takes place in passing from a condensed to a normal atmosphere. Bucquoy considered that in a compressed atmosphere the amount of gases absorbed by the blood increased in accordance with physical laws and that on decompression gas must escape and may cause in some cases joint and muscular pains and hæmorrhages. Dr. Snell as a result of his observations strongly supports this theory of supersaturation of the blood. Now what arguments are there against the tenability of this theory? I have carefully observed every case of compressed air illness which came under my treatment and have considered the conditions which appear to bring about an increase or a decrease in the number of cases, and I have been unable to find any fact which cannot be reasonably explained if we accept supersaturation of the blood as the underlying cause of the symptoms. Dr. Smith, it is true, objects to this theory on the very insufficient grounds that frequently the symptoms do not appear until several hours after leaving the pressure, whereas, in his opinion, if the symptoms were produced by free bubbles of air in the blood-vessels this condition should be at its maximum at once after leaving the pressure and should give rise to the symptoms immediately. His second objection is that the fact of the "comparative immunity from danger which results from repeated exposures to compressed air" could not be explained if the action were due to purely physical causes. He says: "The obstruction of the vessels described by Bert is a condition of which the system could never become tolerant by frequency of repetition." The first objection may be answered by pointing out that the disengagement of the air from the blood is not an instantaneous process, and that very many of the fine bubbles may have to collect before even a capillary vessel can be blocked, and, as Dr. Snell further points out, a still greater collection must take place before stretching and rupture of the capillaries can ensue. Regarding Dr. Smith's second objection it may be said that the comparative immunity acquired as a result of repeated exposures to compressed air is as yet not proven, though personally I am inclined to the opinion that some degree of immunity may result. But even if this be admitted I can see no reason why the vascular system should not adapt itself to this condition equally as well as to the condition of congestion described by Dr. Smith. Probably in many of the cases the vessels do not rupture, but the air passes through them into the surrounding tissues. Why should not the vessels acquire a resistance to this or to rupture as well as to congestion? This theory is capable of explaining why the length of time spent in a condensed atmosphere should be of such moment, for saturation of the blood will only take place more or less gradually. We can also see why higher pressures are more dangerous than low ones if we admit the operation of Dalton's law in these cases. It also explains why the symptoms are never observed so long as one remains in the pressure, but only after exit. Furthermore, I am satisfied in my own mind that this theory affords a reasonable and scientific explanation as to why an increase in the carbonic acid gas should bring about an increase in the amount of illness and also why, with an atmosphere containing 0·06 per cent. carbonic acid gas at the Baker-street and Waterloo railway tunnel, we had no cases occurring under a three hours' sojourn in the pressure. When we consider the relative solubility of oxygen, nitrogen, and carbonic acid gas, it is within the bounds of probability that the latter is the one dissolved in greatest amount in the blood, though present in such a small quantity in comparison with the other component gases of the atmosphere The application of the law of Dalton explains why pressure, length of stay in that pressure, and amount of carbonic acid gas present should be so intimately connected one with another that it is impossible to consider one without the others. It is true that Bert in analysing the bubbles of air obtained in his experiments on animals found them to consist chiefly of nitrogen. But as Demarquay, quoted by Dr. Snell, has shown, free gases existing in the tissues of the body are absorbed at different rates, and while carbonic acid gas is absorbed in 45 minutes nitrogen may be discovered after several weeks. Is it not possible that the length of time intervening between death and necropsy in Bert's experiments may have been sufficient for the disappearance of the carbonic acid gas? This theory also enables us to comprehend why rapid re-compression followed by a long "locking-out" are in a large majority of cases curative in all forms of the illness, the air being re-absorbed and the gradual "locking-out" enabling it to escape through the lungs. It also accounts for the fact that the sooner re-compression is practised after the onset of the symptoms the more satisfactory are its results.

MORBID ANATOMY.

There having been no fatal cases at the Baker-street and Waterloo railway tunnel works I have had no opportunity of seeing for myself the post-mortem conditions present. There have been a fair number of necropsies following death resulting from compressed air, but many of them seem to have been incompletely performed. Congestion of various organs has usually been present and, in some cases there has been effusion beneath the arachnoid and blood-clots under the dura mater of the cord. Dr. Smith details one of his cases in which Dr. Janeway of New York performed the necropsy. Death had taken place suddenly within two hours of exit. Nothing abnormal was found except congestion of the lungs. It is not stated whether the cavities of the heart were examined for free air bubbles. The spinal canal was not opened. So far the post-mortem examinations made in this condition are not absolutely reliable, for they seem to have been conducted, as far as can be made out, without the precautions necessary for the discovery of free air in the tissues and vessels. The experiments of Bert on animals seem to have been followed by much closer post-mortem investigations.

REMOTE EFFECTS OF WORK IN COMPRESSED AIR.

Does the human organism suffer any ill-effects which may be described as chronic as a result of being subjected to the action of compressed air? I can only say that I have never been able to discover anything which would lead me to answer this question in the affirmative. Many of the men who came before me had worked on and off in compressed air for periods of five, six, and seven years, yet I was unable to find any pathological condition in their organs or arterial systems except in one case—viz., that of a man, 42 years of age, who had worked for varying periods during the last seven years in compressed air and who showed marked arterio-sclerosis apart from any cardiac or renal condition which could be discovered. This sclerosis may have been caused by his occupation, but it is impossible to say definitely that it was.

Regarding the paleness of the face and the general unhealthy appearance of compressed-air workers insisted on by Dr. Smith, I may say that I was not able to detect a greater degree of pallor in these men than was present in men working in other parts of the tunnel, where compressed air was not used, and which is found in most men working underground. Dr. Snell says in this connexion that at the Blackwall Tunnel as ventilation improved the pallor became less marked, so that eventually he could not pick out an air-pressure man by his complexion though previously he had been able to do so

TREATMENT.

In the great majority of cases only one treatment is necessary and that is re-compression. For this purpose we had a medical air lock erected on the stage consisting of a boiler placed horizontally. At one end was a door which was air-tight when closed, and the interior was fitted with bunks, lighted by electricity and heated by steam. A small window and speaking-tubes completed the arrangement. It was connected with the air-compressors and was fitted with a pressure gauge and the necessary taps. The sooner re-compression is practised after the symptoms appear the better as a rule are the results. If a long period has elapsed, even though the pain may be benefited, there is always in joint cases marked stiffness remaining, the condition then being not an acute one but simply the result of the bruising and stretching undergone by the tissues.

The amount of pressure needed for relief depends more on the severity of the case than on the original pressure which produced the symptoms. Persons attacked after coming out of 30 pounds per square inch pressure may feel perfectly relieved when the pressure in the medical lock amounts to 18 pounds, others may require to be re-compressed up to 25 pounds, although the pressure they came out of was only 23 or 24 pounds per square inch.

Decompression must be slow, and I think that it is of advantage not to reduce the pressure faster than at the rate of one pound in three minutes. In my experience re-compression never fails to stop the pain but there are exceptional cases where it returns shortly after exit. In some of these a second re-compression is effectual, in others it is quite useless, and I have given an example of each class in the appended illustrative cases. If the pain returns it invariably does so in the original situation, and the fact that pain should ever return after re-compression is probably owing to the creation by the first attack of a *locus minoris resistentiæ* which renders the passage of air into the tissues easier than escape by way of the respiratory system. In the cases in which the pain returned I had recourse to morphine given hypodermically. It must be used in fairly large doses, a quarter of a grain not being sufficient to control the pain in any of the three cases in which I used it.

Ergot is highly spoken of by Dr. Smith who considered it superior to morphine in relieving the pain. I never found it to be of any benefit except in one variety of case—that in which giddiness and headache are the symptoms. I have used it in doses of from one to two drachms of the fluid extract in cases of this kind and always with the greatest benefit.

In the acute cases it is my experience that liniments are practically useless and the same is true of bandaging.

In the cases of stiffness following the acute symptoms I have used the liniment containing aconite and belladonna recommended by Dr. Snell with the greatest benefit.

ILLUSTRATIVE CASES.

CASE 2.—The patient was a strong and healthy man, aged 26 years, who had been working in the Baker-street and Waterloo railway tunnel works for six days. He had finished an eight-hour "shift" at 6 A.M. on May 29th, and three hours later he had very severe pain in his left hip and thigh. He returned to the works at 8.15 P.M. when I saw him. The pain was then very severe, the left thigh being much swollen, and he could only walk with great difficulty. He was put into the medical lock and the pressure was raised to 18 pounds, at which point the pain had practically gone. The pressure was reduced to normal in 45 minutes and he came out feeling quite well but with much stiffness in the limb. There was still considerable swelling, so the thigh was firmly bandaged and he was given a liniment. When seen on the night of May 30th he stated that he felt quite well and that there was no return of the pain.

CASE 3.—The patient in this case was a man, aged 40 years, who had had previous experience in compressed air. He was a strong, healthy man. He came out of the pressure at 6 A.M. on June 14th, after the regular eight hour "shift," the pressure then being 28 pounds. At about 8.30 A.M. he was seized with pains in his left knee and in his right shoulder and elbow. He returned to the stage at 2 30 P.M. and I re-compressed him up to 25 pounds, the "locking-out" occupying 50 minutes. The pains before going into the lock were most intense, but on coming out the shoulder and elbow were perfectly well, the knee being slightly stiff. There was no return and he went on his "shift" at 10 P.M.

CASE 4.—The patient, a man aged 23 years, had worked in compressed air at Glasgow and had been at the Baker-street and Waterloo railway tunnel works for over a month. He had never been affected before. He came off his "shift" at 6 A.M. and immediately on leaving the lock he was seized with most acute pain in his left arm between the shoulder and elbow. He went back into the pressure and obtained instant relief, but on coming out again the pain returned as severely as before. I was sent for at 9.15 A.M when I found him in great pain. The left upper arm was much swollen and on palpation it gave a crepitant sensation to the examining fingers. He was put in the medical lock and re-compressed up to 22 pounds, coming out in 50 minutes The pain returned but not so severely as at first. I then rubbed his arm with a liniment containing aconite and belladonna and applied a moderately tight bandage without the slightest relief. He was therefore again re-compressed up to 12 pounds, at which point the pain had gone. The "locking-out" took 30 minutes. There was no return of the pain after this second re-compression. The crepitant sensation imparted to the fingers in examining the arm in this case would lead one to suppose that it may possibly have been due to free air in the tissues. Dr. Snell had a similar case occurring in the thigh.

CASE 5.—The patient was a healthy man of small build, aged 26 years, who had had no previous experience in compressed air. He "came off" at 6 A.M on Oct. 12th, after doing his first "shift," and within ten minutes he experienced most intense pain in both knees. He returned at once to the stage and I saw him a few minutes later, and he was then crying and groaning and apparently suffering very greatly. There was no swelling of the joints themselves, but there was a considerable amount of swelling in the muscles of the thighs. He was put into the medical lock and was re compressed up to 22 pounds, at which pressure the pain completely went. The pressure was reduced to normal in one and a half hours, and the pain at once returned. He was then given one and a half drachms of the fluid extract of ergot and was re-compressed to 22 pounds, two hours being occupied in "locking-out." The pain immediately returned and was so intense that I injected a quarter of a grain of sulphate of morphia hypodermically and had to repeat it in half an hour. This controlled the pain and the patient slept till 7 P.M., going home soon afterwards free from pain but hardly able to walk on account of the stiffness of his knee-joints.

CASE 6.—In this case a strong, healthy, spare man, aged 43 years, who had had no previous experience in compressed air, came out of the pressure at 6 P.M. on Oct. 10th after being in for four hours and about an hour later he was seized with most severe pain in the abdomen, the knees, the shoulder, and the elbows. The abdominal pains were most excrutiating and were accompanied by severe and intractable vomiting. He had two physicians at his own home, who on failing to relieve him advised him to come back to the works. He was brought back in a cab about 4.30 A.M. on Oct. 11th, and I saw him about 15 minutes later. He was in great agony, groaning and writhing with pain, and had to be lifted into the medical lock. During re-compression the abdominal pain increased and was so intense that he rolled on the floor of the lock, but when the gauge showed 24 pounds pressure the pain almost completely left him. The pressure was reduced to normal in 80 minutes, and when he came out of the lock he was quite free from abdominal pains and the only joint which was still somewhat painful was the left shoulder. In a short time he was able to proceed home When seen on Oct. 12th the patient said that he felt quite well except for stiffness in the left shoulder. He was advised not to resume work in the air pressure.

CASE 7.—This patient came out of the pressure at 7 P.M. on August 20th, having been in just over three hours, the pressure being about 28 pounds. Almost at once he was seized with the most intense pain in "the small of the back on each side of the spine." It rendered him helpless an made him feel sick. I saw him at 7.15 P.M. and he wa re-compressed, the pain having vanished by the time pressure of 15 pounds was reached. Decompression occupie 65 minutes and he was perfectly well on leaving the loc When seen on the morning of the next day he stated tha he felt perfectly well. There was no return of the pain.

CASE 8.—The patient was a strong healthy man, aged 2 years. He had had previous experience in compressed a and had worked at the Baker-street and Waterloo railwa tunnel works from the commencement. He came out the pressure at 6 A.M. on Oct. 16th after working for eigh hours and an hour later he felt very giddy and began t vomit very violently. There was no pain in the head or els where. He was quite unable to stand. This condition continued for two days and on the third day he began t improve. On Oct 22nd he returned to the works and I sa him for the first time. He was still somewhat giddy, so gave him one and a half drachms of the fluid extract of ergo and in an hour he said that his head was quite clear. At n time was there any loss of power anywhere, the helplessnes being due altogether to the giddiness. The vomiting wa severe and intractable.

CASE 9.—The patient, who was a healthy spare man, age 45 years, had been working in compressed air on and of for the last six years. He had never been affected b it in any way. He had been working at these work since the commencement of operations without having ha any trouble. He came out of the pressure at 10 P.M. o Oct. 13th, and 15 minutes later he had very severe pai in the lower lumbar region on the right side of the spin and pain of a less marked character on the left side. H also had abdominal pains of moderate intensity. He returne at once to the stage, his lower limbs by this time bein completely useless and sensation being much impaired a high up as the iliac crests. I was not sent for, some of his fellow workmen taking it upon themselves to re-compres him, and at a pressure of 18 pounds all trouble had disappeared and he could use his lower limbs as well as ever. But they reduced the pressure to normal in less than ten minutes and, as was to be expected, the pains in his back and the paresis of the lower limbs returned just as he reached home. On Oct. 14th the lumbar pain had disappeared, but power in his legs was still absent and he had also lost power over his bladder and rectum, a catheter and enemas being necessary. He was brought to the stage on Oct. 15th and I saw him when I obtained the information which I have given above. He was then quite unable to move his right leg and could only just move the left leg. Sensation was impaired, but not completely gone, as high as the iliac crests in front and behind. I had little hope of re-compression or of ergot being of use, the interval having been so long, but I thought it well to try them. He was given one drachm of ergot and was re-compressed up to 25 pounds, the pressure being reduced to normal in an hour and three-quarters. There was no improvement at the time, but an hour later he was able to lift both legs and he said that he did not feel so helpless. Having given him instructions regarding himself he wa taken home shortly afterwards. He improved daily and within a week was able to move about on his legs, but the use of a catheter was still necessary. I last saw him o Nov. 9th. He could then walk fairly well and sensation wa much improved, but it was not yet normal and a cathete was still necessary. In this case I believe recovery will b complete, though it may be several months before the ma is able to engage in his ordinary work. As a rule, in these cases the bladder is the last to recover, and the use of catheter may be necessary for a considerable time after the limbs have completely recovered.

The pathology of these cases of paraplegia in which ther is recovery can be reasonably explained by the pressure o air bubbles either in or outside the vessels upon the nervou centres in the cord. It is not probable that where recover takes place there has been rupture of the vessels and consequent hæmorrhrge, though in those cases in which there no recovery but in which the patients remain paraplegic would appear that this is what happens. In the foregoin case the pressure on the cord was certainly not due hæmorrhage because the man was at once completely cure by re-compression, and had the "locking-out" occupied a hour instead of less than ten minutes I am perfectly satisfie that there would have been no return of the paraplegia When I saw the man nearly 48 hours had elapsed, and h was probably then suffering not so much from the pressure as from the results of that pressure on the nervous structures of the cord, but from the fact that the second re-compression was of some benefit there was probably some free air even at that time.

INTERESTING SURGICAL CASES.

BY E. PAGET THURSTAN, M.D., B.A. CANTAB.

THE following is a report of 24 interesting surgical cases which occurred in the practice of Dr. E. J. A. Haynes and myself in Perth, Western Australia. The cases were operated upon by Dr. Haynes. We have thought that a brief account would be interesting to your European readers.

CASE 1. *Left ovarian cyst; ovariotomy.*—The patient was a woman, aged 21 years, who had been under treatment by a medical man for menorrhagia for some time. When Dr. Haynes was called in he found a large tumour which upon examination under chloroform proved to be a left ovarian cyst. The uterus was also enlarged to four inches. The peculiarity in this case was the severe menorrhagia—indeed, metrorrhagia—which pointed to uterine rather than to ovarian trouble. The patient was removed to a private hospital and Dr. Haynes performed ovariotomy in the usual way. The cyst was of the size of a man's head. The patient made an uninterrupted recovery notwithstanding that she was blanched by the severe hæmorrhage prior to coming under our care.

CASE 2. *Carcinoma of the liver.*—The patient was a man, aged 48 years. An exploratory incision was made, when a soft fluctuating tumour of about the size of an orange was found over the right lobe of the liver just below the point of the ninth rib. The liver was much enlarged, but was smooth and even. The patient fancied that the side had been swollen for 12 months before. Undoubtedly during the past three months it had been increasing in size and becoming painful. He had lived for years in South Australia, where hydatids are common, and he had also suffered from dysentery on the goldfields a few months before. There seemed to be no symptoms—e.g., wasting or jaundice—pointing to carcinoma. The diagnosis apparently lay between hydatids and liver abscess. A vertical incision was made three inches in length along the outer edge of the rectus and immediately on opening the peritoneum the case showed itself to be one of carcinoma of the liver. Subsequently there was no vomiting or abnormal temperature. After the third day the patient refused to keep his bed and on the fourth he left the hospital despite all our persuasions. Subsequently we learned that he recovered completely from the operation, but died a few months later in Fremantle from the malignant disease.

CASE 3. *Extra-uterine fœtation; laparotomy.*—In this case (of my partner, Dr. Haynes) extra-uterine fœtation was diagnosed, but the patient, a married woman, was so collapsed from constant vomiting, &c., that it was deemed advisable to postpone the operation, if possible, for a few days to endeavour to restore her strength. For a week she was kept in bed and was fed per rectum and she distinctly rallied. An incision four inches in length was made in the median line below the umbilicus. On opening the peritoneum a tumour of the size of a large orange was visible, but the uterus was bound down, the bowels and omentum were adherent in a mass over the tumour, and the relation of the several parts to one another was completely distorted. It being impossible to tie off the sac Kelly's suggestion was followed, and sharp-pointed scissors were thrust from the vagina into the sac and an indiarubber tube was inserted. The abdomen was then closed. For three days all went well, the discharge coming freely through the vagina. Then symptoms of heart failure set in, and, despite hypodermic injections of strychnine and rectal injections of brandy, the patient rapidly collapsed and died in eight hours from the onset of the symptoms.

CASE 4. *Perinephritic abscess; abdominal section.*—The patient was a married woman, aged 42 years. She had had no family. She had been in the public hospital, but had been discharged on the ground that there was nothing the matter with her. On examination there was found to be pain on pressure over the region of the ascending colon. On very deep pressure there was a feeling of a tense fluctuating tumour in the direction of a vertical line from the point of the tenth rib to the level of the umbilicus. The patient had been feverish for some weeks before coming under our care. An incision was made from the tip of the tenth rib downwards and forwards for four inches, the peritoneum was opened, the liver was pulled up, and the flexure of the colon was drawn inwards. A tense tumour with a dense white covering could be seen which could be traced up under the liver and down to the level of the umbilicus. There was considerable matting together of adjacent parts, which made it doubtful whether the mass was a localised psoas abscess or a perinephritic abscess. The parietal peritoneum was with much difficulty stitched down to the sac and the tumour was then aspirated. About one and a half pints of offensive bluish pus were evacuated. An incision was then made, a large rubber tube was inserted, and the space around was packed with iodoform gauze. The gauze and tube were brought through the middle of the abdominal wound and the rest of the wound was stitched up. When the gauze covering was removed it was found that there was a free discharge through the tube. The wound was thereafter daily dressed with iodoform gauze. From the sixth day onwards the cavity was syringed out with weak iodine solution and the tube was removed and cleansed daily. The abdominal stitches were removed on the twelfth day, the whole wound being soundly healed except the portion in which was the tube. The patient left the hospital in three weeks and was then well except for the fact that the wound was discharging. This case was done without fee on our part and the cost of her stay in hospital was obtained by charitable subscriptions. This fund being exhausted she had no opportunity of returning or of undergoing further operation which was indicated. She was seen from time to time for a few weeks, but the wound never completely closed. The cause of this abscess was very obscure. There was no spinal mischief or anything to indicate psoas abscess. The probability seems to be that it was perinephritic.

CASE 5. *Extra-uterine fœtation on the left side; laparotomy.*—The patient was a married woman. The cyst burst during the operation and its thick grumous contents were baled out with a silver-plated ladle. The broad ligament had to be dissected out. Dr. Haynes used the purse string stitch to close the peritoneum as recommended by Dr. O'Hara. The patient made an uninterrupted recovery and she left the hospital in a month, being then well.

CASE 6. *Extra-uterine fœtation on the left side; ani-laparotomy.*—The purse-string stitch was again used. The patient, a married woman, left the hospital in six weeks, after an uninterrupted recovery, and returned to the country. We subsequently heard that at the end of her journey a jollification was held in honour of her return. Coitus was probably indulged in. The medical man who attended her informed us that pelvic cellulitis supervened, to which she succumbed a few months later.

CASE 7. *Hydatids of the brain; trephining.*—The patient, a boy, aged 11 years, had been treated for years by various medical men for severe pains in the head, which were attributed to a fall on the head. For a year or two previously to his coming to Perth for advice he had had epileptiform convulsions. These convulsions were increasing in frequency and the mental condition was deteriorating rapidly. There was also motor paralysis on the right side for some days after each fit. Dr. Haynes diagnosed cerebral tumour of the left motor region. At the operation, as soon as the trephine circle (made over the region of the fissure of Rolando) was enlarged, the dura mater bulged into the wound. When it was incised nearly half a pint of hydatid fluid and daughter cysts escaped. Another sac was detected towards the right frontal eminence. A second trephine hole was cut in this spot. The bone was much thinned, being in one spot scarcely thicker than an eggshell. The dura mater bulged into the wound as before and four ounces of hydatid fluid and daughter cysts were removed. It was found that a probe would pass from one sac to the other, the pressure of the sac in the left hemisphere having apparently absorbed the falciform process of the dura mater. The sac was subdural, the surface of the dura mater being lined by the wall of the sac. The wall was thin and adherent and the cyst could not, therefore, be shelled out. Just prior to the operation the lad had had several fits followed by a semi-conscious condition from which he could be roused, but he invariably used one of three phrases: "Shut up," "Hurry up," and "Don't." For a few days after the operation the patient improved in intelligence and in motor power. Hydatids kept coming away in numbers and it was evident that the brain was extensively permeated with cysts. He died within three months of the operation. It is possible that had the diagnosis been made years previously the lad might have recovered health as he rallied well from the operation. It is noticeable that he knew when the fits were coming on and used to run to his mother crying, "Oh, mammy, save me!" His head appeared large for a boy of his age.

CASE 8. *Double pyosalpynx; abdominal section.*—The patient was a married woman. Both tubes were greatly distended with pus and had to be removed, and the left tube was slightly ruptured during its removal. The abdomen was thoroughly flushed out with normal saline solution at a temperature of 110° F. The peritoneum was closed by purse-stitch. No drain was left in. This probably was the turning point in the operation, as the abdominal wound broke down without causing any symptoms of peritonitis. The external wound had been soiled by the ruptured tube and possibly had been rather bruised during the strong retraction of the incision which was necessary for removal of such large tubes. A very considerable quantity of pus was discharged daily from the abdominal wound. Almost every lotion recommended in the text-books was tried without success in the endeavour to check this formation of pus, until Kelly's advice was followed and a hydrogen peroxide 5 per cent. solution and a 0·5 per cent. formalin solution were used, when rapid improvement took place. A collection of pus formed in Douglas's pouch, whether from the remains of infection in the stump of the tubes or from cellulitis it was hard to say. This was incised per vaginam and drained and was ultimately completely closed. The abdominal wound healed at the end of three weeks. The patient made a perfect recovery and has since been actively managing a business without needing to lie up for a day. The complication of the suppuration burrowing under the recti and spreading between the planes of the abdominal muscles is distinctly one to be dreaded, and the value of syringing with peroxide and formalin is well worth remembering.

CASE 9. *Tuberculous kidney; removal of the left kidney.*—Medical treatment having failed to give relief to the patient (a man) it was decided to remove the left kidney, which was subsequently found to be very large, weighing over three ounces, and to contain abscesses. At the operation the incision was made anteriorly, as recommended by Mr. Harrison Cripps. Though easier of performance than with the posterior incision there is the drawback that the peritoneal cavity is opened. When there is purulent infection in the kidney, as in this case, the peritoneum can hardly fail to become affected, and this occurred in the present instance. The patient ultimately succumbed to peritonitis, and Dr. Haynes attributes his want of success to his doing the operation intra-peritoneally instead of extra-peritoneally.

CASE 10. *Hydatids of the abdomen; abdominal section.*—In this case, that of a married woman, there was a well-defined tumour running across the right epigastrium, and apparently across the liver, as the area of liver dulness was much increased downwards Fluctuation could be made out. The patient was a young woman, only 23 years of age. The diagnosis was hydatids. An incision three inches long was made over the right rectus. After the fibres of the muscle had been separated it was found that the cavity of the peritoneum had become shut off and there was nothing below the muscle but the adventitious sac of the tumour. On aspiration a gallon of clean hydatid fluid was drawn off. After incision the sac was kept open by fixation forceps and the mother cyst, though very thin-walled, was safely removed without rupture. It proved to be an acephalous hydatid cyst. Further exploration showed that the cyst had pushed the liver down some three inches and quite a cavity existed between the wall of the cyst and the diaphragm. The cyst was sutured with catgut and the abdominal wall was closed by interrupted silkworm sutures. The patient made an uninterrupted recovery and left the hospital three weeks after the operation.

CASE 11. *Uterine fibroids; double oophorectomy.*—On opening the abdomen of this patient, a married woman, a very formidable array of complications was made manifest. There were three fibroids attached to the fundus; the posterior portion of the uterus was adherent to the pelvis; one of the fibroids had dissected up the right broad ligament, and both broad ligaments were twisted round the womb and flattened out. Apparently the only choice lay between hysterectomy and removal of the ovaries. The patient was in a very low condition from previous hæmorrhages and the larger operation seemed contra-indicated, so both ovaries were removed. Dr. Haynes found this somewhat difficult owing to the twisting of the ligaments. The patient made an uninterrupted recovery. Her symptoms have abated and at the time of writing she is perfectly well.

CASE 12. *Appendicitis; abdominal section.*—The patient was a married woman, aged 40 years. When I first saw her she had great pain over McBurney's point, with tenderness, rigors, and a temperature indicating suppuration. An incision three and a half inches long was made over the site of prominence in the direction of the fibres of the external oblique, as recommended by Greig Smith. The muscular tissues of this and the internal oblique were separated rather than cut and a free incision was made through the transversalis. Below this all the parts were so matted together that it was difficult to recognise the structures. At this stage the peritoneal cavity was inadvertently opened, but was easily stitched up again with a continuous catgut suture. The dissection was then continued down to the cæcum, the abscess was discovered, and fully an ounce of pus was evacuated. The appendix could be made out in the abscess cavity, but Dr. Haynes decided not to attempt its removal. An iodoform gauze drain was inserted, the several muscular layers were sutured with No. 3 silk and the skin with silkworm gut, two deep silkworm gut sutures being also inserted on each side of the drain. The fever, vomiting, and bowel obstruction were at once relieved. On the day after the operation the gauze was removed and a rubber tube was inserted. It was some time before the sinus finally closed, but the patient made an excellent recovery and remains in splendid health.

CASE 13. *Strangulation by Meckel's diverticulum; abdominal section.*—The patient (a man) had been treated on the goldfields for appendicitis, which his symptoms closely resembled, and it is doubtful whether so unusual a course of obstruction would have been diagnosed anywhere. A tumour could be felt on a level with the umbilicus and to the right of it. There were symptoms of obstruction, and the trouble having lasted some time an exploratory incision, with the option of performing any further operation indicated at the time, seemed to be the right course. A median incision was made and ultimately extended to four inches in length from below the umbilicus towards the symphysis pubis. A mass of the size of a man's fist, matted over with omentum, was drawn out of the wound. The mass consisted of the small bowel covered by omentum strongly adherent to the ascending colon. The ragged uneven omentum was dissected off the mass and ligatured with fine silk and removed. As the separation of the several parts of the mass continued it was found that two coils of the ileum, doubled on themselves, were adherent to the colon. With extreme care Dr. Haynes dissected these apart, having to tie several bleeding points, which was done with fine silk. Then for the first time the cause of all the trouble was discovered—Meckel's diverticulum had remained patent. It was as thick as a little finger, about two and a half inches long; it was club-shaped, and it sprang from the ileum six inches from its termination in the colon. It was firmly adherent to the two coils of ileum, from which it was dissected with extreme difficulty. There was sharp bleeding from the separated walls of the small bowel, which was stopped by passing a straw needle armed with fine silk beneath the bleeding point. The diverticulum was clamped close to the ileum, was cut off, and was secured by over-stitching, and was then inverted into the lumen of the gut, the peritoneal coats of which were brought together with fine silk, just as in removal of the appendix. The patient made a complete recovery.

CASE 14. *Ovarian cyst; ovariotomy.*—The patient, a married woman, had an ovarian tumour which was removed in the usual way. There was nothing in the operation deserving record. During the three days succeeding the operation everything progressed most favourably and she seemed to be out of danger. On the third night she was suddenly seized with acute pain in the chest; she gasped for breath, threw her hands about wildly, and begged the nurse to open the window as she was "smothering." She died before Dr. Haynes could get to her. No post-mortem examination was obtained, but there was little doubt that the cause of death was pulmonary embolism.

CASE 15. *Stone in the kidney; nephrotomy of the right side.*—The patient was a male. The case presented all the symptoms of stone in the kidney. After consultation an operation was determined on. Dr. Haynes made the usual lumbar incision and found the kidney quite easily. It was much enlarged and was bound down by old peri-nephritic adhesions. Great difficulty was experienced in separating the kidney and in bringing it out of the wound. After several exploratory punctures a soft friable mass was located towards the lower edge. This was incised and was thoroughly washed out. The kidney was returned and the external wound brought together with deep silkworm sutures. A drainage tube was left in for four days, being withdrawn gradually. The patient made a very good recovery and left the hospital in splendid health.

CASE 16. *Hystero-epilepsy; double oophorectomy.*—The patient, a married woman, had had two children, the last born eight years previously. She had had constant epileptiform seizures. During the periods these were exceptionally severe and frequent and they left her drowsy and helpless. Almost every medicine in the British Pharmacopœia had been tried without avail and insanity was feared. Bimanual examination disclosed both ovaries to be enlarged and painful, and pressure was sufficient to provoke a seizure. It was resolved to remove both ovaries and this was done. The left ovary proved to be markedly cystic and the right ovary was also cystic but in a less degree The patient made a good recovery with immediate improvement. She has since continued to improve and the fits have ceased.

CASE 17. *Large uterine fibroid; double oophorectomy.*—This patient, a married woman, was practically slowly bleeding to death when she came to us. On examination an enormous fibroid was made out. Abdominal section showed that the tumour was sessile and attached to the fundus uteri. Removal of the tumour was impossible, and both ovaries were therefore removed. The patient made an uninterrupted recovery, and when she was last heard of the hæmorrhage had ceased, the tumour had shrunk to half its former dimensions, and she was able to attend to her domestic duties instead of being a confirmed invalid.

CASE 18. *Advanced cancer of the cervix uteri; removal impossible; blood supply tied off.*—This patient, a married woman, was in a deplorable condition, being almost at death's door from exhaustion and hæmorrhage. She had travelled for 600 miles by land and sea from a distant goldfield to Perth for medical treatment. She entered the Public Hospital, but she was told that her case was too far advanced for operative treatment. With this view Dr. Haynes coincided, so far as removal was concerned, for the disease had spread from the cervix and had implicated the vault of the vagina The uterus generally was much enlarged. The patient was 50 years of age and the symptoms had first shown themselves six months previously. About this time Dr. Haynes noticed that the medical journals were giving accounts of Dr. Jannesco's treatment of inoperable cases by cutting off the blood-supply, and he determined to follow Dr. Jannesco's instructions in the case. It was represented to the family that such an operation would not cure the disease, but that it would, if successful, considerably prolong life and would greatly mitigate the present urgency of the symptoms Consent to the operation was eagerly given. A median incision was made four inches in length below the umbilicus. The bowels were held back and a good view of both broad ligaments was obtained. The ovarian arteries on both sides were tied off with No. 3 silk twist, as were both round ligaments with their arteries. Then a long right-angled needle was passed, first on one side and then on the other, close to the uterus, low down near the insertion into the vagina, and the arteries of the uterus were there tied. Despite the low condition of the patient uninterrupted recovery took place from the laparotomy. During her stay in hospital the ulcerated surface was curetted and treated every third day with an application of iodised phenol and glycerine tampons, and the vagina was daily syringed with permanganate solution. By the time she left the hæmorrhage and foul discharge had ceased and her health was greatly improved. She was able to travel back by rail and to resume her business and to continue it for six months until she was able to dispose of the goodwill. The disease, of course, has spread, but it is now nearly 12 months since the operation and the patient is still able to get about. Dr. Haynes considers this operation as a striking proof of the wisdom of Dr Jannesco's mode of procedure, as under no other known treatment would the poor woman have been alive to-day.

CASE 19 *Cystic ovary; left oophorectomy*—The prominent symptoms in this case, in which the patient was a married woman, were extreme irritability of the bladder and pain in the left side and the left leg which became intolerable for a week during each menstrual period and which was accompanied by constant vomiting. Laparotomy was performed The left ovary, which was found to be as big as a mandarin orange, was removed. Recovery was uninterrupted and complete relief from all the symptoms was secured.

CASE 20. *Internal strangulation in the ileo cæcal fossa; laparotomy.*—The patient, a boy, three and a half years of age, had been under treatment at the Public Hospital for nine months for worms. When brought to Dr. Haynes he had a tumour of the size and shape of an ounce medicine bottle about an inch above McBurney's point. The chief symptoms were pains in the abdomen accompanied by vomiting and terminating in convulsive seizures. Operation was determined upon, but the child was in such a low condition that it was deemed advisable to feed him per rectum for three days first. An incision two inches in length was made in the median line. Nothing was found wrong with the cæcum or with the appendix. A loop of ileum four inches in length had passed through an aperture into the ileo-cæcal fossa and passed upwards under the colon towards the left kidney. Very great difficulty was experienced in withdrawing the bowel, which was much congested. In the coats of the ileum at the bend was a lump of about half the size of a walnut, probably inflammatory, thickest at the spot where the bowel was first nipped. An uninterrupted recovery and a perfect cure of the symptoms ensued. According to Maylard and Treves this is a very rare form of strangulation and possibly is the first recorded in the living subject. There was no mistake about the case, however, as Dr. Haynes took great pains to verify the relation of the parts. Three lengths of ileum appeared in view at first. It was found that the lowest one was the part normally joining the cæcum, the two upper coils being the strangulated parts. The ileo-cæcal fold covering the fossa was well defined, and on the finger being inserted subsequently the direction of the sac under the colon could distinctly be made out.

CASE 21. *Adhesions subsequently to former ovariotomy; laparotomy and separation of the adhesions.*—This patient, a married woman, aged 32 years, had had her right ovary removed in Melbourne 10 years previously. The recovery had been very slow and a sinus remained for 18 months. She had ever since been a martyr to pain and the greatest difficulty had always been experienced in obtaining relief of the bowels; indeed, at times the trouble amounted to obstruction. On opening the abdomen it was difficult to define the peritoneal cavity at all. The small intestine was adherent to the old abdominal incision, to the uterus (which was retroverted and firmly bound down), and also to the large bowel. The omentum could not be defined. How a human being could have lived with her intestines in such a tangle was a mystery. Great difficulty was experienced in separating the adhesions and tying the bleeding points. The left ovary proved healthy, and it was therefore not interfered with. The uterus was freed and replaced in position. Recovery was uninterrupted Two months later, at a subsequent operation, Dr. Haynes removed several large piles with the benzine cautery. Since then there has been no trouble with the bowels and the patient enjoys as good health as she did prior to her marriage twelve years before.

CASE 22. *Traumatic ovaritis on the left side; oophorectomy.*—This patient, a married woman, aged 38 years, had received a kick from a horse nine months before. She was drifting into permanent invalidism through abdominal pain and irritability of the bladder, the symptoms being very intense at the menstrual epochs. The ovary proved to be large and cystic. A cicatrix ran transversely across the outer third of it, the tube was thickened, and the broad ligament showed signs of old inflammatory trouble. The left ovarian vein was enlarged and varicose, this condition being probably caused by the kick. The patient made an uneventful recovery.

CASE 23. *Hydatid of the liver: abdominal section.*—This case, in which the patient was a married woman, has been already reported.[1] Dr Haynes had previously removed five large hydatids from the abdomen. In the former account of the case it was mentioned that the patient was three months pregnant at the time of operation. Two months later she returned, complaining of trouble in the vagina Dr. Haynes then removed per vaginam a cyst containing six ounces of hydatid fluid and daughter cysts. The pregnancy continued to seven and a half months, when labour set in and she was delivered of a living child, but the infant died in a few days. On the present occasion the patient presented a large tumour reaching close up to the ribs above and extending from the right nipple-line to two inches beyond the median line. A vertical incision three and a half inches long was made over the prominent part of the tumour. The sac wall was stitched to the peritoneum with chromic gut. The tumour was aspirated and about two quarts of fluid were drawn off. The flow through the needle ended very suddenly, but as no more fluid could be persuaded to pass Dr. Haynes incised the tumour and the wound was kept open by Spencer Wells forceps. The theory was that the mother cyst had slipped off the point of the needle at the moment that the flow ceased, and the correctness of this was proved eight days after the operation when in the course of the usual syringing the mother cyst presented in the wound and was successfully removed. The adventitious sac was stitched to the abdominal incision by silk twist, the needle taking up the peritoneum and passing through the whole thickness of the abdominal wall. The remainder of the incision was closed with silkworm gut. Following Mr. Treves's advice Dr. Haynes inserted a very large rubber drain and dressed the wound with iodoform gauze and wood-wool. Iodine solution was used for the daily syringing. The large tube was left in for 10 days, being gradually shortened, then a smaller tube was inserted, and finally a smaller one still until the wound closed. This cyst was acephalous and had no daughter cysts, and this was the case also with two others, the remaining four having subsidiary cysts The paralysis of the left arm from which the patient suffered after the first operation had entirely disappeared.

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[1] THE LANCET, April 29th, 1899, p 1141.

CASE 24 *Traumatic varicose aneurysm of the thigh; ligature of the vein and the artery.*—The patient, a young man, aged 25 years, was cutting a side of bacon with a long pointed butcher's knife when it slipped and entered his thigh an inch and a half below Poupart's ligament and half an inch to the outer side of the course of the femoral artery. He was under treatment on the goldfields and five months had elapsed from the receipt of the injury, three of which he spent in bed, before he consulted Dr. Haynes. A tumour was visible just below the fold of the groin three and a half inches in its long diameter, with its summit elevated half an inch. There were visible pulsation and a distinct thrill in the tumour. A loud, booming bruit was heard over the elevated area, downwards for two inches along the course of the femoral and profunda arteries and upwards along the external iliac artery. Pressure on this artery caused cessation of thrill and bruit below. Signorini's tourniquet was applied over a Barnes's uterine-dilating bag filled with water and kept on for 18 hours. Thrill, bruit, and pulsation all disappeared during treatment but re-appeared immediately it was left off. The risks in ligaturing the iliac and common femorals being so great Dr. Haynes preferred to cut down over the seat of injury with a view to finding and tying the injured vessels and turning out the clots if necessary. A three-inch incision was made over the course of the femoral artery, starting just below Poupart's ligament. As soon as the sheath of that vessel was defined the tumour was found to run along its outer side and apparently to pass underneath it lower down. Accordingly the incision was prolonged and the dissection carried further down The sac of the aneurysm was defined close to the outer side of the profunda. The external circumflex seemed to be imbedded in the infiltrated tissue of the sac, but the integrity of the coats of the profunda and superficial femoral was clear. The thrill could be felt under and to the outer side of these vessels. The tissues were much matted together and the branches of the anterior crural nerve were defined with difficulty. The external circumflex was ligatured (after the sartorius had been dissected free and drawn outwards) about an inch from the profunda The thrill and pulsation at once ceased. Just above the artery was a dilated vein of about the size of a No. 6 catheter, which seemed to come from the aneurysmal sac. In endeavouring to ligature this the sac, being very thin, burst at that part. For the moment the hæmorrhage was rather alarming, but it was stopped by sponge-pressure and the vein was successfully tied. This vein was apparently one of the venæ comites, though separated by half an inch from the artery. The incision was closed by silkworm gut, a few strands of silk being inserted as a drain. The dressing was iodoform gauze and sublimate wool The whole limb was bandaged and an outside splint was applied from the axilla to the ankle. The drain was removed at the end of a week. The patient made an excellent recovery. He was ordered to wear an elastic stocking as a support.

Perth, West Australia.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

REMARKS ON A NEW INTESTINAL ASTRINGENT.

By J. PORTER PARKINSON, M.D., M.R.C.P. LOND.,

PHYSICIAN TO THE LONDON TEMPERANCE HOSPITAL, AND PHYSICIAN TO OUT-PATIENTS AT THE NORTH-EASTERN HOSPITAL FOR CHILDREN.

IT is well known that tannin, though an energetic astringent when used locally, nevertheless exercises its effects chiefly upon the upper parts of the gastro-intestinal tract, as the mouth and stomach, coagulating the albuminous fluids there and also precipitating the pepsin. On this account it interferes with digestion. It is also rapidly absorbed from these mucous surfaces as gallic acid and then is useless as an astringent; hence, except when it is given in huge doses, it does not reach the lower part of the intestine and so can exert no astringent action there.

Many preparations have been placed upon the market, such as tannigen, tannalbin, and tannoform, all of which are of more value than tannin as intestinal astringents, but all are to a large extent split up in the stomach. In 1899 Dr. Sztankay prepared a derivative of tannin in which it is so combined with albumin and keratin that a minimum of disintegration occurs in the stomach and 72 per cent. of the amount given passes into the intestines, which is nearly twice the amount of any other astringent unchanged in the stomach. To this compound he gave the name of "Honthin." This substance, as now prepared by Messrs. Hell and Co. of Troppau, is a brownish powder, insoluble in water but partly soluble in saline solutions, and is without taste or smell. Its action is a precipitation of albumin and mucus such as are found upon catarrhally inflamed mucous membranes, thus protecting these membranes from further irritation and preventing the penetration of organisms or toxins. It also contracts the superficial vessels and diminishes the secretion of fluid. It has been used by Dr. Kölbl of Vienna with striking results in cases of acute, subacute, and chronic diarrhœa both in children and adults. The average dose for an adult is 20 grains three times a day. It is best given as a powder placed upon the tongue, followed by a drink of milk or water, and as it is tasteless children take it well; it is also absolutely non-toxic and so there is no danger of giving an overdose.

My experience of this drug extends over the past six months, during which time I have repeatedly used it in hospital and private cases with good results. I have used it most frequently in the diarrhœa of children. In these the beneficial effect is seen in the course of a day or two in diminution of the number and increase of solidity of the stools with lessening of the amount of mucus they contain. I have generally commenced treatment by the administration of a single dose of castor oil and have then prescribed doses of between five and ten grains of honthin three times a day for children between the ages of two years and ten years. It is most generally useful in cases of diarrhœa which continue in spite of careful dieting and the administration of the usual remedies; it has but little effect in reducing the offensiveness of such motions though it diminishes their frequency, and it does not appear to be so generally useful in the choleraic form of diarrhœa in which very large quantities of fluid are discharged. In cases of chronic colitis in adults I have used it with marked benefit and it appears to be worthy of trial in cases of acute or chronic dysentery.

I have thought it worth while giving a short account of this drug as it appears to be little known in England, for there was considerable difficulty and delay in procuring it and many of the best known pharmaceutical chemists appeared not even to have heard its name.

Wimpole-street, W.

A CASE OF CHRONIC DILATATION OF THE STOMACH ENDING IN DEATH FROM GENERAL TETANIC CONVULSIONS.

By D. D'ESTERRE, M.D., B.S. DURH., M.R.C.S. ENG., L.R.C.P. LOND.

THE patient was a man, aged 30 years, who for three years past had suffered from symptoms of dyspepsia occasionally accompanied with vomiting. At one time he was a heavy drinker and a large eater, but he became very careful and abstemious in the matter of food and drink, which even in small quantities caused him pain and uneasiness. There was no palpable tumour within the abdomen. His most troublesome complaint was the vomiting of enormous quantities of coffee-coloured fluid about twice a week. His wife stated that the quantity was sometimes nearly a gallon. He also suffered much from eructation of gas. The physical signs of gastrectasia were present. He was instructed in the use of the stomach-tube, in which he became quite expert, and often expressed himself as feeling much better after its use. However, after a slight improvement he was suddenly attacked with extremely painful convulsions of a tetanic character affecting chiefly the flexor muscles of the arms and hands and in a lesser degree those of the abdomen, legs, head, and neck. Opisthotonos was at one time marked and he also showed the risus sardonicus. This attack was overcome with large doses of chloral hydrate, bromide of potassium, and tincture of opium, and subsequently he was given sulphate of soda and magnesium as well as enemata to counteract the constipation. He improved sufficiently to go about again and resume his work, but he succumbed to a similar seizure a few months later.

Regarding the pathology of these convulsions, which are distinctly rare, it may be summed up as uncertain, but resting at present on three theories: (1) Kussmaul's idea of the sudden decrease of water in the tissues of a subject already very dry, as occurs in cases of cholera; (2) Gerhardt's suggestion that the tetany is due to the absorption of products of decomposition; and (3) Ewald's suggestion that they are a manifestation of reflex action analogous to convulsions in children with worms. If the first theory be correct it would seem advisable to administer large rectal injections or employ transfusion, but similar attacks follow other diseases which cannot be traced to such a cause as dehydration of the tissues. If the second theory be correct tetany would not be expected to occur in cases where the stomach-tube was regularly and thoroughly used as in the case above narrated. The third-mentioned theory of the reflex nature of tetany in these instances can hardly be disproved and gains strength from the well-known cases of increased nervous irritability, mechanical and electrical, which accompanies auto-intoxication.

Gipsy-hill, S.E.

THE PYREXIA OF SYPHILIS.

By P. W. BASSETT-SMITH,
STAFF-SURGEON, R.N.

AT the meeting of the Clinical Society of London held on Nov. 23rd[1] Mr. Campbell Williams brought forward a case of fever which he called "intermittent essential fever" of syphilis, in contra-distinction to the fever frequently found in the early secondary period, and it was then pointed out that this condition was far from uncommon, though there is very little reference to the peculiar characters in the usual text-books. In the article by Mr. Jonathan Hutchinson on the disease, as found in Allbutt's "System of Medicine," it is not mentioned. The diagnosis of these cases is often obscure, as the fever is frequently unattended by any marked specific characters, the patient being quite free from rash, gummata, or other usual manifestations, and the intermittency of the fever often leads to the diagnosis of malaria or tubercle.

In a case lately under treatment in the Royal Naval Hospital, Haslar, the course of the disease was interesting. A man, aged 25 years, had been invalided from the West Indies for fever of an irregular type; he was admitted into Haslar Hospital in January, 1900, and was under treatment for post-influenzal pyrexia, being then very anæmic. He returned to duty for six months, but he was again admitted in August for malaria. Examination of his blood showed no evidence of this, but it was noticed that there was a relatively great increase of lymphocytes, as distinct from the polymorpho-nuclear leucocytes (neutrophiles). On a blood count being made there was seen to be a reduction of the red cells (2,800,000) without nucleated forms, but only a slight total increase of white cells (13,600). This, with the marked anæmia, tendency to epistaxis, and slight enlargement of the glands in the groin, led to the diagnosis of early lymphatic leukæmia. His temperature was remarkable, varying as much as 7° F. at times between night and morning, but without rigors and with scarcely any constitutional symptoms. The patient was treated with arsenic, iron, digitalis, &c., for ten weeks, and for a short time with mercury with chalk. Regular examinations of the blood showed the same characters throughout with an extraordinary abundance of blood-plates, this being beautifully demonstrated by using Louis Jenner's stain. As there was an old history of syphilis he was later put on iodide of potassium and bark, with the result that in three days the temperature fell to normal and never again rose.

This question of treatment is interesting as agreeing with the experience of Dr. T. D. Savill that the iodides gave more favourable results than mercury, for though early in the course of the disease this patient was taking the latter as an anti-specific remedy the temperature did not fall to normal. Cabot[2] states that in certain stages of syphilis there are a decrease in the number of red cells and an increase of lymphocytes as was found in this man, but he does not mention the increase in the blood-plates. The peculiar intermittent fever with such intense oscillations is noticed by Dr. Burney Yeo, and a similar case is reported by Dr Sidney Phillips,[3] in which the pyrexia lasted for months, resembling tertian ague, but yielded at once to iodide of potassium. It is probable that many cases of indefinite fever so common in the services are of this character.

Haslar.

HERNIA STRANGULATED IN THE INGUINAL CANAL; RADICAL CURE.

By J. B. PIKE, M.R.C.S. ENG., L.R.C.P. EDIN.

THE patient, who was a foreman railway porter, aged 35 years, for about a year had noticed a lump in his right groin. On Oct. 16th, 1900, this became larger after exertion, and vomiting and pain very shortly supervened. The hernia was partially reduced the same evening, but some slight fulness was still left in the inguinal region. On seeing the patient the next morning I found vomiting still persisting and a distinct fulness remaining, although the external ring was quite free. On inserting the finger deeply through the ring a small tumour was felt, occupying the canal. The patient was at once removed to the Loughborough Hospital and herniotomy was performed as soon as possible. On opening the sac some very congested bowel was found, which was retained by a tight constriction at the neck of the sac. The stricture having been divided and the intestine returned the sac was found to be much thickened and adherent to the spermatic cord, from which it was only separated with considerable difficulty. This having been done the neck of the sac was transfixed and ligatured with catgut and the sac cut off. A deep silk suture was then passed through the neck of the sac and the edges of the wound, the remainder being brought together with silkworm gut. The after progress of the case was uneventful. There is now (six weeks after the operation) a very slight tendency to bulging in the inguinal region on coughing. As a precaution a light truss is being worn. Primary union was made more probable by the incision lying well above the scrotal tissue.

Loughborough.

A CASE OF POISONING WITH A SMALL DOSE OF CHLORALOSE.

By EDWARD H. DOUTY, M.D. CANTAB.

Professor Bradbury's remarks about chloralose in his Croonian Lectures for 1899 lead me to relate the following case.

I was called at about 12 midnight to a young woman who was supposed to be in a fit. She had gone to bed at 11 P.M. She had been in the habit of indulging in chloral and also in cocaine at home, but she had taken very little while at Davos. A physician in London had given her cachets of chloralose, eight grains in each, to take for sleeplessness. She took one for the first time that night. I found her in great distress, unable to move her legs or her arms, with a feeling of numbness in them, the numbness being more marked on the right side. She could not move. Her mind was clear but her speech was slow. Her pulse was good. She recovered in five or six hours. A week afterwards she took another cachet and I was called at about 1 A.M. by her friend who slept in her room because she would not answer when spoken to and again was thought to be in a fit. She was in a cramped-up posture of emprosthotonos, her thighs were tightly flexed on her abdomen, and her chin was forced down on her chest. Respiration was almost inappreciable and very slow and she was cyanosed. Her pulse was 80 and fairly good. Her extremities were not cold. She was quite unconscious and I could not rouse her. I had difficulty in overcoming the contraction of her limbs and neck, but having done so I performed artificial respiration for half an hour, whilst others applied very hot water to her chest and head, and as soon as she could swallow we forced down some brandy, and her breathing improved, but was very slow. In an hour it was possible to get a grunt in reply to questions. She remained in that state for six hours and was torpid all the next day, then seemed quite herself again. The small extent to which the heart seemed affected on each occasion quite bore out Professor Bradbury's observations in his experiments.

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[1] THE LANCET, Dec. 1st, 1900, p. 1577.

[2] Clinical Examination of the Blood, pp. 263, 271.

[3] Osler's Medicine, p. 240.

Davos Platz.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

A CASE OF PERFORATED GASTRIC ULCER.

(Under the care of Mr. T. H. KELLOCK.)

IN the lectures on the Surgery of the Stomach delivered in March last by Professor Mayo Robson there are given statistics of 429 cases of perforated gastric ulcer treated by operation. Of these 193 patients recovered and 236 died.[1] This is a mortality of 55 per cent. The most important element in prognosis in cases of perforation treated by laparotomy is the length of time which has elapsed before the operation is performed. In the lectures already quoted it is shown that of cases under 12 hours the death-rate was 28 per cent.; from 12 to 24 hours it was 63 per cent.; and from 24 to 36 hours it was 87 per cent. For the notes of the case we are indebted to Mr. R. Ainsworth, house surgeon, and Mr. C. W. Rowntree, dresser.

A single woman, 22 years of age, a domestic servant, was admitted into the Middlesex Hospital at 1 A.M. on Sept. 20th, 1900, suffering from vomiting and pain in the back, shoulders, and abdomen. She stated that for five years she had suffered severe pain after taking food; the pain came on immediately after a meal and was most acute in the epigastrium. She had occasionally vomited about a quarter of an hour after a meal and the pain was then much relieved; on one or two occasions there had been a little blood in the vomited material. She had also suffered from amenorrhœa and dysmenorrhœa and had been under treatment on and off for the whole period of five years. At 9 P.M. on the previous evening she had a supper of hashed meat and half an hour later was seized with sudden severe pain in the epigastric region which was worse than she had ever experienced. She was given some brandy which she at once vomited, and shortly afterwards she vomited again, but there was no blood in the vomited matter on either occasion. As the pain became worse and as she was obviously very ill Dr. Percy Edmunds was summoned. He saw her three-quarters of an hour after the onset of acute symptoms and found her suffering then from pain almost entirely confined to the neighbourhood of the scapulæ and clavicles, and he also noted that her face was markedly of the "abdominal" type He diagnosed a perforated gastric ulcer, administered two grains of opium, and advised her immediate removal to the hospital.

On admission the patient appeared to be seriously ill. Her face was very pale and drawn and she complained of pain in the back between the shoulders and in the epigastric region, but it did not seem to be very severe; there was no retching or hiccough. The pupils were not contracted. The pulse was 120 per minute, of very poor volume, and occasionally dicrotic, the respirations were increased in frequency, short and grunting in character, and the temperature was 100° F. The abdomen was somewhat distended and moved very little with respiration; there was considerable muscular rigidity on palpation, especially in the epigastrium and below the right costal margin, but very little tenderness. There was no dulness in the flanks and no fluid thrill was to be obtained; a tympanitic stomach note could be obtained on percussion over the left lower ribs nearly to the level of the umbilicus; the liver dulness was present down to the right costal margin.

Mr. Kellock saw the patient at 2 A.M. and decided on immediate operation. The abdomen was opened by an incision in the middle line reaching from the xiphisternum to the umbilicus. On opening the peritoneum a fair quantity of thin turbid whitish fluid escaped. On drawing up the left lobe of the liver the stomach was seen to be somewhat distended, its anterior surface was covered with lymph, and the vessels were intensely congested. The lesser curvature was fixed by adhesions so that it could not be drawn up. On examination of the upper border a perforation of about the size of a sixpence was found near the cardiac end, through which gas and fluid came when the stomach was manipulated. The edges of the perforation and the wall of the stomach in its neighbourhood were very hard and indurated. Owing to the density of the adhesions the closing of the opening had to be done without bringing it up to the surface; the edges were first brought together by fine silk interrupted sutures and a row of Lembert's sutures was then inserted, turning in the peritoneal and muscular coats of the stomach all round the perforation. The peritoneal cavity was cleansed by means of sponges, very little extravasation of the contents of the stomach being found except at the upper part in the immediate neighbourhood of the stomach and liver. A rubber drainage-tube was inserted leading down almost to the site of the perforation, the peritoneum was closed round it by a continuous silk suture, the skin and muscles were united by silkworm gut and horsehair sutures, and a dressing of cyanide gauze and sal-alembroth wool was applied.

The patient bore the operation very well; on its completion she was given a quarter of a grain of morphia hypodermically, after which she was very quiet for some hours and free from pain; she vomited slightly once, bringing up some greenish fluid. Eight hours after the operation the pulse had fallen to 96 per minute, the facial expression was improved, and the abdomen moved with respiration slightly more freely and was free from tenderness. A little blood-stained discharge came from the drainage-tube at first; on the second day a drain of iodoform gauze was substituted for the tube, and this was again changed on the third day for a strip of oiled silk which was continued for three days and then omitted as the discharge had practically ceased. For four days the patient was fed entirely by the rectum, plain water being given at first and subsequently peptonised milk and beef-tea. This was discontinued gradually and feeding by the mouth with milk-and-water was commenced. She suffered very little pain in the abdomen after the second day when it was relieved by a hypodermic injection of morphia. By Oct. 2nd she was having all her nourishment by the mouth; she was then given palatinoids of carbonate of iron and a little liquid extract of cascara sagrada. The stitches were removed on the twelfth day, the wound being soundly healed except where the drainage-tube had been. The temperature rose to 101° on the first day but subsequently was practically normal. The patient was sent to a convalescent home on Oct. 18th, the wound being then quite healed, her anæmia had much improved and she was taking a fair amount of solid food without pain or discomfort.

Remarks by MR. KELLOCK.—Owing to the early diagnosis that had been made in this case we were fortunately able to operate within five hours of the onset of the acute symptoms; the opium which had been given previously to the patient's admission to the hospital had, by relieving the pain, masked one of the important symptoms, but it probably helped very considerably in the successful issue by lessening the movements of the stomach and intestines and so prevented any great extravasation of the contents of the stomach. The history of the case, the rapid feeble pulse, and the rigid, almost motionless abdominal wall, combined with the marked abdominal facial expression, seemed to be sufficient evidence of what had occurred. The strong adhesions about the lesser curvature of the stomach rendered the suturing of the perforation difficult, as it had to be performed at some depth owing to the impossibility of bringing the organ to the surface without separating them; the density of these adhesions showed them to be of some standing, and it is quite possible that it was they that had given way at the time of the acute onset of symptoms and allowed the contents of the stomach to escape through a previously existing perforation in its wall. The limited area of peritoneum soiled by the contents of the stomach rendered the cleansing of the cavity easy and capable of being carried out with very little disturbance of the intestines and other viscera.

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[1] THE LANCET, March 17th, 1900, p. 748.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

A CASE OF CHONDRO-CARCINOMA OF THE RIGHT TESTIS, FOR WHICH CASTRATION WAS PERFORMED.

(Under the care of Mr. T. VINCENT JACKSON.)

MANY tumours of the testis are found to contain portions of cartilage embedded in their substance, and the only other organ which is similarly affected with equal frequency is the parotid gland. Another pathological bond of connexion between these two organs is the fact that the inflammatory process in mumps is liable to involve both of them. Malignant growths may arise in healthy tissues or they may involve, as in the case recorded below, non-malignant tumours; and in such cases the malignant growth has probably attacked the pre-existing tumour because of its low power of resistance.

A man, aged 40 years, was sent to Mr. Vincent Jackson by Dr. Sydney Partridge and was admitted into the Wolverhampton and Staffordshire General Hospital on Sept. 9th, 1900, on account of a sarcocele of the right testicle. The patient was married and his circumstances were ample for his position in life. He had not been troubled with any particular care or mental anxiety, his health and appetite were good, and he had maintained his ordinary habit of body. There was a clean sheet as regards any hereditary tendency to malignant disease, and none of the present generation of his relatives had been victimised by this disease in any of its forms. The previous history was very incomplete, but the patient was decided on the fact that he had never suffered from syphilis or traumatism. His personal knowledge of the enlargement of the testicle dated back only seven or eight months; probably this is to be accounted for by the absence, or almost the entire absence, of any subjective symptoms. The growth, however, continued, and as the weight appeared to cause lumbar pain he sought advice.

On examination the testicle, supported by the left hand, appeared to the eye to be massive in size and in weight unusually heavy, and all over it was non-resistant, with no suspicion of fluid. There were no isolated masses of cartilage; the tumour was non-transparent; here and there subcutaneously a distended vein was visible. No glandular enlargement was detected either by superficial or deep pressure in the right inguinal region. The condition of the lumbar lymphatic glands was undetermined. The liver was not enlarged. No diagnosis was made as between sarcoma and carcinoma. The report as to the urine was favourable.

On Sept 12th, under an anæsthetic, the right testicle was removed, care being taken to detach with it as much of the cord as could be reached. The organ weighed over a pound and a portion was sent to the Clinical Research Association for examination and a report. On the 21st the scrotal wound had quite healed, and on the 26th the patient left his bed. On the 28th an unexpected incident occurred, for in the morning hæmoptysis supervened and every effort was made to determine the cause. All physical means, such as percussion and the use of the stethoscope and of the thermometer, were resorted to, but with a negative result, no evidence of tuberculous deposit being detected. Several specimens of sputum were examined and no tubercle bacilli were found. There was no disease or enlargement of the aorta. On Oct. 5th there was obtained from the Jenner Institute of Preventive Medicine, a 10 per cent. dilution of Koch's original tuberculin. An injection of 0 01 cubic centimetre diluted with 1 in 100 carbolic acid was given. On the 8th 0 05 cubic centimetre diluted as before with carbolic acid was injected. In each case, five hours after the injection, a rise of temperature to 99 2° F. took place, the general symptoms being *nil*. Dr E. O. Morland, house physician, undertook the above test assisted by Mr. S. Southall, house surgeon. The presence of tubercle having been negatived by every diagnostic test used, it was felt that the cause of the hæmorrhage might be a cancerous deposit of the lungs. On the 12th the patient wished to be discharged. The expectoration now consisted of a little mucus, containing occasionally a little blood. On Nov. 14th Mr. Jackson received an announcement from the patient's wife that her husband had died on Nov. 3rd from a severe and uncontrollable attack of lung-bleeding. Later, Mr. Jackson was instructed that the patient had been buried without any post-mortem examination of the lung [illegible]

Microscopical examination —Mr. J. H. Targett's report on the specimen sent to the Clinical Research Association is as follows: "This is a composite tumour of the testis, congenital in origin. There are nodules of cartilage, bands of unstriped muscle, and tubulæ lined with columnar ciliated epithelium. Some of the cysts are filled with laminated epithelium which is undergoing a keratoid change. But the strangest thing in the section is an apparent infection with recent tubercle. Groups of giant cells are seen resembling those of tubercle, though they may be of the nature of phagocytes, although it is certain that tumours of all kinds may become infected with tubercle. The tumour is malignant in its present condition, though starting probably in some congenital inclusion. The term 'chondro-carcinoma' is now sometimes applied to this variety of growth. In the absence of other evidence I should not like to speak definitely about the tuberculous infection. It is a very interesting specimen "

Remarks by Mr. JACKSON.—On carefully considering the report of the microscopical examination of the tumour it seems to be very difficult to classify it accurately, for it contains a mixture of dissimilar elements which renders it scientifically distinct from an ordinary example of cancer.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Chronic Mastitis and its Relation to Tumour Formation.—Broncho-œsophageal Fistula.—Hæmorrhagic Pancreatitis with Fat Necrosis.

A MEETING of this society was held on Dec. 18th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Mr. F. T. PAUL (Liverpool) read a paper on Chronic Mastitis and its Relation to Tumour Formation (illustrated by a lantern demonstration and *microscopic specimens*). He commenced by remarking that the tendency of chronic inflammation of the mammary gland to end in tumour formation was a fact by which he was more impressed every year. It was well known that cancerous breasts almost constantly showed microscopical changes indicating a preceding chronic mastitis, and that breasts removed for simple chronic mastitis frequently presented appearances suggestive of the commencement of cancer. The same was also true of innocent tumours, even of those occurring early in life. The varieties of chronic mastitis were discussed. In the tuberculous form of mastitis actinomycotic-like bodies were described as present in five or six cases. In the simple form of mastitis it was considered that there was no true pathological distinction between cases occurring in early life and those met with during the period when the breast underwent involution, as all the proliferative and cystic changes characteristic of the later form were sometimes present in the early kind. A case of marked bilateral chronic mastitis occurring in a girl, aged 18 years, and showing the cystic, intracystic, peri-acinous, and epithelial changes in an excessive degree was described. The histology of "involution mastitis" showed, said Mr. Paul, that it commenced as a chronic interstitial inflammation, passing into a cirrhotic change accompanied by cystic alterations in the acini, and generally by a considerable increase in the gland elements. At the stage of involution in some cases resolution took place; in others the irritation continued to be evidenced, especially in the peri-acinous connective tissue, which after prolonged stimulation might end in the growth of a fibro-adenoma. In other examples, or at other parts of the same organ, the epithelial structures responded chiefly, and intra-cystic papilloma or carcinoma might be originated. Attention was called to the following points: the association of chronic mastitis with adenoma in early life and also with the cystic and other varieties met with at a later period; to its almost constant presence in conjunction with mammary cancer; to the marked bilateral mastitis which precedes bilateral cancer; and especially to the highly suggestive appearances seen under the microscope in specimens of chronic mastitis. Taking these facts in conjunction with clinical experience it seemed certain that chronic inflammation of the breast, if not the actual cause, was at any rate the frequent predisposing cause of tumour change in the mamma and in Mr. Paul's opinion rendered excision desirable in all marked or inveterate cases.—The PRESIDENT said that he did not gather whether Mr. Paul regarded chronic mastitis as a precursor of all cases of cancer or whether that was only one mode in which it arose. The subject was interesting in relation to the possible parasitic origin of cancer. On the one hand Mr. Paul's view rather upset this hypothesis, but on the other chronic mastitis might be only a necessary condition to the parasitic growth.—Mr. RAYMOND JOHNSON remarked that he had examined a large amount of material with the object of determining if the form of mastitis met with in carcinomatous breasts was in any way to be distinguished from that met with under other circumstances. He had gradually come to the conclusion that the proliferative epithelial changes found in such cases, although very marked, were not distinctive. As to the close relation between carcinoma and chronic mastitis he had no doubt, but it seemed impossible to trace the one condition without interruption into the other, and it was probable that some other cause must be superadded to the mastitis to cause cancer. Mr. Johnson did not believe that the ordinary fibro-adenoma of the breast of young women was the result of chronic inflammation. He also remarked that in his experience there was no evidence that adenoma of the breast tended to undergo a transformation into carcinoma.—Mr. D'ARCY POWER congratulated Mr. Paul on his specimens. On looking at them carefully he could not fail to notice an essential difference between the parts which that gentleman had indicated as mastitis and those which he had indicated as cancer.—Mr. S. G SHATTOCK endorsed the view of those who thought that there was something essentially different between the inflammatory and carcinomatous processes. He asked whether the specimens had been stained for "cancer bodies." If these were present then the structure was cancer, but if not then it was not cancer. As regarded the "actinomycotic" bodies to which Mr. Paul had drawn attention, he asked if they had been submitted to any bacteriological stains and he proposed that they should be referred to the morbid growths committee. He differed from Mr. Paul in his view on tuberculous disease of the breast. He had long thought that the fatty changes of the epithelium in mammary carcinoma were of the physiological kind. He had, however, tested many mammary carcinomata for the reaction with rennet, but in all cases with a negative result.—Mr. PAUL, in reply, confessed that he could not see his way at present to subscribe to the parasitic theory of cancer, though he was quite willing to do so when sufficient evidence was brought forward. "Cancer bodies" had not been tested for in the specimens. On the whole he agreed with Mr. Raymond Johnson that there was a gap between chronic inflammation and cancer and he did not believe that chronic inflammation went straight on to cancer without a break.

Dr. J. H. DRYSDALE exhibited a specimen of Broncho-œsophageal Fistula derived from a girl, aged 17 years. At the age of three years she had swallowed a shilling. She was admitted to hospital on account of the vomiting which occurred every time she took food, the vomit containing mucus and pus with food. At the necropsy an opening was found on the anterior surface of the œsophagus leading through the bronchus into a cavity at the apex of the left lung.

Mr. H. A. SCHÖLBERG exhibited specimens from a case of Hæmorrhagic Pancreatitis with Fat Necrosis. On Nov. 18th, 1900, the patient had been suddenly seized with severe pain and vomiting. He was admitted to hospital on the 22nd; the diagnosis pointed to gastritis. Eight days later he died suddenly. At the necropsy all the fat connected with the intestines showed fatty necrosis. The pancreas was thickened and matted to the tissues in front of it and it was the seat of hæmorrhage. The patient had during life a large quantity of sugar in the urine, but he was stout and had exhibited none of the other signs of diabetes. Most of the cases of hæmorrhagic pancreatitis which had been reported had been mistaken either for peritonitis or for intestinal obstruction, but this case did not present the symptoms of those conditions.—In reply to Dr. ROSE BRADFORD Mr. SCHOLBERG said that there was no embolism of the splenic artery. All the arteries of the abdomen were normal. There was no fatty necrosis in any other part than the body.

CLINICAL SOCIETY OF LONDON.

Ankylostomiasis.—Hæmatoporphyrinuria.—Pyo-pericarditis Treated by Incision and Drainage.—Concretions of Uric Acid in Gonorrhœal Rheumatism.

A MEETING of this society was held on Dec. 14th, Sir R. DOUGLAS POWELL, Bart., the President, being in the chair.

Dr. W. J. TYSON (Folkestone) read a paper on a case of Ankylostomiasis. The patient, a man, aged 34 years, had for the past 15 years lived in China and had been quite well until May, 1899, when he was told that he was suffering from malaria. At this time he was living in Singapore. Subsequently he became very anæmic and suffered from indigestion. He noticed that his stools were often reddish in colour and attacks of faintness were common, with much breathlessness and palpitation on the slightest exertion. He also had dimness of vision, with partial loss of hearing. During a sojourn of 14 days in Singapore, on his way to England, the malarial parasite was discovered in the blood, and on account of the excessive anæmia the fæces were examined and there was found in them the ova of ankylostomum duodenale. A course of thymol was carried out on board ship, but the result was not satisfactory. Three doses of the drug of 10 grains each were given. Dr. Patrick Manson saw him on his arrival in London and confirmed the diagnosis of ankylostomiasis. He advised a course of thymol and placed him under the care of Dr. Tyson. He was admitted into the Folkestone Hospital on Sept. 23rd, 1899, suffering from severe anæmia. There were no enlargement of the liver or of the spleen, no œdema, and no retinal hæmorrhages. He complained of pain in the epigastrium and of insomnia. On Sept. 24th two doses of Carlsbad salts were given in the morning, and when the bowels had acted then thymol was given in 30-grain doses every two hours on four occasions, 120 grains in all. During its administration the bowels acted several times. At 7 P.M. a further dose of Carlsbad salts was given and the bowels again acted. On examination of the fæces a large number of worms and ova were found. The thymol produced, with the exception of a feeling of sickness, no unpleasant effect. A week later the same treatment was repeated on account of two or three worms being found in the motions. He made a rapid and complete recovery. Dr. Tyson remarked that this parasite should be remembered as a cause of progressive and obstinate anæmia. The large doses of thymol had an extraordinary effect on the parasite, but apparently did not affect the patient in any poisonous way. It was interesting to note in this case the presence of the malarial parasite with the ankylostomum duodenale; it was not uncommon for the two parasites to dwell in one host. When this was so it was important to settle the relative value of each cause, for the administration of thymol was not a suitable treatment for malarial disease or for any other form of anæmia.—Dr. F. S. TOOGOOD remarked that the presence of the malarial parasite in Dr. Tyson's case was very interesting in its bearing on the disease known as kala azar. This was a very fatal malady which was always endemic and sometimes epidemic in the tea-planting districts of Assam. It was long thought to be due to the presence of the ankylostoma, but Major G. M. J. Giles, A.M.D., had shown that although the parasite was present in many of the cases yet the disease was essentially malarial. The spleen was often enormously enlarged and examination of the blood revealed the malarial parasite and great diminution of the white corpuscles as well as of the red corpuscles. The ankylostomiasis was treated by the administration of thymol which usually caused much pain and often vomiting.—Dr. TYSON, in reply to the PRESIDENT, said that the thymol had been given in cachets. It was necessary to give large doses to produce the desired effect upon the worms. To avoid the poisonous effects the bowels must be very freely moved and all forms of alcohol in which thymol was soluble must be avoided.

Dr. JAMES CALVERT communicated a paper on a case of Hæmatoporphyrinuria not due to Sulphonal (with a report on the urine by Dr. A. E. Garrod). The patient, a woman, aged 32 years, single, was admitted on Jan. 15th, 1900, into St. Bartholomew's Hospital for hæmatemesis which had occurred on Jan. 13th. She had a history of indigestion and the diagnosis was gastric ulcer. As no urine was passed during the six hours after admission a catheter was used and 20 ounces of dark, cherry-coloured urine were drawn off. The urine was faintly acid and its specific gravity was 1016. No albumin, no sugar, no blood, no bile, and no casts were present. The spectroscope showed the bands of hæmatoporphyrin. The patient noticed the dark urine on Jan. 14th, but she said that "it was all right before then" She had passed similar dark urine about a year before this attack. At that time she was suffering from indigestion, but she had no hæmatemesis and, so far as she knew, no melæna. She denied taking any sulphonal and her medical attendant wrote to say that he had never given her the drug. On Jan. 19th an examination of the blood was made: hæmoglobin, 48 per cent.; red blood corpuscles, 2,292,000; *and white blood corpuscles, 8500.* On Jan. 23rd another blood examination was made: hæmoglobin, 54 per cent.; red blood corpuscles, 3,880,000; and white blood corpuscles, 11,000. On Jan. 25th the blood examination was as follows: hæmoglobin, 62 per cent.; red blood corpuscles, 3,968,000; and white blood corpuscles, 11,000. After this the percentage of hæmoglobin and the number of the red corpuscles steadily increased, and the urine gradually returned to its natural colour. Throughout the case the hæmatoporphyrinuria did not appear to give any manifestations of its own. All the symptoms present could be attributed to the hæmatemesis. The patient made an uninterrupted recovery and she left the hospital on March 8th. Dr. Calvert remarked that eight cases of hæmatoporphyrinuria not due to sulphonal poisoning had been recorded. They were mentioned in Dr. A. E. Garrod's article in the fourth volume of the Encyclopædia Medica. They all ran a favourable course with the exception of Ranking and Pardington's two cases which occurred at the same time in different rooms of the same house. These two cases were severe, presenting symptoms similar to those of sulphonal poisoning, which, however, was carefully excluded—one of these patients died and the other recovered. There was no post mortem examination on the fatal case. The fact that the hæmatoporphyrinuria occurred after hæmatemesis was interesting because Professor B. J. Stokvis held that hæmatoporphyrinuria occurring in sulphonal poisoning was due to the absorption of altered blood from hæmorrhages produced by the drug in the mucous membrane of the stomach and intestines, a view which was opposed, among other things, by the circumstance that such hæmorrhages were by no means constantly found at the post-mortem examination of these cases. The blood counts were instructive, showing as they did the increase of hæmoglobin and of red blood corpuscles occurring together with the hæmatoporphyrin in the urine. In its general characters the urine which was passed closely resembled sulphonal specimens. Hæmatoporphyrin was present in considerably larger amount than in ordinary morbid urines, but, as in sulphonal cases, the abnormal *colour of the urine was chiefly due to other less* known pigments. The hæmatoporphyrin could be removed by the soda method and after its removal a purple pigment could be extracted which did not agree in properties with any known urinary colouring matter. To this pigment the colour of the urine appeared to be mainly due. Owing to its instability the purple pig*ment could not be obtained in a state of purity*, as it was changed by heat and could not be extracted by ordinary solvents such as chloroform, ether, or amylic alcohol.—Dr. A. E. GARROD remarked that the case was of interest because of the rarity of hæmatoporphyrinuria apart from the administration of sulphonal and because of its association with hæmatemesis. He thought that the urinary condition was not really dependent upon this latter condition, as in several cases of hæmatemesis and melæna he had failed to find any unusual amount of hæmatoporphyrin in the urine. Another point of interest was the steady increase of red corpuscles and hæmoglobin in the period during which hæmatoporphyrinuria was observed. This lent further support to the view that the excessive excretion of this pigment was due to a perversion of the processes disposing of effete hæmoglobin rather than to an unduly active hæmolysis.—Dr. W. H. B. BROOK (Lincoln) referred to a case of hæmatoporphyrinuria which he had seen 12 years ago in which no sulphonal had been administered. The patient was suffering from pernicious anæmia. In that case there was found to be a very great excess of the aromatic sulphates over the inorganic sulphates.—Dr. CALVERT, in reply to the PRESIDENT, said that the hæmatemesis was due to gastric ulcer. No estimation of sulphates in the urine had been made.

Dr. JOHN FAWCETT and Mr F. J. STEWARD communicated a paper on a case of Pneumococcal Suppurative Pericarditis treated by Incision and Drainage. The patient was a boy, aged eight years, who was admitted into Guy's Hospital on July 16th, 1900. Illness began on July 10th. On admission there were signs of lobar pneumonia at the right base. Signs of pericarditis were first noted on July 17th. Ten days later the pericardium was explored as the evidence of infusion had increased and the boy's general condition had so deteriorated that it was thought the effusion was possibly purulent. The area of dulness reached above the first intercostal space one inch to the right of the sternum and to the left two inches *external to the nipple*; there was also marked tenderness of the epigastrium on pressure Pus having been found on exploration the pericardium was incised and drained by removal of a portion of the fifth left costal cartilage. After operation the boy's condition much improved, but 14 days later a small localised empyema of streptococcal origin was found on the right side The necropsy showed that the condition of the pericardium was rapidly clearing up and that as far as it was concerned the result was most favourable. It was almost certain that had the patient not developed a streptococcal empyema he would have survived, but he was a very thin, ill-developed boy, and so a most unfavourable subject for so severe a series of infections. *Early incision with drainage* was certainly the correct treatment for there cases; 45 cases of suppurative peritonitis thus operated on had been recorded, and 16 of the patients (35·5 per cent.) had recovered. Dr. Fawcett remarked on the absence of friction sound, which had been frequently listened for in this case. The temperature gave no indication of the suppuration within the pericardium.—Mr. E. P. PATON referred to a case which he had under his care five years before in which he regretted that drainage had not been carried out. It was a case of acute infective osteo-myelitis of the humerus, complicated by a large collection of pus in the pericardium. Aspiration was first performed and pus was drawn off, the patient being thought too *ill for further operation*. The patient became very ill on the next day, and when almost moribund the house surgeon, suspecting re-collection, attempted to repeat the aspiration and inserted the needle on the right side of the sternum The patient died shortly and it was found that the left auricle had in some unaccountable way been wounded on its posterior aspect.—Dr. W. C BOSANQUET remarked that considerable difficulty attended the diagnosis of pus in the pericardium and he asked what were the signs upon which Dr. Fawcett relied. He also asked whether it was possible to do operations upon the pericardium under local anæsthesia such as that produced by cocaine. He had been particularly struck with the large number of cases of pericarditis which had occurred during the past year in the Charing Cross Hospital amounting to four or five times the normal number. He would like to know what was the experience at other hospitals and whether any cause could be suggested. In such cases as had been examined the pneumococcus was certainly the most frequently occurring organism. This organism had a marked proclivity to the pericardium in children and in young people.—Mr. F. C. WALLIS thought that local anæsthesia was most advisable in such cases. Where general anæsthesia had been employed the result in his experience was mostly fatal. He regarded eucaine as decidedly preferable to cocaine. The latter had distinct toxic effects which were not observable in eucaine. He had used as much as four drachms of a 4 per cent. solution of eucaine without any evil effect, and he had even excised rib under local eucaine anæsthesia. He trusted that operations upon the pericardium would be more frequent. In reply to the PRESIDENT he said that he had used cocaine both for adults and children.—Dr. PERCY KIDD referred to a case of suppurative pericarditis in which several drachms of a 4 per cent. solution of eucaine had been injected and swabbed about the parts. Most pain had been experienced when the pericardium was taken up with the forceps and experimental researches had shown that this membrane was acutely tender. The absence of a friction sound was unusual in suppurative pericarditis, and he mentioned an interesting case in which after death a pericardial suppuration was discovered, though there were no signs during life.—Dr. A. F. VOELCKER asked if the brain had been examined in the case under discussion. In cases due to the pneumococcus death was aften brought about by meningitis. Cases of pneumococcus infection were often complicated by pleuritis, in which the exudation was so thick that nothing could be drawn off by the needle; and he suggested that in such cases where the pneumonia did not resolve it would be advisable to open the pleura and drain it.—Dr. A. E. GARROD remarked that suppurative pericarditis was difficult to diagnose in adults, but it was even more so in young children, and any means which helped to clear this difficulty was of value.—The PRESIDENT asked if a preliminary puncture had been made prior to the operation. The general symptoms of suppurative pericarditis as of empyema were most misleading. The chart, for instance, of the case under discussion gave no indication of suppuration and profuse sweating often occurred in children with simple serous exudation. He asked what cause could be traced and whether there had been previous cases in the same house.—Mr. ARTHUR BARKER agreed with the value of eucaine and local anæsthesia, but the emotional condition of children must not be forgotten, and on this account local anæsthesia was not always available. A certain fortitude on the part of the patient was necessary and he referred to a case in point.—Mr. WALLIS added, in reply to the PRESIDENT, that in using local anæsthesia for children he had sometimes adopted the method of blindfolding them and using local freezing for the needle puncture.—Dr. FAWCETT, in reply, referred to the difficulty in diagnosing suppurative pericarditis. In his case the symptoms, which had enabled him to come to that conclusion, were the increase in the pericardial dulness, the progressive anæmia and wasting, and finally an acute tenderness at the lower end of the sternum. An exploratory puncture had been made prior to the operation in the fourth interspace one inch to the left of the sternum. The etiology of his case was obscure; there had been no cases in the same house. His belief was that the brain had been examined but nothing had been found.

Mr. W. G. SPENCER read a paper on a case of Gonorrhœal Rheumatism, with bursæ which were filled with concretions of urate of soda. The patient was a coloured man, aged 33 years. He had suffered 14 years previously from gonorrhœa and 10 years ago he had a stricture which was divided under anæsthesia. No instrument had been passed into the urethra since. For six or seven years he had suffered from attacks of spasmodic pain in his legs, lasting two or three weeks at a time, especially in August and September (in Demerara). During the attacks the knees were stiff. Six years ago a swelling formed on the dorsum of the left foot, then over the tubercle of the left tibia, and then on both sides of the heel. The patient's habits were temperate and there was no family history of gout. On his arrival in this country he was unable to walk; the skin over the knees was red, shiny, hot, and tender, and the joints could not be moved without pain. Examination revealed the existence of a spasmodic stricture at the membranous urethra. The patient was treated for a time by dilatation of the stricture and the joints improved, but the bursæ remained unaltered. The latter were explored and search was made for gonococci, some thick, white, semi-solid material being withdrawn, which proved to be sodium biurate free from organisms. He left the hospital six weeks later. Mr. Spencer suggested that the concretions in the bursæ owed their existence to the gonorrhœal inflammation.—Mr. GEORGE EASTES asked what were the grounds upon which the bursal condition had been associated with the gonorrhœa. He doubted the connexion. Might it not be that the urate of soda had been deposited before the patient had been attacked by gonorrhœal rheumatism?—Mr. SPENCER, in reply, remarked that they had to rely upon the history of the patient.

OPHTHALMOLOGICAL SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held on Dec. 13th, Mr. G. ANDERSON CRITCHETT, the President, being in the chair.

Mr. J. H. FISHER showed a case of Congenitally Imperfect Separation of the Iris from the Back of the Cornea. The patient was a woman, aged 27 years, who had been treated recently at the London Hospital for an attack which appeared to be one of acute or subacute glaucoma. On examination the whole anterior surface of the left iris was pitted. At the outer and lower part there was a wide adhesion of the iris to the back of the cornea, while on the inner side it was adherent to a less extent. Mr. Fisher worked out the refraction under hematropine with the result that the tension rose to + 1. There was pain and the pupil remained dilated, although that of the right eye had regained its normal condition by the next day. He considered that this case threw some light on congenital glaucoma, as the position of the iris here clearly was the cause of the increased tension.

Mr. W. T. LISTER exhibited a large Dermoid Tumour on the Cornea of an Ox, extending to the Sclera, from which grew a Bunch of Long Hairs.

Mr. G. T. BROOKSBANK JAMES showed:—1. A rare example of Persistent Papillary Membrane. The patient was a child, aged eight years, who attended on account of a convergent squint. She was one of a family of four, none of the others having any eye affection. When the patient was 16 months of age there was a slight inflammatory attack which lasted a few days only. In the right eye there was a convergence of 40 degrees. The iris was of a pale greyish yellow colour. The normal pupil was occupied by strands which inclosed several openings. In the left pupil there were some small tags of pupillary membrane, though vision in the eye was good in spite of five dioptres of hypermetropia. In the affected eye the vision was extremely bad but the projection was good. 2. A boy, aged 11 years, who with his Hypermetropia Corrected had Normal Vision. In the fundus there was a large pigmented area below the disc which had a crescent. The pigment was mostly under the vessels but near the disc they dipped into it. There was also a strand of persistent pupillary membrane. Mr. James referred to some cases shown by Mr. Sydney Stephenson which exhibited somewhat similar changes.

Mr. A. STANFORD MORTON showed a Growth on the Cornea in a boy, aged seven years, who was first seen in August, 1900. At the upper corneal margin there was a yellowish spot four millimetres in diameter; it was not raised above the corneal margin and it extended downwards to about the margin of the undilated pupil. He tried to shave it off, but failed to do so. He then transfixed it and entered a space full of yellowish material which he scraped out. It was found on examination to consist of connective tissue with some elastic fibres but no fat. On the deep surface of the parts removed was some cellular material in which there appeared to be a few giant cells, but there was nothing typical of tubercle. It certainly was not congenital and it continued to spread but very slowly.—Mr. E. NETTLESHIP referred to a case which he had seen with Mr. T. H. Bickerton which was somewhat similar, and here after a time it ceased to grow.—Mr. G. H. GOLDSMITH also referred to a somewhat similar case.

Dr. A. H. THOMPSON exhibited a case of Superficial Choroidal Atrophy without subjective symptoms in one of a family the members of which were subject to night-blindness. The patient was a woman who made no complaint of her vision which was found on testing to be $\frac{6}{9}$ in one eye and $\frac{6}{6}$ in the other. The maculæ were normal and the fields were full. In each eye there was a large area of choroidal atrophy; there was, however, no night-blindness or diminished light sense. This patient's father had difficulty in seeing objects, though he could see to read small print, and there were several members of the family who suffered from night-blindness.—The PRESIDENT had found that many of these patients derived very great assistance from wearing glasses of a golden-yellow tint, and he thought that the cutting off of the violet rays by glasses of this colour might be the explanation of this, although they did not help all cases.—Mr. EDRIDGE-GREEN thought that it would be interesting to see if this patient saw with the macula as quickly as a person with normal sight. He had tried the golden-yellow glasses and in a dim light he at first saw better with them, but after wearing them for some time he certainly saw no worse when he removed them.—Dr. TEMPEST ANDERSON discussed the use of yellow glass employed in the photographic camera when taking a picture of the sky and clouds.

Dr. W. O. ROCKLIFFE exhibited an instance of Conjunctival Growth; (?) Pinguecula. This patient, aged 12 years, was first seen in August, 1900. The mother of the patient stated that at birth a small red pimple was noticed at the outer side of the left cornea and it had slowly spread since then. A crescentic pigmented thickening surrounded the outer third of the cornea which was two millimetres in thickness. It was freely moveable with the cornea and had no deep attachment, so that a probe could be passed beneath it It had not enlarged to an appreciable extent during the last three months. There was a tuberculous history, but a piece which he had removed for examination had not yet been reported upon. The fundus was normal and the vision was $\frac{6}{6}$. Dr. Rockcliffe stated that he did not think it malignant and he mentioned a similar case shown to the society by Dr. W. J. Collins. In the *Ophthalmic Review* for October was an abstract of a paper by Le Grange in which he stated his belief that these growths were usually of a dermoid nature and that they contained hairs, but in this case no hairs were present. Dr. Rockcliffe stated his intention of dissecting it out.

Mr. R. MARCUS GUNN showed a case of (?) Tubercle beneath the Ocular Conjunctiva. The patient was a girl, aged 13 years, beneath the conjunctiva of whose left eye near the cornea was a vascular growth. She had tuberculous glands, but there was no family history of tubercle.

Mr. J. H. FISHER exhibited a Sarcoma of the Conjunctiva. The patient was a man, aged 28 years, who had been invalided out of the army on account of the eye. In May of last year he first noticed a small red spot which grew and was removed in February of this year. It was removed again in May and also in August for recurrence. There was now a flat yellowish-brown mass which was smooth on the surface and vascular. About one-fifth of the cornea was covered, but the vision was good. There was no glandular enlargement and no specific history. Mr. Fisher proposed to remove the eye, with the growth, as partial operation had proved to be useless.

Mr. C BLAIR showed an unusual case of Choroiditis. The patient was a woman whose sight had been affected for about three months. Her vision now = J. 20. There was an area of closely-packed choroiditis with almost an entire absence of pigment. The patches were not raised and the field of vision was defective. The vitreous was full of opacities, but there was no specific or tuberculous history.—Mr. W. H. H. JESSOP always looked upon these cases of vitreous opacities as being syphilitic and thought that this case was really of that nature.—Dr. C. O. HAWTHORNE also mentioned a case.

Mr. W. T. HOLMES SPICER showed a Nævus of the Orbit. The patient was a married woman who, when seen in July, 1893, had some proptosis of the left eye due to a vascular tumour. In August of that year Mr. Spicer performed electrolysis without any immediate result In January, 1899, he again electrolysed the organ. The patient became pregnant and during this time the nævus increased greatly in size. A hard mass was then felt and on cutting into this it was found to be an old blood cyst. Shortly after the cornea ulcerated and the eye was excised. Mr, Spicer then sent the patient to Dr. H. Lewis Jones who considered that owing to the apparent free communication of the growth with the cavernous sinus electrolysis was not safe —Mr. W. A. FROST suggested that pressure might be beneficial.—The PRESIDENT thought that the growth had better be left alone owing to the danger of cutting into so vascular a structure.

BRITISH GYNÆCOOLOGICAL SOCIETY.

Exhibition of Specimens.—Four Abdominal Cases.—Circulatory Phenomena as Sequelæ of the Pregnant Uterus.

A MEETING of this society was held on Dec. 13th, Dr. W. J. SMYLY, the President, being in the chair.

Mr. J. FURNEAUX JORDAN (Birmingham) showed specimens (1) of Carcinoma of the Ovary, and (2) of Tubal Gestation, removed by vaginal cœliotomy.

Mr. F. BOWREMAN JESSETT and Mr. W. BALGARNIE showed a specimen of Tubal Gestation removed by Abdominal Cœliotomy.

Dr. HERBERT SNOW showed a specimen of Pyonephrotic Kidney ruptured by the fall of a picture in a case of uterine carcinoma.

Dr. P Z. HEBERT showed a specimen of a Nine-weeks Embryo in an intact amniotic sac.—Dr. HEYWOOD SMITH, Dr. SNOW, Dr. J A. MANSELL MOULLIN, Dr. W. JAPP SINCLAIR (Manchester), and the PRESIDENT took part in the discussion on these specimens.

Dr. GEORGE ELDER (Nottingham) read short notes of Four Abdominal Cases, with comments. The first was a case of acute gonorrhœal salpingitis, in which, after palliative treatment had been tried without success, the tubes were resected by abdominal section, the ovaries being allowed to remain. The second case was that of a very large renal cyst, with the symptoms and signs of an ovarian cyst with twisted pedicle. Repeated examination of the urine had failed to detect any abnormality in it. The third case was one of hysterectomy for a large fibroid, in which the patient made a good recovery, but a week after her return home was taken very ill with renal symptoms, from which she died four weeks later. The cause of death was apparenty septicæmia. The fourth case was the later history of a patient whose ovaries and tubes were removed in 1894 for papilloma She continued in very good health until the end of last year, when she was lost sight of.—Mr. BOWREMAN JESSETT said that he had reported a case very similar to the second one mentioned by Dr. Elder at a meeting of the society some weeks ago, whilst the third case found a parallel in a case described by Dr F. A Purcell two years ago.—Mr. CHARLES RYALL, referring to the first case, said that it was very difficult to know how to advise men who had had gonorrhœa as to when it was safe for them to marry, especially when they had a chronic gleet, for it had been repeatedly proved that the disease might lurk, not only in the anterior urethra, but also in the posterior urethra and in Cowper's glands.—Mr. SKENE KEITH remarked that he had seen a case in his father's practice very similar to the one of hysterectomy reported. The patient did well for some days after operation, except that she was very flushed and somewhat cyanotic. She died some weeks after getting home, and the post-mortem examination showed that there was hardly any kidney substance left.—Dr. JOHN SHAW, in speaking of the first case, said that although the symptoms and sequelæ were very like those of gonorrhœa, he had seen cases of salpingitis, especially of hydrosalpinx, on one or both sides in young women as a result of excessive sexual intercourse Such a condition usually got quite well under hygienic treatment.—Dr. SINCLAIR observed that 10 or 12 years ago he had a case of papilloma of both ovaries. He was under the impression at the time that the condition was a malignant one. But he saw the patient in the early part of last year and she was then quite well In another case the pelvis was so overgrown with papillomatous masses as to resemble a bird's nest; but the patient made a good recovery, and although this was five or six years ago, she had since remained quite well.—Dr ELDER replied

Dr. R H HODGSON read a paper on Circulatory Phenomena as Sequelæ of the Pregnant Uterus.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Dec. 6th, Dr. W. H. LAMB, the President, being in the chair.

Mr. EDMUND ROUGHTON showed a man who complained of Sciatica. He had a large gumma in the gluteal region. At present it had not yielded to large doses of iodide. Mr. Roughton proposed to give mercury as well.—The case was briefly discussed by Dr. A. EDDOWES, Dr. ERIC PRITCHARD, Mr. H. W. PAGE, and Mr. RAYMOND JOHNSON.

Dr. YULE read notes of and showed (for Dr. LEONARD GUTHRIE) a case of Alexia due to "Word" and "Letter Blindness." The patient, a man, aged 53 years, had an attack of repeated retching lasting 24 hours on Sept. 29th, 1900. On the following day he found that he could not read aloud or understand the meaning of printed or written matter. He could speak well enough for ordinary purposes, but frequently found himself at a loss for common words, and he often forgot the names of common objects. He could tell the time correctly by the clock, count money, read Arabic and Roman numerals, and do simple sums in arithmetic. His intellect generally and his memory for events, recent and past, were unimpaired. He had no paraphasia or motor aphasia, no "word-deafness," no hemiplegia, and no hemianæsthesia. Dr. Rayner Batten reported that his optic discs, fields of vision, and colour sense were normal. He had no headaches or other cerebral symptoms. He had contracted syphilis 20 years previously. His symptoms at present were inability to read or understand written and printed language and a certain degree of loss of memory for words and names of common articles. Thus, for example, he named "watch," "key," and "pencil" correctly, but could not name a "hand-bell" although he knew what it was. He called eye-glasses "spectacles," but was aware of his mistake. If asked to read aloud he recognised and uttered correctly a few words here and there, but seldom in sufficient number to make sense. Sometimes he guessed a word when he knew its context, or perhaps from its general shape and appearance; sometimes he substituted another word for it more or less resembling it in meaning or sound. His chief trouble was obvious when he attempted to spell a word at sight or to copy it, for he then mistook various consonants for each other. B's, p's, r's, m's, and n's were confused and the result in each case was a nonsense word. He copied "tumbler" as "tunrer" and "pocket" as "roecket," and of course attached no meaning to either word. In copying, also, he left out words and whole lines. Vowels were usually copied correctly. He could write easily from dictation and also spontaneously, spelling fairly well for a man of his education, but after an interval he was unable to read or copy his own writing. Sometimes after prolonged scrutiny the meaning of a word seemed suddenly to dawn upon him; sometimes he spelt it letter by letter and in time got it right. In commenting upon the case Dr. Guthrie remarked on the rarity of uncomplicated word- and letter-blindness and on the fact that it was a complaint from which the uneducated were exempt. Had the patient never learnt to read or to write he would not have known that there was anything the matter with him. At most he would have complained of slight loss of memory for words and names of objects. The various causes of alexia were enumerated, such as motor aphasia, especially in those who could only understand print by framing the words with lips and tongue or uttering them *sotto voce;* verbal amnesia, in which the patient had forgotten the names of the words which he saw; hemianopia; and word-deafness in "auditives" who hitherto had always seemed obliged actually to hear words seen in print in order to understand them. In the present case alexia was proved to be due to word- and letter-blindness by the patient's inability to copy. The freedom from difficulty in reading numerals was not uncommon in such cases and had led to the belief that there was a separate centre for storage of mental images of numerals apart from that for letters and words. It seemed more probable, however, that the images of numerals were retained because they were few compared with those of letters, being nine only as against 52. A similar explanation would account for his recognising vowels better than consonants. The region involved was probably the left visual word-centre situated in the angular gyrus and possibly a part of the supra-marginal convolution. The partial loss of memory for words and names pointed to an affection of the left auditory word-centre in the superior temporal convolution, not sufficient to cause word-deafness. The history of prolonged retching immediately preceding word-blindness made it probable that hæmorrhage from a syphilised vessel in the neighbourhood of the left visual word-centre had occurred. In most cases of the kind, however, thrombosis was the lesion found.

Dr. ALFRED EDDOWES showed a girl, aged 17 years, who presented a condition resembling Lichen Simplex Chronicus extending in a narrow band from the spine to the point of the shoulder, thence in a more broken line down the arm and obliquely across the hand to the first, second, and third fingers. The lesion commenced from eight to nine years ago as an eczema on the back of the hand. As this starting point became worse, apparently as the result of scratching, the disease spread upwards in the above-mentioned line which suggested at first sight the distribution seen in ichthyosis hystrix or nævus linearis, but it was cleaner looking than the latter. Microscopically the papules had much the appearance of lichen planus, but the cell-infiltration surrounded the hair follicles which formed the centre of each papule. The affection which had recently been treated by cauterisation had proved far more rebellious than the more commonly met with patches of lichen simplex chronicus. The extraordinary interest of the affection consisted in its distribution, considering that it was not congenital in origin. Various theories were discussed to explain how such could occur otherwise than as a congenital defect.

Mr. D'ARCY POWER showed a man, aged 64 years, with a Sacculated Swelling on the Radial Side of the Palmar Aspect of the Wrist. The swelling was freely moveable and lobulated. It possessed a well-marked pulsation which was slightly distensile. The swelling appeared three months ago and had gradually increased in size. The patient was a labouring man who had never worn a wristlet and had sustained no injury to his wrist. Mr. Power thought that the question of diagnosis was one of interest and lay between a sacculated radial aneurysm and a ganglion of the sheath of the supinator longus tendon over which lay an enlarged and thickened artery. The aneurysm appeared to him the less likely as such a condition in the radial artery was rare apart from injury and embolism. He proposed however, to cut down upon the tumour and treat the condition he found. But in any case the case enforced the necessity of a careful examination of such swellings in the neighbourhood of arteries before they were incised or an attempt was made to disperse them.—Mr. ROUGHTON thought that the pulsation was not distensile and that the tumour, although fluid, was not compressible. He felt pretty sure that it was a ganglion.—Dr H. A. CALEY considered that the free mobility of the swelling, its lobulated outline, and the fact that the pulsation was not definitely expansile were against its being aneurysmal. The tense feeling on compression told in the same direction and suggested that it was a ganglion intimately connected with the radial artery.

Mr. HUBERT PHILLIPS showed a case of severe Bromide Rash in an Epileptic.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Hæmatocolpus and Hæmatometra.—Inflammatory Conditions of the Colon associated with Septic Abdominal Disease.—Acute Parenchymatous Glossitis.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Dec. 4th, Dr. GORDON BLACK, the President, being in the chair.

Dr. J. B. HELLIER read notes of a case of Hæmatocolpus and Hæmatometra due to atresia of the hymen. The patient, who was 15 years old, showed signs of puberty. The vagina was distended so much that it formed a cystic swelling which reached above the navel. The distended uterus formed a small cystic swelling above the hæmatocolpus. At the vulva there was a protrusion formed by the bulging out of the imperforate hymen. The patient had enjoyed perfect health and the condition was discovered accidentally. The case was treated by slow evacuation of six pints of inspissated menstrual fluid and by the subsequent excision of a circular portion of the septum, followed by drainage and irrigation. The patient made a good recovery and she had menstruated normally since. Dr. Hellier advocated the excision of the tubes by abdominal section when in such cases hæmatosalpinx was also present.—Mr. H. LITTLEWOOD, Dr. JAMES BRAITHWAITE, Dr. E. WARD, Dr. E. O. CROFT, and Mr. C. J. WRIGHT took part in the discussion and Dr. HELLIER replied.

Mr. BASIL HALL (Bradford) read a paper on Inflammatory Conditions of the Colon associated with Septic Abdominal Disease. He recorded three cases in which he had observed a train of symptoms of an unusual character. The chief features of the cases were great distension of the ascending and transverse colon, accompanied by violent, irregular, and painful peristalsis. There was no diarrhœa but the bowel was totally unable to empty its contents. There was no blood in the stools but very large quantities of mucus were evacuated after gravitation enemata. Flatus was usually passed in large quantities after a hypodermic injection of morphia had been given, suggesting that the condition might be one of spasm in the left colon. The descending colon never became greatly distended but was acutely tender throughout. The only treatment from which benefit had been derived was gravitation enemata of oil emulsion with occasional injections of morphia.—Mr. B. G. A. MOYNIHAN, Mr. J. W. DRAPER, Dr. T. CHURTON, Mr. LITTLEWOOD, Dr. W. EDGECOMBE, and Mr LAWFORD KNAGGS joined in the discussion and Mr. HALL replied.

Dr. C. OLDFIELD described three cases of Acute Parenchymatous Glossitis. In the first case the patient, aged 39 years, complained that he was unable to swallow solids because of pain in the throat. Six weeks previously he had had a sore-throat and had not been able to swallow solids from then to the date of being seen. When he was first seen there was no enlargement of the tongue, but there was some tenderness which prevented a view of the pharynx being obtained. On the third day the tongue began to swell; there were fulness in the submaxillary region, pain, and a copious secretion of mucus in the throat. Even liquids could not be swallowed. On the fifth day the tongue protruded far out of the mouth and there was great submaxillary swelling. Breathing was difficult because of the mucus in the throat. On the sixth day ether was given with great difficulty. Only a partial anæsthesia was obtained, but sufficient to allow the mouth to be forced more widely open with a gag, and an incision to be made into the tongue, letting out offensive, dirty, watery pus in considerable quantity and under great pressure. Recovery was rapid. The second case was that of a man, aged 40 years. The illness began with a rigor during the night and when the patient was seen on the next morning he had great pain in the throat and was unable to swallow. The uvula was very œdematous and enlarged. The tongue and the tonsils were normal. During the day the tongue began to swell and by the evening of the third day it was very large, forcing open the mouth and projecting through it. Swallowing was impossible, but the breathing was easy. Submaxillary swelling was not so marked in this case as it was in the case which had been described. During the night the swelling of the tongue went down and by noon of the fourth day that organ was of about its natural size. There had been no escape of pus observed. The uvula was still enlarged and it was covered with dirty white membrane on the sides and on the posterior surface. A swab was taken but Dr. E. F Trevelyan reported that diphtheria bacilli were not found in it. On the fifth day the temperature went up to 104° F. and signs of acute lobar pneumonia developed. This condition ran an ordinary course and the patient convalesced quickly. In the third case the patient, a man, aged 31 years, had had an acute tonsillitis seven days previously to the onset of the affection of the tongue. In this case also there was a rigor at the commencement of the illness, and in the course of five hours the tongue swelled so as to completely fill the mouth and to prevent swallowing. On the tip of the tongue was observed a small ulcer which had been caused by a cut from tacks which he placed in his mouth while following his employment—that of a cobbler—and from this the swelling had commenced and had spread. On the third day the swelling disappeared almost as quickly as it had appeared, no escape of pus being observed. The nature of the last case was obviously a cellulitis of the tongue and the others were most probably of the same character. In the second case the disease appeared first in the uvula and it was probably there that infection took place. The long duration of throat symptoms prior to the development of the swelling of the tongue pointed to some ulcerative condition there, most probably in the lingual tonsil. Considering how common were wounds and ulcers of the tongue it was remarkable that the disease of acute parenchymatous glossitis was so rare; especially might they expect to find it more frequently in the foul ulcerative mouths of certain diseases.—Dr. CHURTON, Dr. E. F. TREVELYAN, Dr. SANDERSON LONG, and Dr. A. BRONNER took part in the discussion and Mr. OLDFIELD replied.

Among the cases, pathological specimens, &c., shown were the following:—

Dr. CHURTON: A girl, aged 18 years, with Optic Neuritis in the Left Eye with a history of influenzal meningitis commencing with aphasia.

Mr. H. SECKER WALKER: 1. A case of Chronic Mastoid Disease operated upon by Ballance's method. The primary operation, which was performed a month ago, was followed a week later by the epithelial grafting operation and in a fortnight the whole surface was sound and dry. 2. A Diagrammatic Model to illustrate the Various Forms of Astigmatism.

Mr. C. J. WRIGHT and Mr. W. THOMPSON: Two specimens of Fibroma Removed from the Vagina.

Dr. A. MANTLE (Halifax): (1) Six cases of Raynaud's disease; and (2) two specimens of Osteo-sarcoma of the Ilium, causing Sciatica, with Secondary Deposits in the Lung.

Mr. T. R. JESSOP: (1) Uterine Myoma removed by Abdominal Hysterectomy; (2) Uterine Myoma, combined with Cervical Carcinoma and Purulent Endometritis, removed by Vaginal Hysterectomy; (3) Uterine Carcinoma removed by Vaginal Hysterectomy; and (4) Tumour (? sarcoma) of the Kidney presenting Difficulties in Diagnosis.

Mr. PRIESTLEY LEECH (Halifax): Skiagrams of Sarcoma of the Femur, Spontaneous Fracture of the Femur from New Growth, and showing Callus in the attempt to Repair.

Mr. LITTLEWOOD: (1) Hysterectomy for Hæmatometra with Suppurating Ovarian Cyst (patient and specimen); (2) large Stone removed from Common Bile Duct and another from the Gall-bladder from a woman suffering for 18 months with intense jaundice (patient and specimen); and (3) Malignant Disease of the Gall-bladder removed with Wedge-shape Portion of the Liver and a large Stone from the Duodenal Orifice of the Common Duct (specimen).

Dr A. G. BARRS: (1) Spastic Paraplegia due to Measles; and (2) grave Nervous Disease due to Measles.

Dr. WARD: (1) Cyst of the Fibula; (2) Uterine Tumour with Hæmato-salpinges; (3) Tuberculous Disease of the Hip-joint with complete Separation of the Epiphysis; and (4) Sarcoma of the Abdominal Wall.

Mr. G. MILLHOUSE and Mr. G. P. ANNING: (1) Pulsating submaxillary tumour (facial aneurysm?) associated with Undue Pulsation of the Subclavian Artery on the same side; and (2) Circumscribed Scleroderma of the Infra-orbital Region.

Mr. MOYNIHAN: (1) Growth of Sigmoid removed from a Congenital Hernia of the Sigmoid Flexure; (2) two examples of Complete Excision of the Umbilical Epiploceles (Condemin's method); (3) Pudendal Hernia, with Vaginal Cyst; (4) an example of Gangrenous Meckel's Diverticulum, causing Acute Obstruction; (5) two Gall-stones removed from Cystic Ducts, one stone removed from the common bile duct; and (6) Arterio-venous Aneurysm of the Popliteal Space the result of a Mauser Bullet-wound received at Spion Kop.

Mr. P. J. CAMMIDGE: Cast of a large Femoral Hernia.

Dr. T. WARDROP GRIFFITH: (1) A Cardiac Lesion for Diagnosis; (2) Post-hemiplegic Mobile Spasm of the Choreic Type; and (3) (with Dr. C. M. CHADWICK) Secondary Carcinoma of the Liver, with Terminal Tuberculosis.

Mr. LAWFORD KNAGGS: (1) Sarcoma of the Clavicle; and (2) four Malignant Pustules (Anthrax) from the same patient.

Mr. THOMPSON: Two specimens of Multiple Myomata of the Uterus removed by Kelly's Method of Hysteromyomectomy.

Mr. BASIL HALL (Bradford): Malignant Intussusception removed by the Sacral Route.

Dr. TREVELYAN: A case of Post-diphtheritic Debility in which the knee-jerks were absent six months after the attack.

Mr. MAYO ROBSON: Case of Coxa Vara (patient shown).

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Open-air Treatment of Phthisis.

A MEETING of this section was held on Nov. 16th, Sir CHRISTOPHER NIXON, the President, being in the chair.

Dr. F. HOWARD SINCLAIR gave a short account of his experience of two years of Open-air Treatment of Phthisis in the Forster-green Hospital, Belfast, and in the Rostrevor Sanatorium. The internal administration of antiseptics he found of little value. In selected non-febrile cases without marked physical signs good results had been obtained from tuberculin. Tuberculin was also used in the Adirondacks Sanatorium in America. Shelters and verandahs were used in wet or stormy weather, though when possible patients remained in the open up till 8.30 P.M. Electric light for this purpose was necessary. All reading and writing were done outside, the use of sitting-rooms being interdicted. It was most necessary that a sanatorium should be built for that special purpose, as no ordinary dwelling could be successfully adapted. Shelter by trees as well as local formation of country seemed to be one of the most essential features of a site. In exposed situations it became almost impossible to keep the windows open. Proximity to centres of population for obvious reasons was very objectionable. The greater the number of cases one had to deal with the more did the sanatorium physician see the absurdity of treating every case by one fixed rule. Much of the success depended on the rational allotment of rest, exercise, and dietary. Gain in weight was not always accompanied by lung improvement. Administration of large quantities of milk might for a time make up for the refusal to eat solid food. Patients must be made to understand that tuberculous sputum was a carrier of infection and that it was a means both of self-reinfection and of communicating the disease to other persons. Cremation was the most satisfactory method of disposing of sputum. Of all known methods of treatment of phthisis the hygienic, "open-air," or sanatorium system was undoubtedly the best.

Dr. J. F. O'CARROLL said that with his experience of Newcastle (co. Wicklow) Hospital he was strongly in favour of the open-air treatment, but care should be taken not to overdo it. For instance, a highly febrile patient was not fit for such methods.

Dr. E. J. MCWEENEY said it was a common belief that when the sputum became small in quantity, and that when the case had obviously improved, the infectivity of the sputum was diminishing and the number of bacilli in it was small. Recently he had a striking example of the opposite state, when he found that the scanty sputum of a patient who had gained in weight and improved in every way was loaded with bacilli. He ventured to plead for the continuance of the tuberculin treatment, not in its original form where it was considered necessary to produce violent constitutional disturbance, but in small doses, continued for a fortnight at a time with intervals. He did not advocate it from clinical experience, but he had read most carefully worked-out accounts of the effects of this treatment of patients in Germany, and he was convinced that important results could be achieved by it.

Sir J. W. MOORE said that in this discussion no one had mentioned the word "sunlight," and sunlight played a part by no means second to that of fresh air.

Dr. A. R PARSONS agreed that as an indication of improvement a gain in weight was *per se* of very little value and at Newcastle hospital they found that the very worst cases often gained greatly in weight. With regard to the tuberculin treatment which had been referred to he did not personally hope for very much from it.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 6th, Dr. Duncan Burgess being in the chair.—Dr. J. W. Martin showed a specimen of Pyosalpinx and read notes of a case of Membranous Dysmenorrhœa associated with Cystic Ovaries and Retroversion of the Uterus. The ovaries were removed and the uterus was fastened by the pedicle of the left broad ligament into the lower portion of the abdominal wound.—Mr. R. J. Pye-Smith showed: 1. A case of Bilateral Coxa Vara in a boy, aged four years, which he had shown in October, 1899. There was marked improvement in gait and in abduction of the thighs. The chief treatment had been passive movements with short periods of recumbency and exercises. 2. A case of Laparo-pylephleb-anastomosis in a girl, aged 19 years, which he had shown in March last. Since then the ascites had entirely disappeared and the general health was good. It was now 13 months since the operation. 3. A case of Regeneration of the Tibia in a girl, aged nine years, after removal of the entire diaphysis for acute infective periostitis and osteomyelitis. The operation was performed in May last on the sixth day of the disease when the shaft of the bone was found to be bathed in pus. The wound was kept open for 10 days and was then closed. A skiagram showed the presence of a good new bone and there was no noticeable deformity, the ankle and the knee were freely moveable, and locomotion was good, though at present the child was wearing an iron support. 4. A case of Moveable Knee-joint after complete Arthrectomy for Tuberculous Disease in a girl, aged seven years The synovial membrane and semilunar cartilages had been removed by Kocher's method in February last. There was but little deformity and the movements of the joints were almost perfect.—Dr. A. W. Cuff showed a case of Congenital Elephantiasis.—Dr. Arthur Hall showed a case of Lymphatic Leukæmia of 10 months' duration in an elderly man.—Dr. Hall also alluded briefly to two unusual cases of Status Epilepticus which had come under his notice in the Sheffield Royal Hospital during the previous week. In one patient, a middle-aged woman, who had never had a fit of any kind before and who was an in-patient for some gastric trouble, the fits succeeded each other with great rapidity and the patient died within three days. At the necropsy nothing was found in any organ to account for the fits. In the second case, that of a middle-aged man, the patient was found unconscious in the street and after admission to the hospital he had a series of epileptic fits following each other at short intervals for the next 24 hours. He became rather dazed for a day or two and afterwards completely recovered. In this case the patient had never had a fit before.—Mr. S. Snell exhibited the following: 1. A girl, aged 13 years, with Chancre on the Inner Surface of the Upper Eyelid. 2 A case of Rupture of the Choroid. 3. A case of Foreign Body (a piece of steel) embedded in the Retina. The date of the injury was in April last. The eye still retained good sight. 4 A case of Recovery from Sympathetic Ophthalmitis in a boy, aged 10 years. The exciting eye retained fair vision and in the sympathising eye after three recurrences vision was normal. 5. A case of Cellulitis of the Orbit in a girl, aged nine years. It occurred after a blow nine days previous to admission to hospital. Two days later, on making an incision to evacuate the pus, a small sequestrum was removed. Recovery was rapid and complete.—Mr. Snell also exhibited a large number of lantern slides of photographs of ophthalmic cases. He arranged them as far as possible in groups. Among them was a case of Double Anophthalmos, and he exhibited with this four other cases of Anophthalmos associated with Congenital Cyst in the Eyelids; there were three instances of Traumatic Enophthalmos. Various photographs illustrating causes producing protrusion of the eye were shown. One case was especially interesting as, in consequence of a fall downstairs, injury had been inflicted on the left fronto-temporal region causing apparently a fracture involving both orbits. The left optic nerve was so injured that complete blindness had resulted, and in the right eye there had been orbital aneurysm and the common carotid artery had been tied. In connexion with this case photographs were shown of injuries to the anterior part of the head from cases under the care of Mr. Snell in which blindness had been occasioned through the fracture involving the optic foramen. Mr. Snell mentioned that he had recorded in the Transactions of the Ophthalmological Society of the United Kingdom 18 instances of this sort which had come under his observation, but he had had five additional cases recently.

MIDLAND MEDICAL SOCIETY. — The second ordinary meeting of this society was held on Nov. 28th, at the Birmingham Medical Institute, Mr. Jordan Lloyd, the President, being in the chair.—Mr. J. G. Emanuel was elected a member of the society.—Mr. W. F. Haslam showed a woman, aged 46 years, suffering from Charcot's Disease. She had always had good health except for the fact that for the last five or six years she had had pains in both legs at irregular intervals. Ten months ago she twisted her right knee in getting into a cart; but she was able to go on with her work on that day. On the following day the knee was greatly swelled but there was very little pain. She kept about for two weeks, but then, owing to the weakness of her knee, she rested in bed for three weeks. The swelling disappeared to a great extent, but she could not trust herself to bear much weight on the knee, as it felt as if it would give way. Her condition on admission was as follows. She walked with difficulty, owing to the weakness of the right knee, but there was very little pain in it. This knee was two and a half inches more in circumference than the sound one. There was swelling of the synovial membrane, but very little fluid was present. The temperature of the knee was increased Flexion was very limited owing to locking of the bones but the joint otherwise was very loose and there was considerable hyperextension and lateral movement There was slight thickening about the lower end of the femur The patient could stand with her eyes shut There were no gastric crises Tactile and heat and cold sensations were normal and the pupils reacted to light and accommodation The patient had no trouble with her bladder or rectum The knee jerk on the left was absent There were shooting pains in the legs at times The x rays showed (1) very marked displacement of the tibia forwards and outwards, (2) slight thickening of the lower end of the femur, and (3) considerable erosion of the condyles of the femur and some erosion of the head of the tibia —Dr A S Underhill showed a Uterus with a Lacerated Cervix and Vagina The patient was a multipara, aged 34 years On Oct 4th, 1900, being in labour, she sent for a midwife In about seven hours after much difficulty the head and shoulders were born, but as delivery could not be completed a medical man was sent for who used some traction and, not feeling certain as to the condition, advised her removal to the Guest Hospital, Dudley On admission the head and thorax were protruding from the vulva, and the upper cervical and mid dorsal vertebræ were separated so that the parts were only held together by skin The vagina was completely blocked by a large fœtal abdomen palpably full of cysts Embryotomy was completed by emptying several cysts No force was used and the fœtus was easily expelled The placenta came away directly afterwards Hæmorrhage was slight and the uterus contracted firmly A full dose of ergot was given and the patient was put back to bed Four hours afterwards the house surgeon found her blanched, with a feeble, running pulse restless, and only partially conscious There was very little bleeding externally Her abdomen now contained two swellings, the well defined, firmly contracted uterus, and by its side a deep seated but less distinct swelling which was crepitant on palpation, reaching well above the umbilicus She died shortly after in a state of collapse Post mortem examination showed a deep laceration through the whole thickness of the cervix and the adjacent wall of the vagina The peritoneal cavity was not opened, but the peritoneum was stripped from the posterior wall of the abdomen to the left kidney, forming a large cavity filled with blood clot and causing the second swelling noticed before death A fairly large vessel was found in the lacerated cervix, which had evidently been bleeding, and caused the stripping up of the peritoneum and the consequent death from hæmorrhage —Dr Underhill also showed a specimen of Double Hydronephrosis with Sacculated Ureters, a large Thickened Bladder, and a Stricture close to the Membranous Portion of the Urethra It was taken from a fœtus born at full term but dead There were other abnormalities about the fœtus a double harelip, cleft-palate an inter ventricular foramen, a supernumerary finger on each hand, and a supernumerary toe on each foot —Mr William Thomas showed specimens of the Clip Sutures advocated by Dr Paul Michel —Mr G Heaton read a paper on the Prognosis and Treatment of Hernia in Childhood

GLASGOW SOUTHERN MEDICAL SOCIETY – An extraordinary meeting of this society was held on Dec 14th, Dr William Watson, the President, being in the chair Owing to the crowded attendance through the importance of the subject—Consideration of the Action of the General Medical Council in their Recent Decision respecting the Sale of Drugs and Poisons by Unqualified Drug Assistants—it was found necessary to leave the usual meeting-place and to secure a larger hall —The President, in introducing the business, explained the reason of their special meeting and drew attention to the various points in the trial of the Airdrie practitioner before the General Medical Council He asked for an expression of opinion by those present on the very serious issues involved —An interesting discussion followed, in which the feeling was expressed that a very serious hardship would fall to the lot of general practitioners should the decision of the General Medical Council be maintained In the opinion of some the General Medical Council had no *locus standi* in the question at issue, inasmuch as there had been no breach of the Pharmacy Act, and in their opinion the offence with which the practitioner had been charged could not by any reason be considered under the category of "infamous conduct in any professional respect" whatever. The open and continued hostility of the Pharmaceutical Society against the general medical practitioner was bitterly commented on by various speakers It was common knowledge that chemists and druggists themselves were guilty of the same offence, for they habitually employed unqualified assistants who dispensed and sold drugs and poisons The Pharmaceutical Society, it was held, should see that those whom they represented kept their own houses in order before interfering with the general practitioner Various suggestions were made in the course of the discussion as to the best methods of conserving the interests of medical men A motion was proposed that this could best be attained at the present juncture by the formation of a Medical Defence Union, but owing to the lateness of the hour and the desire for further discussion the meeting was adjourned until an early date

LIVERPOOL MEDICAL INSTITUTION —The second meeting of the Pathological and Microscopical section of this society was held in the theatre on Dec 13th, Dr J H. Abram being in the chair —Dr W Alexander and Mr J E Dimond showed a Cervical Rib removed by Operation, Scirrhus of Mamma, and a Malignant Uterus —Mr Douglas Crawford showed a specimen of Multiple Sarcomata from a female, aged 30 years Growths were present in the upper end of the right humerus and the right half of the lower jaw . The upper third of the humerus and the right half of the mandible were removed and there was no recurrence six months later The growths were both of the spindle celled variety —Dr F H Barendt showed a section of Ephelis *ab igne* with pigment cells in the derma, also pigmented skin due to arsenicated beer, the pigment being in the deeper stratum of the Malpighian layer —Mr F T Paul showed an Adenoma of the Kidney which he had removed during life, also a Vermiform Appendix very much enlarged —Dr R J M Buchanan showed Sections of a small Adenoma of the Kidney discovered post mortem in a patient who had died from Scirrhous Carcinoma of the Pylorus —Mr G P Newbolt showed a Testis which he had removed with a Cyst which had totally destroyed the Epididymis The cyst had a thick wall and contained straw coloured fluid There was also a hydrocele of the tunica vaginalis —Dr W Blair Bell showed a specimen of Carcinoma which he had removed from a male breast —The specimens were discussed by Dr Abram, Mr Paul Mr Newbolt, and Mr K W Monsarrat — Dr W B Warrington and Dr J E Dutton read a note on the Course of the Optic Tracts studied from a case of Unilateral Optic Atrophy The note was illustrated by numerous microscopic sections, drawings, and lantern slides —A discussion followed in which Dr Abram, Dr. A S F Grunbaum, and Dr John Hay took part, and Dr Warrington replied.

BOURNEMOUTH MEDICAL SOCIETY —A special meeting of this society was held on Dec 14th to consider a report from the committee on the possibility of providing better accommodation for the society and its library The report, which had been printed and circulated, was taken as read After some discussion it was adopted with only one dissentient —Dr F O Bottomley read a paper on Some Sensory Affections of the Upper Extremity He said that when working in the out patient room of a London hospital he was struck by the number of patients complaining of one or more of the following symptoms affecting the arms—viz , pain, loss of power, numbness, tingling or coldness He had made brief notes of 27 such cases He gave details of these, from which it appeared that the majority were women, the average age being 44 years Both arms were affected in 10 patients, the left arm alone in nine, and the right alone in eight The duration of the symptoms varied from a few weeks to months He considered whether there was any lesion in the arm to account for the symptoms, such as neuritis, or whether the affection was functional or hysterical or caused by overwork or strain or whether the pain was a referred pain or due to some disturbance of the circulation in the limb such as a vaso constriction Having discussed each of these possible explanations he thought that the symptoms were entirely subjective and that they were referred from some other part in the same way as pain from a decayed tooth is frequently referred to the temple He gave reasons in support of this view such as the referred pain and other sensations due to flatulence or indigestion — Dr A Kinsey Morgan, sen , read a paper on the Modern Treatment of Phthisis

Nottingham Medico-Chirurgical Society.—A meeting of this society was held on Dec. 5th.—Mr. R. C. Chicken read a paper on the By-ways of Appendicitis. Dealing first with the symptoms of appendicitis, he affirmed that they were very illusive; all might be present and yet no appendicitis be found. He cited, as examples which had been known to simulate the condition, typhoid fever, subdiaphragmatic abscess, psoas abscess, acute intestinal obstruction, tumours in connexion with uterine appendages, and other pelvic tumours. The actual condition could only be cleared up by laparotomy. He then discussed the points for incision, pointing out that the painful spot was only valuable as a diagnostic sign before suppuration, and only rarely should the top of the incision be above a line drawn from the umbilicus to the superior iliac spine, extending from the edge of the rectus outwards. Specimens illustrating his paper were shown: (1) Excised Sloughing Cæcum; (2) Malignant Stricture of the Sigmoid Flexure; (3) Malignant Stricture of the Hepatic Flexure of the Colon; and (4) Tuberculous Tumour of the Cæcum, simulating appendicitis, and enlarged mesenteric glands. The second and third specimens exemplified the fact that stricture of the intestine might exist in a chronic form without evidence of obstruction but only of constipation. The lumen in each case was of the size of a No. 16 catheter.—Dr. H. Handford showed a microscopic section of the Thyroid Gland in which no gland epithelium was left. The specimen was from a man who was the subject of myxœdema and who was shown to the society in February, 1899.

Bristol Medico-Chirurgical Society.—A meeting of this society was held in University College, Bristol, on Dec. 12th, Dr. D. S. Davies, the President, being in the chair.—It was proposed by the President, seconded by Dr. B. M. H. Rogers, and carried:—

> That the cordial thanks of the society be accorded to Mr. Paul Bush for the most interesting series of lantern slides that he showed at the close of the last meeting, illustrating hospital and other scenes he had taken during the Boer war.

—Mr. A. W. Prichard read notes on a curious case of Hypertrophy of the Hand, the patient being shown as well as skiagrams and photographs.—Dr. J. Michell Clarke and Mr. W. Roger Williams discussed the paper.—Dr. Michell Clarke showed a patient with Muscular Atrophy.—Dr. T. Fisher showed a patient with Patent Ductus Arteriosus.—Dr. Clarke and Dr. E. H. E. Stack remarked on the case.—Dr. J. O. Symes showed a microscopic specimen of Leukæmic Blood.—Dr. A. J. Harrison and Mr. Roger Williams commented on the case.—Mr. Roger Williams read a paper on Medical Science in the Nineteenth Century.—Dr. J. Lacey Firth read notes on a case of Bilocular Hydrocele.—Mr. Munro Smith and Mr. J. Paul Bush spoke on the condition.

Southport Medical Society.—The second meeting of the present session was held on Nov. 14th, Dr. R. Harris being in the chair.—Four new members were duly elected.—Mr. S. Backwell Fenn gave a short history of the case of Obliterative Endarteritis, probably syphilitic, shown at the last meeting.—Mr. F. J. Baildon showed a case of Disarticulation at the Shoulder-joint.—Dr. A. Storrs read a very interesting paper on Vaccination, which provoked an animated discussion, complaints as to the unreliability of glycerinated calf lymph being numerous.—The third meeting was held on Dec. 12th, Dr. Harris being in the chair.—Two new members were duly elected.—The President raised the question of the Infrequency of Medical Evidence at Inquests in the District, and after some discussion a deputation was unanimously appointed to wait upon the coroner and to lay the views of the profession before him.—Mr. G. Reinhardt Anderson read an able paper upon Appendicitis and showed specimens of diseased appendices removed by him. Rules for treatment and for operative interference were also laid down.—A discussion followed.

Glasgow Pathological and Clinical Society.—A meeting of this society was held on Dec. 10th, Mr. H. E. Clark, the President, being in the chair.—Dr. James Carslaw showed (1) two patients who suffered respectively from Peripheral Neuritis as a Complication of Enteric Fever and (2) Hemiplegia occurring in the course of Enteric Fever but probably the Result of Mitral Stenosis.—Professor Robert Muir gave a microscopical and lantern demonstration of some of the Bacteriological Features of Bubonic Plague.—Dr. George T. Beatson showed a series of skiagrams of Tumours connected with Bone.—Dr. A. W. Russell showed a Uterus the seat of Multiple Myomata. There had been encysted hæmorrhage into the left ovary.—Dr. Munro Kerr showed as a fresh specimen the Lungs and Kidneys from a case in which Embolism of the Pulmonary Artery had occurred 14 days after labour.

Rochdale and District Medical Society.—At a meeting of this society held on Dec. 6th Mr. G. W. Malim read a paper on Pernicious Anæmia and mentioned that he had recently had three cases in three contiguous houses. He supported the theory that the excessive destruction of coloured corpuscles which had been shown to occur was due to the absorption of a poison by the gastro-intestinal tract. He also gave some useful hints on treatment, especially as regards diet.—Mr. W. Pooley mentioned a case which had occurred in his practice. A woman died from pernicious anæmia and shortly afterwards her husband died from the same disease.—Dr. W. E. Jameson, Dr. D. Richmond, Mr. J. Chadwick, Mr. W. Stanwell, Dr. W. J. Kerr, and Dr. A. Wallace also took part in the discussion which followed the paper.

Reviews and Notices of Books.

Thomas Henry Huxley: a Sketch of his Life and Work. By P. CHALMERS MITCHELL, M.A. OXON. New York and London: G. P. Putnam's Sons. 1900. Pp. ix.-297. Price 5s.

APPEARING so soon after the two large volumes of biography by Mr. L. Huxley, which we noticed in THE LANCET of Nov. 17th, there might at first sight seem to be no need of the present volume. Mr. Mitchell has, however, treated the subject-matter from an entirely different point of view, and instead of providing us with a record of daily life and occupations has picked out the main thread of Huxley's contributions to science and to contemporary thought for continuous presentment. From the few pages which make up this volume it is possible to get a clear grasp of the main achievements of a remarkable man, while the account is clothed only with just sufficient extrinsic matter to attract the attention and to explain the external circumstances which had influence upon his doings and writings. It is significant and not at all gratifying to find that Mr. Mitchell feels himself obliged—and we admit that he is obliged—to emphasise more than once the position of Huxley as a great original explorer in the domain of comparative anatomy. Popular estimation of that eminent anatomist was well expressed to us once by a clergyman who inquired "Why is he called Professor Huxley? What is he professor of?" The public do not read the Philosophical Transactions or the Proceedings of the Zoological Society; but they do read the daily papers and are thus apt to gauge the eminence of a man by the number of times he appears therein. It is hardly too much to say that the professor's extensive reputation was nearly entirely due to his advocacy of, or attacks upon, commonplace matters understanded of the people. He unfortunately bulks much more largely as an objector to the Gadarene swine and as the inventor of the phrase "Corybantic Christianity" than as the exponent of the vertebrate skull and as the comparer of the two-layered condition of the embryos of the higher animals to the adult hydrozoon. It is urged that Huxley advantaged science greatly by his continual presence in the arena before the general public, but we are not at all so convinced of this For the possibilities which he showed have led men of vastly inferior achievements, but gifted in the use of the pen or the tongue, to pose as exponents where they should be humble learners.

Mr. Mitchell justly points out that one marked feature of the contributions of Huxley to zoological science is their extreme exactness; there is but little to correct in his statements; and when it is reflected how poor were the instruments and methods of displaying minute structure at the time when he was chiefly engaged in work the wonder at these achievements grows. To examine a medusa through a microscope "lashed to the mizen mast" and to deduce therefrom truly epoch-making generalisations is a feat which requires no disputes with Owens and Wilberforces to enhance it. Mr. Mitchell devotes a page or two to the important subject of geographical distribution. It is interesting to note that current opinion at the present moment is perhaps rather more strongly in favour of the views expressed by Huxley in his celebrated paper upon the anatomy and range of the Gallinaceous birds than it was at the time. "There has been recently," writes Mr. Mitchell, "a recurrence to Huxley's suggested union of South America and Australia." We are not, however, quite in accord with Mr. Mitchell in his advocacy of this view so far as concerns details. The important fact of the occurrence of a diprotodont marsupial, first named by Mr. R. Tomes "hyracodon," in South America, would rather be interpreted on our view by the theory that the two divisions of the marsupials had already arisen in Europe and North America before the spread of the race to South America on the one hand and to Australia on the other. Moreover, the connexion of South America with Australia was, we are disposed to think, indirect and through New Zealand, which was itself connected with Queensland. This view of the matter seems to be supported by certain freshwater fishes, and above all by the range of one or two genera of earthworms, creatures impatient of salt water and thus dependent upon a land connexion for possibilities of migration.

This, however, is not the place where these matters can be debated at length. It remains only to say that the writing of this appreciation of Huxley has fallen into precisely the right kind of hands; for Mr. Mitchell is competent by his own investigations into comparative anatomy to treat with a proper sense of proportion the vast amount of discovery connected with the name of Huxley, while he has the requisite literary skill to present his statement in such a way as to appeal to the reader.

Handbook of Practical Botany for the Botanical Laboratory and Private Student. By Dr. E. STRASBURGER, Professor of Botany in the University of Bonn. Translated and Edited from the German with many additional notes by W. HILLHOUSE, M.A., F.L.S., Professor of Botany and Vegetable Physiology in the University of Birmingham. Fifth edition. Rewritten and enlarged. London: Swan Sonnenschein and Co., Limited. 1900. Pp. xxxii.-519. Price 10*s*. 6*d*.

THE fact that this work has reached a fifth edition must be a source of gratification to all concerned. As is well known the volume before us is a translation of Dr. Strasburger's "Das Botanische Praktikum," which is one of the best handbooks for certain branches of practical botany—namely, anatomy and histology—which we possess. From the preface it may be gathered that this edition has been practically rewritten, and also that a certain number of new figures have been added.

It is a matter of some little difficulty to review a book which has been used for a considerable time and hence is so well known. There are, however, a few points to which attention may be drawn. In Chapter XXVII. the fertilisation of *Picea* is described and also the behaviour of the nucleus of the egg after fertilisation has been effected; on page 376 it may be read that "The next stages take the embryo nucleus into the end of the oöspore remote from the neck, where, by repeated bipartition, it forms four nuclei lying in the same plane." Judging from the most recent research into the fertilisation of this class of plants, this statement is not quite correct. For instance, V. H. Blackman makes the following remarks. "It is clear from my observations that though a definite fertilised nucleus hardly exists as such, the first segmentation spindle appears in the position formerly occupied by the female nucleus. The two daughter nuclei themselves also undergo division before they begin to wander down to the base of the egg." Dixon also ascertained that the fertilised nucleus divided in the centre of the oöspore.

As regards another point, we should like to suggest that Professor Hillhouse would have done well to have added an alternative plant for the study of fertilisation in sea weeds. The types taken are *Fucus platycarpus* and *F. vesiculosus*. Although the fertilisation in these two plants is extremely interesting, still there is another in which the process is still more so. We refer to *Halidrys*. Fertilisation in this plant is very easily observed, and as to its interest the following quotation from Farmer and Williams will answer. The male elements, as is well known, attach themselves to the egg and cause it to rotate by the movements of their cilia. "Suddenly the antherozoids are seen to leave the egg like a crowd of startled birds or else they become quiescent, and these phenomena are immediately followed by a great change in the egg itself, which becomes warty and covered with conical projections. ...... We consider it as certain that the flight of the supernumerary antherozoids marks the moment of actual fertilisation and it seems only possible to interpret the events outside the egg as the result of an excretion from it of some substance which not only exerts on the surrounding antherozoids a negative chemiotactic but also a directly injurious effect, for a number of dead sperms may be seen around the fertilised egg."

In the portions dealing with the fertilisation of angiosperms we do not notice any mention made regarding the recent discoveries of the triple fusion of nuclei, the two polar with the second generative nucleus of the pollen-tube, to form the endosperm (or definitive) nucleus of the embryo sac. It is to be borne in mind, however, that in the types described this phenomenon has not yet been observed excepting in the case of *Monotropa*. Although these discoveries were not made till after the publication of the third edition of Dr. Strasburger's "Das Botanische Praktikum," of which full use has been made in this edition of the translation, still the facts are of sufficient importance to warrant mention. These remarks do not apply to the case of *Monotropa*, for it is only quite recently—indeed, within the last month or two—that the so-called "double fertilisation" has been observed.

Excepting the above points the book is extremely good. The work is so carefully graduated and the directions as to technique are so numerous and practical that a beginner in this branch of knowledge need find but very few difficulties in this all-important side of botany. The volume is rendered more valuable by the addition of appendices which deal with English and metric weights and measures, plants and materials used for study, the preparation of, and methods of using, reagents, &c., mentioned in the text, and finally some general notes on methods and selected reagents.

The Great Boer War. By A CONAN DOYLE With Maps. London: Smith, Elder, and Co. 1900. Pp. 552, including Index. Price 7*s*. 6*d*.

THIS is a big book and requires careful reading, and, what is more, it well merits it. The author, besides having a natural and graphic style of writing which makes perusal pleasant, has approached his subject with a sense of responsibility and with an evident desire to weigh thoughtfully and impartially all he has to say. It is possible, he states with modest frankness, that a fuller knowledge may give an entirely different meaning to some of the events of the Boer war. "The occasional judgments and criticisms on which I have ventured may be founded upon error, but at least they are made without either fear or favour."

The book begins with a brief sketch of the history of the Boers and is followed by chapters descriptive of the cause of quarrel and negotiations, carrying us on to the eve of war and the battle of Talana Hill, which is characterised by the author as "a tactical victory but a strategical defeat." After that the volume is almost entirely one of military history—battles, sieges, and engagements of one sort and another—with a final chapter on some of the military lessons of the war, into which, as appertaining more especially to military critics and army reformers, we need not enter. The historical details descriptive of the state of affairs antecedent to our defeat at Majuba Hill and from that onwards until the present campaign began in earnest are lucidly and, as it seems to us, fairly set forth. It will be seen that this work has been brought out before the war has ended; for, in the face of recent occurrences and despite what Lord Roberts has told us, it cannot be said to have terminated yet.

Readers of any history of the Boer war will turn with much curiosity and interest to those sections which deal with the battles of Lombard's Kop and Nicholson's Nek, Lord Methuen's operations on the Modder, the battle of Colenso, the affair at Spion Kop, the siege of Ladysmith and its final relief, and with the advance and successful strategical operations of Lord Roberts's army. They will not be disappointed with the graphic description which the medical novelist gives of these stirring events. A great deal has been said about the want of strategical foresight and ability which characterised the earlier phases of the war, but many judgments may have to be recast and possibly, as a matter of justice, withdrawn when all is known. Dr. Conan Doyle makes it clear to us that the Boer leaders missed their opportunity by not having concentrated their efforts at the beginning of the war on the capture of the country in the direction of Durban. The fighting in Natal and the various sieges had the effect of frustrating any scheme of the kind later. In his chapters on "The Halt at Bloemfontein" and "The March on Pretoria," and in his final chapter summarising some of the military lessons of the war, the author has a good deal to say about medical matters and the epidemic outbreak of enteric fever, which, if not of an exhaustive character, is interesting and conceived in a very fair and just spirit. Probably Dr. Conan Doyle recognised that this particular subject was altogether too special to be adequately discussed in a book of this kind and so did not attempt it. Our readers will have gathered from our remarks that "The Great Boer War" is, in our opinion, an interesting and eminently readable book.

We may add that the short sketches and descriptive touches of character of many of the generals and leaders in the war which are interspersed in the volume are excellently done. It should be mentioned that the volume is illustrated by some good maps, a reference to which is of much help to the reader.

BRISTOL HOSPITAL SUNDAY FUND.—At a meeting of the committee of the Bristol Hospital Sunday Fund held on Dec 13th under the presidency of the Lord Mayor it was reported that on Hospital Sunday, Jan. 28th, 1900, collections were made in 223 places of worship, an increase of 40 as compared with the previous year. The amount received was £1383, or £125 less than in 1899 It was decided that in 1901 Jan 27th should be observed as Hospital Sunday.

THE CLIFTON CLUB.—The committee and members of the Clifton Club, Bristol, entertained Mr J. Paul Bush at dinner on Dec 13th. After dinner Mr. Bush gave a most interesting lecture on his experiences in South Africa, and his lantern slides illustrating scenes during the Boer War were much enjoyed by the company present.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Dec. 13th, Sir WILLIAM MAC CORMAC, Bart., K.C.V.O., the President, being in the chair.

The resignation of Mr. Edward Trimmer, M.A., the secretary was accepted. Mr. Trimmer's retirement will date from March, 1901, when he will have been connected with the College for 42 years. Mr. Sibert Cowell, the present assistant secretary, was appointed his successor.

The resolutions carried at the annual meeting of the Fellows and Members in November were read. In reply to the first resolution, which urged the Council to take steps to obtain representation for the Members, it was resolved to say:—

> That the Council, having fully considered the resolution moved by Dr. Herbert Snow and seconded by Mr. Joseph Smith, and carried *nem. con.*, are of opinion that it would be most undesirable to re-open the question of representation of the Members on the Council.

In reply to the second resolution, requesting the Council to take steps towards obtaining a Parliamentary inquiry into the working of the Medical Acts with a view to their amendment, it was resolved to say:—

> That the mover, Mr. George Brown, and the seconder, Dr Danford Thomas, of Resolution No II. carried at the annual meeting of Fellows and Members be requested to furnish the Council with information as to the points in regard to which they are of opinion the Medical Acts require amendment.

With regard to the third resolution, which claimed for every Member the right to receive a copy of the annual report of the Council without application, it was resolved:—

> That the annual report of the Council be sent only to those Fellows and Members who apply for it, but that to save unnecessary trouble to those who desire to receive the report regularly any Fellow or Member may, on request, have his name entered upon a standing list.

It was further resolved that the mover and seconder of the fourth resolution carried at the annual meeting of Fellows and Members be informed that the resolution had been laid before the Council. The Council also resolved to accede to the request expressed at the annual meeting, that the names of deceased Members who have died during the year should be recorded in the annual report, as in the case of the Fellows.

A report was presented from the Centenary Committee in connexion with the Guarantee Fund, by which it was shown that the cost of the centenary dinner with other expenses amounted to £798 and that £308 of this were received by the subscriptions from Fellows and Members for dinner tickets, and that the balance—namely, £490—was contributed by the guarantee fund of the members of the Council.

The SECRETARY reported the death of Professor Albert of Vienna, and of Professor Ollier of Lyons, honorary Fellows of the College, and the President was requested to address letters to the families of the two late honorary Fellows expressing the sympathy and the condolence of the Council.

The Council decided to renew for another year the recognition of Cooke's School of Anatomy, Physiology, and Operative Surgery for the performance of the extra six months' dissections required for the primary Fellowship examination.

The PRESIDENT reported that Mr. John Langton had delivered the Bradshaw Lecture on Dec. 12th and that the subject of the lecture was "The Association of Inguinal Hernia with the Descent of the Testis."—The best thanks of the Council were given to Mr. Langton for his lecture and he was requested to publish it.

The PRESIDENT informed the Council that property extending from Serle-street up to Nos. 35 and 36, Lincoln's-inn-fields had been acquired by the Crown and that it was proposed to erect on this site a building projecting beyond the general building line to within four feet of the pavement.—The President was requested to write to the First Commissioner of Works setting forth the objections to the plan and asking him to reconsider the matter.

Mrs. Henry Lee presented to the College a bust of her husband, the late Mr. Henry Lee, by Mr. Thomas Brock, R.A.—The gift was accepted by the Council with thanks.

THE LANCET.

LONDON SATURDAY, DECEMBER 22, 1900

IN no one disease is prognosis more difficult to determine than in pulmonary tuberculosis Dr ROBERT MAGUIRE in the Harveian Lectures before the Harveian Society of London which we recently published, gave a thoughtful disquisition on the several points that have to be considered by the physician before a decision can be arrived at He pointed out that a difficulty besets us even before we can approach the subject proper, and that is, to define what we understand by prognosis in each of the so called "stages" of the disease In the first stage, that of invasion we wish to attain to complete cure of the patient, an absolute arrest of the bacillary action, and a return of the lung to an entirely normal condition, though of course, the same tendency which led to the disease previously, being a tendency innate in the subject, will still exist That tendency having shown itself, perhaps being recognised for the first time on the outbreak of the lung trouble, may be combated by suitable means, but for a long period must remain with the patient When the disease has reached the second stage—according to the lecturer, "that of progress of the bacillary infection," or as it is more generally known, the "stage of softening"—arrest of the condition may still be hoped for, but if accomplished it will only be after a certain amount of damage to the lung tissue has been done—damage which is evidenced afterwards by cicatricial tissue and pleural adhesions Yet this damage may eventually give the patient no trouble if only the tendency to further attacks be kept well under control In the third stage we find total destruction of lung tissue, the result, as Dr MAGUIRE says, of bacillary action, and he maintains that the most favourable prognosis which can be made in the third stage must be vastly less favourable than that of either of the two preceding stages That a patient in the third stage of pulmonary tuberculosis is open to great danger of fresh activity cannot be doubted, but it is common medical experience that a patient who has reached the third stage has more chances of prolonged life than one in the first stage, and consequently Dr MAGUIRE'S general statement must be taken with reserve Dr MAGUIRE, however, sets forth very clearly the grounds upon which he founds a prognosis and shows that he does not make his deductions without examining his facts He takes into consideration the stage of the disease, but he also lays stress on the antecedent conditions, the nature of the physical signs, the localisation of the physical signs, and the significance of individual symptoms And he points out that if there are certain cases in which the physician does not hesitate to give an opinion, there are others which present the greatest difficulties Dr MAGUIRE draws particular attention to one class of cases in which the constitutional symptoms are out of all proportion greater than the physical signs He thinks that under such circumstances an unfavourable prognosis must be given, and he suggests the term "latent pulmonary tuberculosis" for this variety of the disease We think the term a good and explicit one, for, as he remarks, the tuberculosis itself is active enough but its pulmonary characteristic is latent And we agree that the prognosis in such cases is serious

Turning now to Dr MAGUIRE'S remarks on treatment we must speak with considerable reserve The experiments which he has described are novel and interesting, and were carried out with great care, while before attempting to treat patients he experimented upon himself Some of his experiences were apparently the reverse of pleasant He adopted the method of injecting into the veins a solution of formic aldehyde of the strength of 1 in 2000, which had been proved to be a most efficient germicide Dr. MAGUIRE was certainly bold in his resolution to employ such a medicament, but after proving on himself the strength that might be administered without danger he was justified in prescribing it for the relief of patients suffering from pulmonary tuberculosis Hitherto the use of germicides in this disease given with the idea of directly attacking the bacillus of tuberculosis in the lung, has not met with great success; indeed, the energies of physicians have been directed rather in the direction of starving out the organisms, so to speak, by rendering the tissues unsuitable for their growth, and the favourable results obtained by this means have been undoubted Naturally, if a means can be devised by which the bacilli can also be destroyed by the use of drugs which at the same time do no harm to the host, a great advance has been made Whether Dr MAGUIRE has succeeded in solving the problem remains to be proved He did not give details of the cases treated by his method but merely the summary of the results He stated that "almost every case has shown some improvement" Before expressing any definite opinion on the subject we think it well that some time should elapse so that those cases already injected may be watched, and also to enable a larger number of cases to be observed No bad results seem to have followed the injections We demur, however, to the statement that "no fear need be entertained from the entrance of a small amount of air into the veins This is an old fashioned surgical fallacy" A "small amount of air' in the vein may do no harm, but as this fortunate result depends upon what is meant by a "small amount it is better that no air should be admitted to the circulation

We publish this week a lecture delivered at the Brompton Hospital for Consumption and Diseases of the Chest by Dr ARTHUR LATHAM, physician to the hospital, the subject of which is the Tuberculosis of Early Childhood Dr LATHAM confesses that our knowledge of the etiology of pulmonary tuberculosis is not so definite as we could wish and forms an insufficient basis for the dogmatic assertions of the present day He adheres to the old established belief that predisposition—the hereditary and acquired character of the soil—is a most important factor The discovery of the tubercle bacillus promised to deal a death blow at the hereditary character of pulmonary tuberculosis, as investigations proceeded, however, it was speedily found that the bacillus itself did not explain the entire etiology and that a second etiological factor existed, the exact nature of which has not been established, and until this has been accomplished we agree with Dr. LATHAM that the hereditary factor cannot be eliminated. He further expresses his belief in the important rôle played in infantile tuberculosis by the milk-supply. This was fully proved by the investigations conducted under the instructions of the Royal Commission on Tuberculosis. Arguing from a pathological point of view Dr. LATHAM holds that in adults, in whom in the majority of cases an air infection has to be dealt with, the lungs are affected before, and more extensively than, the bronchial glands; consequently if in children the primary affection is also through the air-supply a similar condition of things should be found, whereas the opposite condition exists. That is to say, that in young children tuberculous disease of the lungs does not often occur unless the pathogenic bacilli first establish a hold on and produce more or less advanced pathological changes in, the bronchial glands. This is an interesting point and one that might have an important bearing upon treatment.

The observations of Dr. MAGUIRE and Dr. LATHAM show that investigations of pulmonary tuberculosis from every point of view are constantly being made and that a continuous fight against the disease is being waged. The British Congress on Tuberculosis which is to be held in London next year will doubtless stimulate many others to bring before the profession the results of their studies and investigations. The new century could not, from a medical point of view, open better than by registering a decided advance in our knowledge of the nature and mode of prevention of one of the most prevalent and fatal of diseases.

THE circumstances which led to the founding of the Birmingham Consultative Medical and Surgical Institution are well known to our readers, for we have explained at some length the principles upon which the institution was established, and have expressed at the same time our entire disapproval of them. The main reason asserted for its proposed existence was that there appeared to be no proper medical provision for a certain class of the population in Birmingham whose financial position, while it placed them above taking advantage of charitable institutions, was yet insufficient to allow them to pay the full fees of consulting physicians and surgeons. It was therefore suggested that an institution should be formed where the advice of "consultants" could be obtained for a fee of half a guinea; and advertisements were issued for a "consulting physician" who for a salary of £500 a year was to give his whole time to the work. The fees, of course, were to go into the exchequer of the institution. As soon as the proposal was publicly mooted a meeting of members of the medical profession in Birmingham was convened by Dr. R. SAUNDBY when resolutions condemning the project were unanimously passed. At the same time it was intimated that with the exception of a few of the senior consultants, who for obvious and proper reasons stood aside, the physicians and surgeons of the city were willing to see patients for a fee of half a guinea provided that satisfactory evidence was adduced that these patients were unable to pay the full fee. This generous offer was, however, totally disregarded, and Dr. HENRY WARD IRVINE was appointed consulting physician to the institution.

At the recent meeting of the General Medical Council Dr. IRVINE was summoned to answer the charge "that he accepted the office of consulting physician to the Consultative Medical and Surgical Institution, Birmingham, at a salary, and approved or acquiesced in the extensive advertisements issued by that institution by posters exhibited in the various manufactories, trading establishments, and mercantile offices of the city, by advertisements in the daily press, and by lithographed letters and printed pamphlets, widely circulated, setting forth conspicuously his name and medical qualifications, and referring to his special ability as a general consulting practitioner, and soliciting and inviting the public to consult him at a reduced fee." The "complainant" nominally was Dr. SAUNDBY, but really the medical staffs of the Queen's Hospital and the General Hospital, Birmingham, of whom Dr. SAUNDBY was the mouthpiece. The case was conducted on behalf of the medical staffs by the Medical Defence Union, whose council once again demonstrated the excellent service that they are prepared to render not only to their own members but, when the occasion warrants it, to the medical profession generally. Dr. A. G. BATEMAN, the general secretary to the Union, conducted the case on behalf of his council, while Dr. IRVINE attended with Mr. FREEMAN, Q.C. Dr. BATEMAN pointed out the extent to which the advertisements had been circulated, and produced a copy of a broadsheet, containing Dr. IRVINE'S name and qualifications, the hours of consultation, and fees, which had been distributed to restaurants, mercantile offices, factories, and board schools. He urged that there could be no question that Dr. IRVINE'S conduct was "infamous in a professional respect," and that the fact that this advertising was done under the ægis of an institution managed by laymen did not alter the gravity of the professional offence and could not be held to excuse or to palliate such conduct. Mr. FREEMAN argued that the institution had been set on foot by public-spirited citizens with no view whatever to their own profit. He called Mr. ARTHUR CHAMBERLAIN, who maintained that the institution was a philanthropic undertaking which the founders hoped would essentially become self-supporting, but that it could not be called a charity, because one of the objects which the management had in view was the preservation of the self-respect of persons who ought not to seek aid from a hospital but were yet in need of some higher advice than they would get from their "street doctor." This distinction between a "philanthropic" and "charitable" establishment we find it a little difficult to appreciate, and we most strongly protest against the use of the term "street doctor." Mr. ARTHUR CHAMBERLAIN evidently meant by this phrase to belittle the position and services of the Birmingham general practitioners, a course which will not commend itself to the public any more than it does to us. For the public knows well the sterling as well as generous nature of the work done by our profession, and may fail to see much philanthropy in the offer of the institution to do, through Dr. IRVINE'S single hands, what the genuine consultants of Birmingham are willing to do for the same money but with more experience and more varied knowledge

Dr BATEMAN drew attention to the fact that there was no wage-limit specified and that a portion of the funds had been obtained as a "loan" from the Hospital Saturday Fund Committee of Birmingham, a charitable body The main points, however, which Dr BATEMAN tried to establish before the General Medical Council were that Dr IRVINE was aware of the character of the advertisements and that he had a direct pecuniary advantage in the success of the institution With regard to the first, Dr IRVINE at first stated that he had never seen one of the objectionable placards, but in cross-examination admitted that there was one in the institution, and in reference to the second point Mr WILLIAM COOK, the chairman of the Committee of the Hospital Saturday Fund of Birmingham, stated in his evidence that if Dr IRVINE was found to be worth more than £500 a year and the committee had the funds to pay he "supposed the committee would like to see him properly paid' On a careful consideration of the evidence the General Medical Council came to the inevitable conclusion that the charge against Dr IRVINE had been proved, but adjourned adjudication until the next session so that Dr IRVINE could consider his position This deliverance of the General Medical Council will commend itself to all members of the medical profession who have followed the case Dr IRVINE has undoubtedly sinned against the canons of medical etiquette Now that the opinion of the supreme court of medical ethics has pronounced against him he will doubtless sever his connexion with an institution which, although apparently formed with very good intentions, was run on lines which cannot be approved by the medical profession We entirely endorse the action taken by the General Medical Council and congratulate the council and officials of the Medical Defence Union on the fair, just, and open manner in which the case was conducted

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THE Christmas holidays are again upon us The lapse of nearly 2000 years makes no difference in their interest or their significance to the great bulk of our race The peace and goodwill promised in the dim past still recede into the indefinite future and the conflict of races shows little abatement But still we believe the promise to hold good, even while science, as it progresses with long strides, deals roughly with the dogmas which have their centre in the event which christens our holiday But still we keep our Christmastide, and, in spite of all that tends to spoil the simplicity of our belief, faith still survives and with it hope and charity We suspend our business in wholesale fashion and we try, or profess to try, to suspend our uncharitableness And if we are as a nation at war, as we shall be on next Christmas Day, the season will be a fitting one wherein to consider as a nation how to make the war, and make it quickly, a means of peace

Let nobody say, therefore, that we have no longer a use for Christmas Day A festival of charity, a date of general reconciliation, is more needed than ever, and we cannot begin the new century better than by carrying into it the Christmas spirit It is hard for many of us while our sons and brothers are still at the front fighting for the maintenance of our rights and influence for good in the world to enter with spirit into the gaiety which we associate with the season But the more we do so, the more complete will be the victory over the petty spite and misunderstanding of which for the moment we as a nation are the victims and the better will be our national health He is a poor physician who does not at times recognise the moral side of human nature and the enormous influence which it exerts on human life both in its national and its individual form Ours is a profession which has to aim at securing for every member of the community the healthy mind in the healthy body The advance in civilisation only emphasises the necessity for recognising our double charge What intelligent British practitioner does not know that for 12 or 15 months he has been dealing with human nature under conditions of depression and care which have complicated disease and antagonised the operation of his remedies The nation has been rich it has been able to eat and to drink to the full, but it has been restless, dissatisfied, and neurotic The state of war is not normal to us as a nation, though we generally contrive by the blessing of Providence to come out of war, possibly after many blunders, on the winning side Our great victories are those of peace, and peace is our greatest interest We do well, then, to make much of Christmas to refuse to believe that any brave men are our lasting enemies, and to cultivate the spirit of peace and goodwill A little good statesmanship in our politicians and our soldiers may make the world in the coming century a very happy world for the subjects of the QUEEN

Taking a more domestic view of Christmas holidays we find much to interest us as a profession To no one more than to a medical man can the disposition to abolish for a season the cares of the poor appeal, for no one knows better than the medical man what the stress of poverty really means to our less fortunate brethren A time when all are trying to do something to assuage the inequalities of circumstance is a time when in a sense the whole people become physicians

"All have to spare none are too poor
When want with winter comes
The loaf is never all your own
Then scatter out the crumbs
Soon winter falls upon your life,
The day of reckoning comes
Against your sins, by high decree
Are weighed these scattered crumbs

But we need to be on our guard against the evils of indiscriminate charity, and very specially against all encouragement of drunkenness The words of Lord ROBERTS pleading for care lest we tempt our returning soldiers into vice are still ringing in the nation's ears It is not too much to ask that whatever forms Christmas kindness to the poor may take it will not take the form of "treating" Coals, clothing, food, entertainment and all forms of personal kindness must supersede this discredited custom And the longer that charitable efforts are continued the better, it is a poor way of honouring Christmas to expend all our care for the poor in one day We are on the eve of new efforts to abate the extreme poverty which discredits our civilisation, and the more personal consideration each one of us can give to the problem the better

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WE have received two small pamphlets, published by Messrs John Bale, Sons, and Danielsson, Limited, Great

Titchfield-street, London, W. Their titles are, "Counsel for Young and Unmarried Men respecting Chastity," and "The Proper Discipline to be observed by Married People in regard to Conjugal Intercourse," and they are stated to be issued "on high medical authority and with episcopal sanction." Their object is sufficiently indicated by their titles. The medical authority concerned in the production dwells with suitable brevity upon the physiological aspects of the case and his observations are accurate and to the point. If we cannot speak as highly of the advice emanating from the "clerical" authority this is not because we do not see that a sincere attempt has been made to do good. But clerical admonitions would prove more impressive if they avoided the appearance of being founded upon an intimate acquaintance with what is right. Thinking men and women are not prone to adopt views the reasons for which they cannot follow, however sincerely those views may be urged upon them by teachers having a personal belief in their correctness. We have two or three general observations to submit upon the subject, and more than general observations we cannot make, for individual appetites so vary that we do not wish to be the medium for recording any hard and-fast limits, even while we see the benefit that might accrue to some people from such guidance. In the unmarried, and especially in the young, continence is the noble aim. We do not dwell for the moment (though this aspect is vitally important) upon the narrower and more selfish view of the physical and moral evils which incontinence may produce: we rather assume the higher ground that a man who ruins, or helps to maintain the ruin of, a female is a sinner against the social law of love. Each young man should act as a trustee for the chastity of every woman and should account as a personal insult and degradation any suggestion to mar her highest development into the type of womanhood. This is the ideal attitude towards unchastity, whether it be assumed out of physiological knowledge, out of faith in the beneficent effect of a Divine will, or (best of all) out of a fortunate blend of both reasons. But incontinence besets the married as well as those to whom sexual gratification is morally forbidden. In married life, as members of our profession know too well, there frequently occurs a reversion to primitive customs. The wife is still too often considered to be largely a mode of sensual gratification to the man instead of a helpmate, entitled to equal respect of her feelings and sense of dignity. This is well known to the medical man, for it is part of the routine of his life to receive confidences of a perfectly intimate character. And his counsel, based upon knowledge that no general laws can be laid down, is always towards moderation. But we would suggest to the Church a reform of the Marriage Service, which in its present terms encourages the belief that marriage is largely a device for the multiplication of children and that the wife in this respect is to "obey" the demands of a husband, however insatiable. Any teaching which appears to support this view can only debase, rather than elevate, married life. The Law, following in the steps of the Church, gives a carnal interpretation of marriage, and treats the tie as mainly one of sensual meaning, and so the full dignity of conjugal union is missed. We need an equitable and righteous reform, possible only under fresher and purer conceptions, and a more elevated view accordingly of the married state—a state in which the intellectual, moral, social, and spiritual affinities between man and wife shall be cultivated and sought, in place of the more debasing notion which is too generally sanctioned by Church and Law, and which largely forms the predominating element in popular views. The Law by the growing recognition of the personal rights of the wife has shown that its purview of married life is becoming larger and more liberal. Medicine plays its part by inculcating moderation. There are ways in which the Church might help.

Annotations.

"Ne quid nimis"

LORD SALISBURY ON THE HOUSING OF THE POOR.

The weighty words which Lord Salisbury has just pronounced on the housing of the poor will, we trust, be taken to heart throughout the land, but more especially by the new borough councils of the metropolis. We are glad to see that the anxieties caused by the war did not prevent the Premier from devoting some consideration to this most important social question. It is true that these questions are not disconnected, though at first sight they seem to be widely apart. A moment's thought, however, suffices to make it clear that it is not from the prosperous artisan class, but rather from among the unskilled labourers, that a considerable proportion of the rank and file of the army must be recruited. In the labour market the recruiting sergeant can scarcely compete with those who work nine hours a day for 9*d*. an hour It is among men who, when in work, earn less than £1 a week that the inducement to enlist must be the strongest. But, on the other hand, if the members of this, the poorer, class are obliged on account of their poverty to huddle together in overcrowded, insanitary houses, their physical powers will be so reduced as to render them unfit for military service. The evil, however, has gone even beyond this point, for workers who are earning higher wages and are willing to pay considerable sums in rent often find it difficult to obtain decent houses, at least in London. Addressing the National Union of Conservative Associations on Dec. 18th, Lord Salisbury recommended his party to devote all their powers to get rid of what he described as a scandal to our civilisation, namely—"the suffering which many of the working-classes have to undergo in order to obtain even the most moderate, I might say the most pitiable, accommodation." He then insisted that this was the most urgent of all social questions and hinted that it was not to be settled by the hard and fast conditions of the market. On the contrary, Lord Salisbury reminded his audience that he had attempted to pass a Bill so that the site of Millbank Prison should be sold at its cost price and not at its market price on condition that it should be used only for the purpose of erecting habitations for the poor. It is not creditable to the House of Commons that it should have rejected this proposal though it had been adopted in the House of Lords. Perhaps now that the grievance is becoming more and more menacing there will be a better disposition shown, and some readiness will be displayed to forego the driving of hard bargains—the exacting of the uttermost penny when this can only be achieved by bringing about the degradation, physical and moral, of large sections of the population.

"FAITH-CURISTS" CONVICTED AND IMPRISONED.

The United States have given birth to many strange sects who have endowed themselves with wonderful and eccentric names. As a rule, these little Bethels vegetate in comparative seclusion, so that perhaps the "Fire-Baptized Holiness Mission" is not altogether sorry at having acquired the publicity of cheap martyrdom. Self-advertisement has become a fine art in America, but we should think that the line might be drawn at manslaughter. Among the peculiarities of this peculiar sect with a peculiar name are their faith in mind cure and their total disbelief in medicine and medical men. Certainly a good deal may be said as to the influence of the mind over the body, but even this theory presupposes the existence of a mind to influence the body. It is doubtful, however, if anyone would venture to define what amount of mind force or will power an infant seven months old can be directed to exercise over himself. Edward Black was the name of the infant in question. According to the statement of his mother, he had been sickly from birth and he was ill when he was confided to the charge of Henry E. Sollenberger and Ezra Sheets, who are "faith-curists" of the "Beulah Orphanage" belonging to the "Fire-Baptized Holiness Mission." The child was first fed on sterilised milk and then on condensed milk, but in a few days he died. Summoned to appear before the court at Philadelphia on the charge of manslaughter, Sollenberger pleaded that he was taught by the Bible to leave all persons who were ill in the hands of the Supreme Being and that medicine was poison to the human system. He did not explain why he had not left the milk in the hands of the Supreme Being instead of having it sterilised, which was surely a medical precaution and quite as unnatural or artificial a process as the taking of medicine. The defendant, it appears, was born in Kansas and was by trade a carpenter, but he declared that he was "controlled by the Spirit" which "called" him to Philadelphia and "directed" his actions. Neither the judge nor apparently anyone else in the court doubted the defendant's sincerity; but as he openly proclaimed that "doctoring was against his principles" and that therefore he had not attempted to obtain any medical advice, both Sollenberger and Ezra Sheets were condemned to three months' imprisonment. 'They cannot complain that this is a severe sentence;' we hope it may suffice to maintain the law and to prevent fatal experiments being made upon defenceless infants. We are not sure but that the mother should likewise have shared in the penalty, for it is a strange aberration on the part of parents to confide sick children to people who are known to repudiate all idea of seeking medical advice. If this sort of thing was sanctioned "the making of angels," as the French say, which constitutes the most profitable phase of baby-farming, would meet with serious competition from unscrupulous "faith-curists." Under the mantle of religious convictions much could be done to hasten the departure of unwelcome infants.

THE BOROUGH OF LAMBETH AND BACTERIOLOGICAL EXAMINATIONS.

Dr. Joseph Priestley, medical officer of health of the borough of Lambeth, has issued a very interesting report dealing with the results of 1000 bacteriological examinations made in the borough laboratory. The laboratory was opened in 1899 at Loughborough, and the work done has been mainly concerned with tuberculosis, typhoid fever, and diphtheria. Out of 200 samples of sputum from doubtful cases of tuberculosis 68, or 34 per cent., were found to contain tubercle bacilli. Of 178 samples of blood from suspected cases of typhoid fever 97, or 54 5 per cent., gave the Widal reaction. Of 620 samples of membrane and secretion from the throats of patients suspected of being affected with diphtheria 191, or 30 8 per cent., gave the true Klebs-Loffler bacillus. A good example of the value of bacteriological examination is the following history of a school in Lambeth:—

> "Out of a total of 137 scholars 57 suspicious throats were from time to time examined bacteriologically, with the result that 48 showed the presence of bacilli—four the Klebs-Löffler (true diphtheria) bacilli and 38 the Hoffmann (pseudo-diphtheria) bacilli. The four cases of diphtheria were at once sent to the hospital, while the 38 pseudo-patients were isolated in a special isolation house belonging to the school, but distinct and away from the main building, and not allowed to return to the main building until further bacteriological examination of their throats failed to show the pseudo-bacilli. The preventive measures which I suggested, and which were strictly carried out by the medical attendant, may be mentioned. The scholars were carefully watched from day to day, suspicious throats swabbed and examined bacteriologically, and afterwards isolated, or not, according as such examinations gave positive or negative results. In this way the whole of the doubtful cases were separated out and kept under observation in an isolated building, where they remained until such time as further bacteriological examinations showed the scholars' throats to be free from infection. Then, and not till then, were the scholars gradually drafted back into the school, after their clothes and persons had been efficiently disinfected. The result justified the means taken, as the outbreak of pseudo-diphtheria has been stamped out; whilst, although pseudo-throats appear, in the light of our present knowledge, to form a suitable breeding ground upon which true diphtheria may at any time become ingrafted and spread rapidly (the pseudo-bacilli apparently at times changing into the true diphtheria bacilli, and *vice versâ*) only one such true diphtheria case developed, making a total of five diphtheria cases altogether. It was not necessary to take the extreme measure of closing the school and distributing the scholars over various parts of London and elsewhere—a procedure that may have to be adopted at times—e g., when the school buildings are found to be insanitary, the school attendance much interfered with, &c."

These results show very well how great an aid to preventive medicine is a careful bacteriological examination.

ALCOHOLIC HOMICIDE.

Dr. W. C. Sullivan, deputy medical officer of Her Majesty's Prison, Pentonville, has published in the October number of the *Journal of Mental Science* a paper on Alcoholic Homicide based on a series of 80 observations, comprising 36 cases of homicide and 44 cases of grave homicidal attempts "in which the criminal act could in some considerable measure be assigned to the influence of alcoholism." To illustrate the special characteristics of the homicide of alcoholism several cases are described, of which the following (the first) is typical It was that of a male, aged 28 years, a sailor. The father was mentally unstable and was "subject to fits." The paternal uncle died insane and the patient himself was said to have had sunstroke. When sober he was of normal feeling and intelligence, but when intoxicated he was violent. He had three times been convicted for having been drunk and disorderly. On the evening of the eleventh day of a severe drinking bout he was seen going home with his wife and appeared to be on "boisterously affectionate" terms with her. During the night he cut her throat with a razor as she lay in bed and then made an almost successful attempt to commit suicide with the same weapon. He professed to have no memory of the act and could not at any subsequent time suggest a motive for it. While under treatment for his self inflicted wound he suffered from the severe digestive and nervous symptoms of alcoholism. Dr. Sullivan regards this as a good example of the "automatic type of alcoholic homicide. As in the corresponding form of alcoholic suicide[1] there is an entire absence of apparent motive, the act is committed in a state of acute intoxication, no trace is left in the agent's memory, and finally, to show the identity in nature and origin of the two impulses, the murder is followed by a suicidal attempt." In explanation of this it is pointed out that the cerebral condition in alcoholism is one which may be termed excitability of the so-called psycho-motor or kinæsthetic functions. In this condition the slightest suggestion arising from whatever cause within the mind tends to be translated into action with extraordinary facility. A clear instance of such agency, trivial in itself but potent in alcoholics, is afforded in a case recorded by Professor Despine, where one of four drunkards who were carousing together suggested the hanging of the most intoxicated of the party—a suggestion which was promptly carried out, with results which only failed of being fatal through the accident of outside intervention. In other alcoholic subjects murder of a wife may be the result of delusions of marital infidelity or of poisoning, which are very prone to develop in chronic alcoholism. In others again a state of sub-conscious automatism similar to that of the post-epileptic stage may be associated with the homicidal act. In few cases is there any degree of lucidity and purposiveness in the act. Chronicity and long indulgence in the drinking habit are the natural antecedents of true alcoholic homicide, except in cases where there exists initially some degree of mental instability, hereditary or acquired. There may then be a very precocious development of impulsive automatism in which the rôle of intoxication is largely overshadowed by that of the primary mental disorder. Cases of this kind form the transition to insane homicide unconnected with alcoholism

THE SANITARY STATE OF MADEIRA.

Dr. Krohn of Funchal, who, in collaboration with an Englishman, Dr. F. J. Hicks, has charge of the Seaman's Hospital, is the author of a report on the sanitary condition of Madeira which has been published in the *Archiv fur Schiffs- und Tropen-Hygiene*, vol. iii., 1899. The water-supply of Funchal is of two kinds, one for drinking purposes and the other for gardens, baths, and closets. The former, which is distributed by means of "hermetically closed conduits," is obtained from five chief sources above the town, and according to analyses made in England its quality is excellent in every respect. There are no sewers in the island, night-soil being diverted into loose-bottomed cesspits, but happily under such circumstances water-closets are the exception. Scavenging in Funchal is only fairly attended to, but the markets are maintained in an exemplary state of cleanliness. Madeira is celebrated for the magnificence of its climate, and yet according to Dr. Krohn the mortality amongst the natives was at the rate of 27·4 per 1000 in 1897, and higher still during the two preceding years. Out of 1067 deaths from all causes (diseases) in 1897 there were 84 from phthisis pulmonalis. Tuberculosis, says Dr. Krohn, is widely spread among the lower classes, as are also pneumonia and bronchitis, which are very fatal to children. Scarlet fever and small-pox are of rare occurrence, but diphtheria, measles, and whooping-cough are common, while typhoid fever is extremely prevalent among the lower orders. The type of these affections is, however, remarkably mild, the mean mortality of the last-mentioned during 12 years having been 0·97 per 1000 inhabitants. The disease which is most prevalent in Madeira would seem to be diarrhœa, but cases of dysentery are only occasionally met with. Leprosy, which formerly was very common in the island, is now said to be dying out, the number of patients under treatment in the special hospital being only four, of whom two were suffering from elephantiasis. There are five hospitals in Funchal and its vicinity: (1) the military hospital, which "leaves much to be desired from every point of view"; (2) the civil hospital, containing 80 beds; (3) the above-mentioned lazar-house; (4) the Donna Amelia Hospital, which is reserved for patients suffering from pulmonary tuberculosis; and (5) the Seaman's Hospital, founded by Dr. Goldschmidt, where mariners of all nationalities are admitted on payment of two and a half francs per diem. Notwithstanding the drawbacks which he enumerates Dr. Krohn strenuously asserts that Funchal makes a most admirable sanatorium for sufferers from tuberculosis and malaria. No doubt the natural advantages, including complete freedom from malaria, are very great, but evidently much might still be done to supplement them. Madeira was originally discovered in a romantic way by an Englishman, Mr. Macham, in 1345, and it was not until 1419 that it was occupied by the Portuguese. In 1807, when the Royal Family of Portugal emigrated to the Brazils, Madeira was taken possession of by Admiral Hood and Lord Beresford, but after some time it was restored to the Portuguese Crown.

THE RÔLE OF CONSANGUINITY IN THE ETIOLOGY OF EPILEPSY, HYSTERIA, IDIOCY, AND IMBECILITY.

A contribution of interest on the above subject appears in a recent *Thèse de Paris* (1900) by Dr. Theophile Gillet of Paris, dealing with the results of consanguineous marriages in relation to certain neuroses and psychoses. Dr. Rilliet and Dr. Barthez in their classical "Treatise on the Diseases of Children" (1859) had stated that the results of consanguinity of parents were as follows. First, fewer births; secondly, more miscarriages and still-births than the average; thirdly, weakness (physical and moral) of the surviving children; fourthly, a special tendency in the offspring to diseases of the nervous system, such as epilepsy, idiocy and imbecility, deaf-mutism, and local cerebral palsies; and lastly, a special proclivity in the offspring to tuberculous degeneracy. It has since been stated that among the more frequent results of consanguinity in the parents are such abnormalities as albinism, deaf-mutism, and retinitis pigmentosa in the offspring, even in cases where but one parent showed the specific morbid taint. The observations of Dr. Gillet were made at the Bicêtre during 11 years (from 1889 to 1900), during which period 1228 children were under care and treatment. Inquiries were also made into the histories of 425 girl patients at the Fondation Vallée, Paris, an institution for children suffering from nervous diseases. The total number of cases investigated was, therefore, 1653. Inquiries into the family histories of these patients elicited the fact that there were 45 instances of consanguineous marriage in the parents. These 45 families were minutely studied, with the result that the offspring of these families taken *en bloc* showed 19 cases of idiocy, 14 of epilepsy (idiopathic or symptomatic), eight of imbecility, three of hydrocephalus, one of chorea, and one of idiocy, a total of 46 grave neuroses and cerebral defects. The relative degrees of consanguinity were as follows. In 28 instances the father and mother were first cousins, in nine they were the children of first cousins, in seven instances they were cousins of the third, fourth, and fifth degree, and in one case uncle and niece. Inquiry into the condition of their children during infancy revealed the fact that convulsions and meningitis were notably prevalent, while idiocy or imbecility and chorea were also found to prevail in an abnormally high degree. Taking the total of all the surviving children of these consanguineous marriages it appeared that 2 7 per cent of them suffered from idiocy, epilepsy, imbecility, hysteria, or other grave cerebral disorders—a proportion very much larger than that generally present among the offspring of those in the same rank of life but who had not contracted consanguineous marriages

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[1] The Lancet, April 14th, 1900, p. 1031.

THE ROYAL INSTITUTION OF GREAT BRITAIN

AMONG the Friday evening lectures to be delivered before Laster, 1901, at the Royal Institution are "Gases at the Beginning and End of the Century," by Professor Dewar, on Jan 18th; "The Existence of Bodies Smaller than Atoms" by Professor J J Thomson on Feb 15th, and "Some Recent Work on Diffusion," by Mr Horace T Brown, on March 22nd The Tuesday arrangements will include a series of five lectures on "The Cell as the Unit of Life,' by Dr Allan Macfadyen, and they will be delivered on Feb 26th, and March 5th, 12th, 19th, and 26th "On the Origin of Vertebrate Animals' will be the subject of three Thursday lectures by Dr Arthur Whilley, the dates of delivery being Jan 17th, 24th, and 31st

THE WATER-SUPPLY OF NEW YORK CITY

THE water supply of New York, though more plenteous by far than that of London and than that of most of the large European cities, is the cause of much anxiety to citizens and sanitarians It is argued, and undoubtedly with truth, that the supply for Greater New York is not keeping pace with the growth in population, and that under present conditions this supply will soon become inadequate The Merchants' Association of New York have recently made an exhaustive study of the question and as a result of their investigations the following data have been gathered All the supply of Manhattan and the Bronx—the two boroughs constituting New York until 1897—is furnished by the city with the exception of 1,000,000 gallons daily supplied by a private company Brooklyn is almost wholly supplied with water from ponds and "driven wells,' all but 7 per cent of which are under municipal control Richmond and Queens, the two other boroughs which make up Greater New York, are supplied by wells owned nearly entirely by private corporations The average daily consumption of all these boroughs in 1899 was 371,778 000 gallons, an estimated average daily consumption per capita of 103 gallons The total daily yield was about 409,000 000, but in the boroughs of Brooklyn, Queens, and Richmond the present consumption is shown to be nearly equal to the present supply, while it is estimated that in 1903 the consumption in Manhattan and the Bronx will nearly equal the supply at that time available under present methods The conclusions reached, therefore, are that an additional supply of water for the entire city is imperative, and, seeing that from six to seven years will be necessary to complete the work of furnishing this additional supply, that immediate steps should be taken to make a beginning The plan most generally favoured would appear to be the utilisation of the Hudson river above Poughkeepsie about 70 miles from New York The Medical Society of the County of New York has been interesting itself in the matter and Dr Chapin, the chairman of the Committee on Hygiene of that body, has lately published in his annual report on the public health of New York a lengthy review of the situation as regards the water supply Referring to the Hudson River scheme, of which he approves, he says "It is proposed to filter this water, the experience of other cities having shown that filtration is a perfect method of purifying water, being, indeed only a scientific reproduction of a process of nature That filtration is effective in removing impurities and germs of disease is amply proved by the experience of Albany, Poughkeepsie, London, Hamburgh, and other cities The reduction of typhoid fever and diarrhœal diseases with the introduction of filtered water has occurred in a large number of cities in Europe and America ' Dr Chapin also strongly advises that any arrangement for increasing the water supply of New York be under municipal management and control and not by contract with any private company, the cost to the consumer being almost always less under public control than under private ownership According to our New York correspondent much dissatisfaction with the quality of water supplied to New York City is now being evinced by the general public so that it seems probable that immediate steps will be taken to remedy the evil

THE DIAGNOSIS OF POTT'S DISEASE

BEFORE the Section of Orthopædic Surgery at the New York Academy of Medicine Dr H Gibney recently read a paper on the Diagnosis of Pott's Disease, which was illustrated by the exhibition of photographs and the presentation of some interesting patients Dr Gibney said that photographs clearly presented the attitudes but failed to display the characteristic movements and deportment of the patient affected with Pott's disease, but the accompanying figure from his collection graphically demonstrates the over erect attitude which was assumed by one of the sufferers throwing light on the mechanism of the production of the lordosis which appears as a compensating curve below the kyphos

DIPHTHERIA BACILLI IN HEALTHY NOSES AND THROATS

THE *Boston Medical and Surgical Journal* of Nov 22nd contains a valuable paper on this important subject by Dr Francis P Denny, bacteriologist of the Brookline Board of Health Kober found from a review of all the reports which he could collect that of healthy persons who had not been exposed to diphtheria 7 per cent had Klebs Loffler bacilli in their throats, while of those who had been thus exposed 18 8 per cent exhibited these organisms But his own investigations showed only 0 83 per cent among the non exposed and 8 per cent among the exposed The high percentages found in literature are to be explained by the fact that many of the cultures were made from individuals living in institutions or in the crowded tenements of large cities Another reason for the high percentages is that in many reports no distinction is made between virulent and non-virulent bacilli. The latter do not differ morphologically from the Klebs-Löffler bacilli but they are probably not a source of danger. They may show slight variations of growth from that of virulent bacilli on certain media, the most important of which is failure to produce acid in sugar bouillon. These bacilli have never been made virulent by experimental cultivation. The bacilli found in healthy persons who have been exposed to the disease are usually virulent. Virulent bacilli may multiply in the throats and noses of certain persons without producing symptoms because these persons are immune to the disease, just as they multiply in the throats of those convalescing from diphtheria. These healthy individuals with virulent bacilli in their throats can communicate diphtheria to others. In coughing, sneezing, and even, according to Pflügger, in speaking, the bacilli are scattered about. They are carried from the mouth on towels, handkerchiefs, forks, spoons, and cups. Many outbreaks of diphtheria in children's institutions which persisted for a long time, despite the fact that all sick children were promptly isolated and the rooms were disinfected, have been quickly stamped out when the healthy children's throats have been tested and when those children whose throats contained bacilli have been isolated. In examining a healthy person for the bacilli of diphtheria cultures should be made from both the nose and the throat, for bacilli may be present in the former and absent in the latter. It is very important to remember that antitoxin prevents only the development of symptoms and not the growth of bacilli in the throat. Thus its prophylactic use may favour the spread of diphtheria, for the artificially immunised persons who otherwise would have developed symptoms and have been isolated are allowed freedom while there are abundant bacilli in their throats. Hence the importance of making cultures from their throats and isolating them if necessary. The nurses in charge of cases of diphtheria frequently have bacilli in their throats without developing the disease. The following narrative shows the value of the examination of the throats of healthy persons for the bacilli of diphtheria. Two children of a milkman's family were sent to hospital suffering from diphtheria. As it was thought that other inmates of the house might harbour the bacilli in their throats and infect the milk cultures were made from their throats. These were negative. About three weeks later diphtheria began to appear among the milkman's customers. Cultures were again made from the milkman's household. Three healthy men, two of whom did the milking, were found to harbour the bacilli of diphtheria, which were very abundant and which proved to be virulent to guinea-pigs. At Brookline during a recent epidemic of diphtheria culture outfits were kept at all the schools. When a child was taken ill with diphtheria inspectors made cultures from those children who sat nearest to the affected child in school. When more than one case occurred in a room cultures were made from all the children in that room. In one case three children who sat in adjoining seats were taken ill simultaneously with diphtheria, and cultures of the bacilli of diphtheria were obtained from the throats of two perfectly healthy children sitting near them.

THE HEREFORDSHIRE GENERAL INFIRMARY.

MOST visitors to the city of Hereford will remember the General Infirmary buildings situated in the picturesque grounds overlooking the river Wye. Established as long ago as 1776 the infirmary with its 100 beds has been carrying on most serviceable work, not only among the inhabitants of Herefordshire, but there has been found room in its wards for patients from the adjoining counties of Worcester, Monmouth, and Radnor. In order to secure more sustained support in the county it was decided early in the present year to make certain alterations in the form of management and at a recent meeting of the governors some definite changes were made. The first proposal was for a change of name. For a century and a quarter the institution has been known as the Hereford General Infirmary and it was suggested that a more comprehensive, though certainly less euphonious, title would be the Hereford County and City Hospital. After several other names had been discussed it was decided, wisely we think, to make the simple alteration to the Herefordshire General Infirmary. With only one other material modification of the constitution are we now concerned and that is in connexion with the representation of the medical staff upon the board of management. Hitherto the whole of the staff have occupied seats upon the board, but it would appear from the reports in the local newspapers that some of the lay members have occasionally found themselves in a minority with the whole of the staff opposed to them; it was decided, therefore, that the staff should elect two of their number upon the board of management. The medical staff are stated to have quite acquiesced in this proposal, so that if they are satisfied we can have little to say on the matter, but as the two medical members will be only one-sixth of the whole board no harm would have been done if the number had been doubled, for even then they would have been in a minority.

WORKMEN'S DWELLINGS IN COLLIERY DISTRICTS

THE exceptionally flourishing condition of the coal trade has given special prominence to the question of the housing of the working-classes in colliery districts, for the higher wages obtained by colliers has attracted to the coal-pits quite an army of labourers who have never before worked underground. In the South Wales coalfield especially the want of houses is being noticeably felt and houses are allowed by sanitary officials to be occupied which ordinarily would be condemned, solely because there is absolutely nowhere else for the occupants to go, while it is almost the exception in many localities to find a cottage house part of which is not sublet in "apartments" or to single men lodgers. Usually private enterprise is to be relied upon to provide a remedy for such deplorable conditions as those indicated, but the present high price of building materials and the increased wages that are now prevailing are quite sufficient to make the speculative builder hesitate before embarking upon any very extensive undertaking. It is gratifying to find that in some districts the sanitary authorities are themselves undertaking the duty of providing suitable housing accommodation. At Nantyglo Part III. of the Housing of the Working Classes Act, 1890, has been adopted and the district council are now in a position to erect lodging-houses and workmen's cottages. At Merthyr Tydvil the working men have for several months been urging upon the urban district council the desirability of erecting workmen's dwellings and an initial step has been taken in seeking for power to borrow the sum of £15,000 for the purpose of building in the first instance 100 cottages. At the Local Government Board inquiry recently held in connexion with this scheme it was stated that each house would have three bedrooms and would let at 5*s.* weekly. The ground-rent of each house is £1 per annum and the land is taken upon lease for 999 years. Merthyr Tydvil has long had an unenviable reputation even among the insanitary towns of Glamorganshire. It is a great pity, therefore, that some of the leading and most influential inhabitants of the town should be found actively opposing the efforts of the council in dealing with a most difficult problem. The sole argument of the opposition appears to be the very selfish one that if the cottages do not pay their way those who live in the more highly rated portion of the district will be called upon to pay their proportion of the loss.

THE CALEDONIAN MEDICAL SOCIETY.

As will be seen by a notice in our advertisement columns, the Caledonian Medical Society is offering two prizes of the value of £20 and £10 respectively for the best original essays upon subjects selected from the "Domain of Celtic Ethnology, History, Philology, or Medicine." The subjects are very wide and so is the area of competition, for it is open to everyone and should attract a large number of candidates Celtic ethnology, including, we suppose, folk-lore, is an entrancing subject and one which should be the cause of most interesting essays. The essays must be sent to the secretary, Dr. S R Macphail of Rowditch, Derby, by Jan. 1st, 1902

THE ALEXANDER MEMORIAL PRIZE.

OWING, probably, to the pressure of work entailed on the officers of the Royal Army Medical Corps by the war in South Africa, no essays competing for the prize of £50 and a gold medal have been received within the limits of time required. The committee have therefore resolved to offer the same subject for the next competition—viz., "Injuries to joints and long bones caused by modern small-arm projectiles their nature, diagnosis, and treatment, with special reference to the appliances required and available on field service." Essays must reach the president of the committee on or before Dec. 31st, 1902, must bear a brief motto, and be accompanied by a sealed envelope similarly superscribed, containing the name and address of the author. No essay should exceed about 20,000 words, exclusive of tables which may be added in the form of appendices. The competition is limited to executive officers of the Royal Army Medical Corps on full pay, and professors and assistant professors at Netley are not eligible while so employed.

THE NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN: AN APPEAL.

CHRISTMAS is heralded by the usual procession of appeals to charity. It is not too much to say that the majority of these are deserving of sympathetic recognition. Not a few are worthy in the highest degree. It is no less true that only the longest purse can even attempt to alleviate their innumerable necessities. It thus becomes for most of us a plain duty to select with the best judgment that we can those benevolent objects the furtherance of which appears to be most desirable. A list of such objects can have no constant composition. Its character will vary with the views of each compiler and we would be the last to prejudice this liberty of individual judgment. It is assuredly with no such motive that we take this opportunity of directing public attention to the needs of one such deserving effort of charity. It is the National Society for the Prevention of Cruelty to Children. The society, notwithstanding that it has many and influential supporters, has not passed through the financial crisis involved by the war in South Africa without suffering some curtailment of its revenue. In view of the fact that its weekly expenditure amounts to the sum of £1100, a moderate income in itself, this is a serious consideration. Moreover, its work is entirely concerned with emergencies, which, however they may be regretted, cannot be overlooked without serious injury to the many illtreated children whom it seeks to help. Thus the extension of its operations is a matter of practical necessity. We have repeatedly explained the nature of these operations. The judgment with which they have been carried out is conspicuous. The society has earned its meed of approval at the hands of the bench, of the police authorities, and even of parents out of whose cruel misdemeanours it has evolved the order and happiness of normal home life. It is hardly needful to remind our readers that whatever is saved and strengthened in the childhood of to day will go to fortify the manhood and womanhood of the coming generation Nor need we rehearse the part which has been taken by the society in promoting every recent legislative measure for the welfare of the young. But we trust that its endeavours will be aided by the liberality of the country in whose interest its work is done. In particular we would express a hope that a serious effort will be made to wipe off a deficit of £8000 which has acted as a drag upon the movement of the society during the present year.

THE INCREASED PREVALENCE OF APPENDICITIS IN SWITZERLAND.

OUR Zürich correspondent writes:—Dr. Haemig, first assistant of Professor Kronlein, made an interesting communication on Dec 6th, at a meeting of the Zürich Medical Society, on a series of cases of appendicitis observed at the Surgical Clinique of Zurich from 1881 to 1900, the 20 years during which Professor Kronlein had been in charge of the clinique The numbers of cases admitted increased from year to year, so that against 45 cases in the first 15 years there were respectively 13, 21, 35, 41, and 48 cases of admission in the last five years. Of these 203 cases, in 35 there was no operation, five of the patients being in a hopeless condition, and in the other cases operation being considered to be unnecessary. 51 patients had to be operated upon in the acute stage for abscess, four of these cases terminating fatally; in 27 cases generalised peritonitis had already supervened and of these 21 terminated in death, notwithstanding immediate operation. 91 patients were operated upon in the "free interval" and all recovered. The mortality percentage of the cases was 14, but if only the cases operated upon in the acute stage, without any generalised peritonitis, and those operated upon in the "free interval" be considered it will be seen that 142 cases had a mortality of only 3½ per cent Dr. Haemig laid due stress on the desirability of operating in the "free interval" and if possible after the first severe attack of appendicitis. The fact of the greater prevalence of appendicitis among men (70 to 30) is accounted for, he considers, by the better blood-supply of the appendix in females.

THE WAR AGAINST TUBERCULOSIS IN CANADA

THE Ontario Legislature has recently adopted a special Act to authorise the establishment of sanatoria for the treatment of phthisical patients. The usefulness of such institutions is generally acknowledged and they already exist in Switzerland, Germany, Belgium, and other countries. They differ, we take it, from a hospital such as the Brompton Hospital for Consumption, because they are not meant for acute cases and are not erected in the towns to which they belong, but in some more or less distant locality where the topographical and climatic conditions are specially favourable for the treatment of the disease. At the onset, however, the difficulty arises as to who shall be responsible for the expense of maintaining and building a sanatorium of this description. The medical officer of health of Toronto is endeavouring to solve this problem by proposing what can only be described as a mixed system. He does not suggest that a municipal sanatorium should be created, but he nevertheless calls upon the municipality to give a grant of $50,000 in aid of such an institution. In exchange for this grant he proposes that philanthropic institutions and charitable persons should supply an equal regards modern surgery, and to interpret their wishes to the lay committee. His interest in his work was very great. Hardly a day passed while he was in Oxford that he did not spend hours in becoming acquainted with all the current details of administration. Last spring he had to be absent for some months for the sake of his health. He went to Italy and seemed to a great extent to have recovered. In July, however, a recrudescence of disease occurred and he was forced to resign the treasurership, as he felt that the climate of this country was impossible for him. It was largely through his appreciation of the requirements of modern surgery that the new operating theatre, of which we gave an account in THE LANCET of June 23rd, 1900, p. 1822, was built. Sir John Conroy, who was born in 1845, was educated at Eton and Balliol, being a Fellow of the latter society and Bedford Lecturer and a Fellow of the Royal Society.

THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD AND THE METROPOLITAN WATER-SUPPLY.

ON Thursday, Dec. 13th, Mr. Long, the President of the Local Government Board, received a deputation from the London County Council on the subject of the water-supply of London. The new Minister thus early in his career was able to make a statement of the views which he holds on this important subject. The Government, he said, had nothing to conceal as to their policy and he was somewhat surprised to hear that the London County Council proposed to introduce during the next Parliamentary session a Bill to enable them to acquire the businesses of the present metropolitan water companies. The policy of the Government in regard to a similar Bill which the London County Council had introduced last year was unmistakeably shown, and the Bill was rejected. The time during which he had been at the Local Government Board had, Mr. Long pointed out, not been sufficient to enable him to study the whole of the question of the London water-supply, but he had become convinced that the solution of the problem was one which would require much consideration and this he promised it should have. If as a result of his study of the question he found that a course could be satisfactorily and definitely settled on, and if the other members of the Government should agree with the solution which he proposed, it was his intention to introduce a Bill dealing with the subject, not during the next session, but in the session immediately succeeding it. With a matter of such complexity and one involving such vast interests it was obviously impossible for him to deal thoroughly during the next session and he therefore regretted that the London County Council had decided to introduce again during that session a Bill similar to that which the Government had found it necessary to oppose last summer. The Government held that the future management of the London water-supply should be placed in the hands of a statutory authority representing the whole area and not a part only of the area of Water London. In regard to the manner in which the representation should be given to any new Water Authority which might be formed the President of the Local Government Board declined to give any pledge, and as to the whole question he said that he would be glad to have the views of the metropolitan boroughs and of those extra-metropolitan authorities which are within the area of supply of the London water companies. Mr. Long will find when he studies the evidence given before Lord Llandaff's Commission that the outside authorities have already spoken with no uncertain voice on the matter. It is satisfactory to note that the President of the Local Government Board confessed that the more he looked at it the more he was impressed with the difficulties of the question and with the risk which the ratepayers would run if they purchased the present undertakings. Mr. Long is already known as an able and strong Minister. The fact that he has thus early in his new office realised that he has a difficult problem to settle is a matter for congratulation. The fact that he has at once definitely promised that he intends immediately to grapple with the difficulty is most satisfactory.

ARSENIC IN ARTIFICIAL MANURES.

DURING the past week our Laboratory Commissioners have undertaken the examination of a number of substances, including certain foods and drugs in common daily use, in the preparation of which sulphuric acid is used. It will be found after a few moments' consideration that a fairly lengthy list of articles of every-day use may thus be drawn up. The results are not yet ripe for publication, but we feel bound to divulge one important result since the disturbing announcement has this week been made by the analyst of Manchester that arsenic has been found in malt in a quantity equal to that found in glucose or malt substitutes. Moreover, arsenic was found in beers which were known to be brewed from malt and hops only. Now that this remarkable statement has been made we may say that we have found, in the course of the inquiry alluded to, artificial manures to be rich in arsenic easily soluble in water. This is hardly surprising, since the basis of artificial manures—namely, superphosphate of lime—is made by acting on ordinary bone ash with common oil of vitriol. The important point is that it has been established that plants to which arsenical manure is applied take up arsenic in their tissues. Cabbages and turnips gathered from fields manured with superphosphate have given unmistakeable evidence of the presence of arsenic. It is probable that arsenic accumulates in the soil which is constantly being dressed with superphosphate, so that plants raised on such soil would absorb arsenic and exercise an injurious effect on the health of man and animals. The question arises, therefore, may not the arsenic in malt be traceable to the somewhat large amount of arsenic inevitably present in artificial manures? This aspect of the subject is very serious and needs further inquiry. We shall return to it in a future issue, when we hope also to be able to record the results obtained in an examination of other more or less familiar articles, in which arsenic may possibly be introduced through the employment of impure sulphuric acid in the course of manufacture.

THE WORCESTER GENERAL INFIRMARY AND ITS ANÆSTHETIST.

WE learn from the *Worcestershire Chronicle* of Nov. 24th that at a meeting of the committee of the Worcester General Infirmary it was decided to discontinue the existing arrangement whereby the infirmary obtained the services of a special officer to undertake the administration of the anæsthetics. By the new arrangement the anæsthetics are to be administered by a member of the surgical staff. We believe it to be extremely important that every hospital in which a large number of operations are performed during the year should have an anæsthetist attached to the staff, and the step which has been taken at Worcester appears to us a retrograde one. From the report before us we gather that the gentleman who has been acting as anæsthetist is not a member of the staff of the infirmary but that he conducted the anæsthetics for the staff and received a small honorarium for his labours. The committee, as it appears, have in a fit of frugality determined to forego the luxury of possessing a paid anæsthetist and to employ the money in other ways. What ways these are do not concern us. The broad question at issue is, Should a provincial hospital in which serious operations are constantly performed have to rely upon the services of any member of the staff who may be available for the conduct of the anæsthetics? We think not Busy practitioners cannot give their time to the work and no man is a satisfactory anæsthetist unless he is regularly employed in giving anæsthetics Where there is no anæsthetist in a hospital the most responsible work of giving the anæsthetics is likely to devolve upon a junior house surgeon who may be without anything but the most limited experience For, as we have recently pointed out, medical students too often receive no instruction in the giving of anæsthetics The constantly recurring fatalities under chloroform in provincial as well as in London hospitals when inexperienced men are giving the anæsthetic support our contention that the staff of every hospital where much operating is done should comprise an anæsthetist The poor and helpless who come to the hospitals have a right to have their lives made as safe from inexpertness or ignorance in an anæsthetist as in a surgeon or a physician

THE CHAIR OF ANATOMY AT THE ROYAL ACADEMY.

THE vacancy in the chair of Anatomy at the Royal Academy of Arts which was caused by the death of Mr William Anderson has been filled by the selection of Mr Arthur Thomson, Professor of Human Anatomy in the University of Oxford Professor Thomson is already known in a similar connexion owing to his holding the lectureship on anatomy in relation to art at the South Kensington Art Schools He is also the author of a most admirable handbook of anatomy for art students We are sure that all who know Professor Thomson will rejoice at the selection which has been made, and nowhere will more pleasure be felt than at Oxford, more especially in the medical school

THE death is announced of Mr Lionel E Kay Shuttleworth at San Remo Mr Kay-Shuttleworth, who was a Member of the Royal College of Surgeons of England, practised at San Remo, and also held the post of H B M Vice Consul there

THE council of King's College, London, have elected Dr Arthur Robinson, at present Lecturer on Anatomy in the Middlesex Hospital Medical School, to the Professorship of Anatomy in succession to the late Professor A W Hughes

MR WILLIAM VERNON, M R C S Eng, has been appointed Knight of Grace of the Order of the Hospital of St John of Jerusalem in England

THE Council of the Borough of Lambeth have unanimously increased the salary of their medical officer of health (Dr J Priestley) by £100 per annum

PRINCE OF WALES'S HOSPITAL FUND FOR LONDON

A MEETING of the general council of the Prince of Wales's Hospital Fund for London was held at Marlborough House on Dec 18th, the PRINCE of WALES being in the chair, to receive the report of the distribution committee

Lord ROTHSCHILD presented a statement of the financial position of the Fund up to Dec 14th, which showed that up to that date the Fund had this year received £26 888 in annual subscriptions, £8523 from donations, undefined contributions, and newspaper collections £6038 from investments £1000 from a legacy by Madame Rosa Ann Deleglise, £1000 as an annual grant from the trustees of the London Parochial Charities for the maintenance of convalescent hospitals, and other smaller sums, making a total of £43 468 13*s* 1*d* He had been informed that the Fund would also receive £6000 from the League of Mercy this year, and he congratulated His Royal Highness upon such a substantial contribution, which showed His Royal Highness's wisdom and foresight in forming the league Notwithstanding the absence of any appeal for 18 months until a few days ago the annual subscriptions were so far £1200 more this year than last It was natural to expect some falling off in donations, which up to the present this year were £5000 less, after including those amounts mentioned in the executive committee's report In addition there was a legacy of £3000 from Sir H P Turner Barron, which the Fund might expect to be paid in 1901

The PRINCE of WALES moved, and the LORD MAYOR seconded the adoption of the treasurer's report, which was agreed to

Mr H C SMITH presented the report of the executive committee, which recommended that the sum of £50 000 should be distributed this year of which £49 000 should be awarded to hospitals and £1000 to convalescent homes This is an increase of £8000 on the amount distributed last year and last year there was an increase of £9000 over the previous year The report also stated that the visiting committee was this year increased to 27 members It consists of the following gentlemen —Lord Lister Sir William MacCormac, Bart, Sir Thomas Smith Bart, Dr W S Church, Mr John Croft Dr A B Duffin, Mr Christopher Heath, Mr N C Macnamara Dr Pavy, Dr E C Perry, Mr T Pickering Pick, Mr H Power, Mr Alfred Willett, Viscount Duncannon, C B Lord Sandhurst G C I E, Sir Trevor Lawrence Bart, Sir Henry Burdett, K C B, Mr Thomas Burt M P, Mr Charles Burt, Mr J G Craggs Mr Frederick M Fry, Mr W D Hoare, Mr H J King, Mr James C Marshall, Mr J Pierpoint Morgan, jun Mr Albert G Sandeman and Mr Hugh C Smith

Lord LISTER presented the report of the distribution committee for the year 1900 and Mr J G CRAGGS read the report of the convalescent homes committee

The PRINCE of WALES moved the adoption of these reports and Sir WILLIAM MACCORMAC seconded the motion The reports were unanimously adopted

A vote of thanks to the Prince of Wales for presiding was moved by the LORD MAYOR

HIS ROYAL HIGHNESS in replying, said I am sure we all realise what a great thing it is for the Fund that the City of London should give us its hearty support It gives me great pleasure to take this opportunity of thanking all those gentlemen who have assisted me in the great work of this institution—the members of the general council, the visitors to the hospitals, the executive committee, and the honorary officers I am very glad Lord Duncannon has been able to take Sir Savile Crossley's place and I cannot say how much we are indebted to Mr Craggs for the labours he gives gratuitously to the Fund We have all plenty to do so I will not keep you any longer, but I think we may separate to-day with the feeling that the Fund is in a very prosperous state and that the interests of our great hospitals are still kept well before the public I can only hope that as time goes on the Fund may increase in prosperity so that the great object we had in view, that of placing the hospitals of this great metropolis on a thoroughly sound financial basis, may be accomplished

The meeting then terminated

THE SANITARY INSTITUTE A DISCUSSION ON PLAGUE

DR F TIDSWELL, principal assistant medical officer of the Government of New South Wales, opened an interesting discussion on plague at the Sanitary Institute on Dec 12th by reading a paper entitled "Some Practical Aspects of the Plague at Sydney" A feature in the delivery of this paper which enabled the audience which was not entirely composed of medical men, more clearly to understand Dr Tidswell's views was the ample illustration of points in diagnosis and etiology by means of lantern slides Dr Tidswell commenced by giving a full description of the methods and means followed in the diagnosis and recognition of the plague. The experience of the Public Health Department of Sydney was that when the first case of plague appeared it was successfully recognised, being fortunately a perfectly clear and straightforward one, and their subsequent experience was to the effect that whilst the great majority of cases could be diagnosed without hesitation they would now and then meet with one concerning which they could not form any decided opinion. It would, therefore, seem that the learnedly cautious attitude adopted by writers on plague was not only commendable from an academic standpoint but was also expressive of real practical difficulty, although this might, as in the epidemic at Sydney, be only of occasional occurrence. As a consequence of his experience Dr. Tidswell, for practical purposes, regarded plague in a way which if it never left him in doubt never led him into error; he mentally classified the cases into those which could be diagnosed off-hand and those which could not be safely diagnosed at all by purely clinical means. Some of the latter were cleared up by an appeal to bacteriology and some even that auxiliary failed to determine. Generally speaking, therefore, given a case presenting symptoms common to many acute fevers the only clinical manifestation which invested it with the specific character of plague was the existence of an acutely inflamed lymphatic gland in the groin, axilla, or neck. In the absence of a bubo the medical practitioner could be little more than suspicious or perhaps more or less convinced that the case was plague; the final adjudication if forthcoming at all was expressed by the bacteriologist or delivered only at the post-mortem table. With regard to the basis on which to form the suspicion just mentioned, Dr. Tidswell was inclined to think that in practice general indications were more to be depended upon than the elucidation of particular symptoms. Dr. Tidswell spent some time in emphasising the importance of recognising that the condition presented at any particular time by a plague patient could rarely be relied upon as a guide to the future progress of the illness. At nearly all stages up to established convalescence there was a liability to sudden and unexpected changes of serious or even fatal consequence. It was particularly in patients apparently slightly ill or progressing favourably that untoward complications with a fatal termination were apt to occur with startling abruptness, and Dr. Tidswell pointed out that the experience of the medical men in Sydney taught them to regard the issue of any case as uncertain until all constitutional symptoms had quite passed away. The case quoted by Dr. Tidswell in connexion with this point is such a striking example of the importance of this rule that it is worthy of record. The patient in question was a man who had been transferred from his house to an ambulance and from the ambulance to a launch upon a stretcher for conveyance under the charge of a trained attendant to the quarantine hospital. This man felt so far from ill that he absolutely refused to obey the nurse's order to remain lying down and sat up during the half-hour's run of the launch down the bay and appeared to be enjoying the trip. As the launch approached the landing jetty of the hospital the patient stood up, waved his arm, and dropped. The man was carried off the launch a corpse, and his death was doubtless due to failure of the heart consequent on the degeneration of its fibres occurring in plague.—Another extremely interesting contribution was a paper read by Mr. S. M. **Kaka**, medical officer of health of the City and Port of Karachi, the capital of Scinde. Mr. Kaka having exceptional opportunities of understanding the nature and extent of Hindu prejudices and native customs was enabled to illustrate his remarks by recording facts with which he had personal acquaintance. He related how the native, when removed to a hospital, believed he was taken away to be poisoned, how the sick bed of the plague-stricken man was surrounded by 30 or 40 relatives, how the native's practice of moving about houses with bare feet resulted in direct inoculation with the poison of plague, and how religious ceremonies compelled the mourners to remain with the corpse. Mr. Kaka, however, had one cheerful passage in his discourse, describing how the natives at Karachi had been educated up to taking kindly to the evacuation of infected districts, and the people having been thus educated formed in successive epidemics their own camps. It was not unusual to find something like 25,000 living in the camps, each sect in its own range of huts and supervised by responsible officers. Unfortunately, however, this preventive measure was not without its drawbacks because it was not possible to prevent the natives from taking their sick with them and as must naturally happen when large bodies of the people migrate disinfection of their clothing and other belongings was a hopeless task to undertake. Mr. Kaka, later informed the meeting that in regard to this latter point the people have learnt to destroy by fire for themselves whatever in their opinion had become infected.—A very instructive evening was concluded by a discussion, in which Dr. H. F. **Parsons**, Mr. **Shirley Murphy**, and Dr. R. T. **Hewlett** joined.

THE WAR IN SOUTH AFRICA.

There is still a good deal of enteric fever among the British troops serving in South Africa, as may be seen by an inspection of the returns of the sick and wounded, and it is to be feared that there will be a recrudescence of the disease during the hot weather. Enteric fever may be said to be endemic in the country, and the cause must have been sown broadcast during its late epidemic prevalence. Sufficient time has elapsed for the compilation of returns showing the numbers of those who have been attacked and who have died among the troops who had been inoculated as compared with those who had not. Some information as to the results of the comparison should soon be forthcoming and is anxiously awaited. Considering the number of troops that have gone out to South Africa, that for most of them it is the first year of their service there, and that so many of them were inoculated against typhoid fever on the voyage out, there should be an excellent basis for instituting a statistical comparison, especially as most of the troops were exposed to similar conditions.

Owing to the recent fighting in various directions which has taken place there has been a considerable augmentation of the list of wounds and casualties of a surgical nature. The wounded from General Clements's reverse at Nooitgedacht have all been brought to Pretoria and are doing well. The news of the increased activity of the Boers and their invasion of Cape Colony has come as a very disappointing surprise; still these occurrences cannot by themselves have any real effect on the ultimate issue. The facts remain as they were—namely, that we are in possession of the enemy's capital, that some 20,000 prisoners are in our hands, that Mr. Kruger, the late President of one State, has fled to Europe, that the late President of the other State is a fugitive, and that the seaboard of the Cape is open to us to replenish our supplies of men, food, and ammunition.

Where so much has been said about the past, present, and prospective aspects of this war we may, perhaps, be pardoned for referring to some of the impressions which we have derived from good information. We have talked to "all sorts and conditions of men"—regulars, volunteers, colonials, and medical officers—regarding this war. As might be expected, there is much variety of opinion (there is ample room for it) in regard to the events in South Africa; still these differences of opinion do not seem to be so great as might have been imagined. The impression which we have received from what we have heard is, perhaps, best expressed by saying that those who had the largest experience and apparently knew most about the subject said the least and were the least dogmatic in the expression of their views. Especially was this the case in the imputation of blame. With regard to one thing all agreed—namely, that only those who had actually seen the country and who had been present in the campaign were in a position to pronounce an opinion upon it or to estimate its difficulties. After all, what was the root of the whole matter? Unpreparedness on our part. Whereas the Boers had thoroughly matured their plans and were well prepared, we were not. But why should any ignorance or unpreparedness have existed on the part of the Government and the War Office at the beginning of the war? It is probable that, as a matter of fact, they were not altogether ignorant of the true state of things, although they were not, of course, informed to anything like the same extent that they were subsequently. To whatever political party the Government of this country may belong there is nothing which it strives so much to avoid as war, and we may be sure that no stone will be left unturned in order to avoid it. It must in fairness be admitted, we think, that the Government did really believe up to the last moment that war would be averted. Sir Redvers Buller was no doubt correct in having so emphatically stated recently that the Government did not at once send an adequate force to the Cape lest it might be possibly accused of having actually brought about the war.

ASYLUM REPORTS.

Lanark District Asylum, Hartwood (Annual Report for 1899).—The population of the asylum during the year was 634 and comprised 344 males and 290 females; 307 patients were admitted during the year; of these 177 were males and 130 females. Of these 132—viz., 73 males and 59 females—were not first admissions. Dr. A. Campbell Clark, the medical superintendent, states in his report that the admission-rate was much in excess of that of the previous year. "The condition, mental and physical, of many of those admitted was very unsatisfactory, indeed many were hopeless from the first." The fact that so many cases are certified because of brain failure in late middle age or old age accounts for the large proportion of such cases in the asylum's admissions. The number of cases discharged as recovered during the year amounted to 89—viz., 51 males and 38 females, a total of 14 per cent. on the average number resident. This is a low rate, "but when one takes into account the nature of the admissions, the many senile sick and moribund cases, it is not surprising. While 17 patients died within a month of admission only one patient recovered." The deaths during the year amounted to 71—viz., 50 males and 21 females, or 11·2 per cent. of the average population. Of the deaths 2 were due to general tuberculosis, 9 to general paralysis, 13 to cerebral softenings and hæmorrhages, and 16 to cardiac disease with complications. "The death-rate has been abnormally high owing to the large number of broken-down, senile, and moribund cases admitted. ...... Many cases come to us which (in the Glasgow district) would find their way as emergency cases into the infirmaries or the large poorhouse hospitals, and need not be certified as insane at all." Epidemics of influenza broke out in the spring and lasted till May, the lungs being affected seriously and frequently. Only one suicide occurred during the year, and the accidents have been slight and few.

The Asylum for Idiots, Earlswood, Red Hill, Surrey (Annual Report for 1899).—The average number of patients resident during the year was 546, and comprised 366 males and 180 females. During the year 60 patients were admitted, 53 of these being first admissions and seven being re-admissions. Dr. Charles Caldecott the medical superintendent, points out in his report that the name "Asylum for Idiots" hampers the institution in receiving patients, as so many of the parents think they only take "idiots," whereas children of imbecile and feeble-minded type are also accepted, and he strongly urges the board to seriously consider whether the title cannot be changed to some such one as "Training School for the Feeble-minded and Asylum for Idiots and Imbeciles," a title which would not only accurately designate the true nature of the institution but also reconcile parents to the idea of sending children for treatment and training. It is also recommended that the training period should be extended from five to seven years. During the year 51 patients were discharged as relieved, and of these 35 were males and 16 were females. 17 patients—viz, 10 males and 7 females—died during the year, or 3·1 per cent. of the average number resident, phthisis claiming a large number of victims. Some of the cases show a notable longevity. Thus there are two patients who have resided in the institution for over 50 years each, while there are 141 patients who have been inmates each for over 20 years. Outbreaks of scarlet fever and of influenza occurred during the year, keeping the general infirmary full all through the year. The board decided some time ago to have a small infectious block for such emergencies, but this has not yet been carried out, and Dr. Caldecott points out the extremely awkward predicament in which the institution would be placed should any epidemic of infectious disease arise among the inmates. Regarding the classification of the inmates on a medical and industrial basis Dr. Caldecott points out "that to allow the institution to do the greatest good, with no possible harm to our trainable pupils, we require the untrainable or custodial cases removed to a separate building which could come under the same administrative head. The various officials of the English idiot and imbecile institutions have been absolutely unanimous on this point." The work of the institution during the year has been arduous and conducted under many difficulties, the war in South Africa having claimed no less than 12 of the male staff who had been ordered to join the colours The causes of imbecility and idiocy among the admissions were as follows: 13 cases were due to heredity, 2 to fevers during infancy, 10 were attributed to convulsions during teething, and 14 to shock or ill-health of the mother during pregnancy; 10 were epileptic on admission. In 16 cases the causation could not be traced. The board of management were able last year to announce that the heavy debt of £7879 incurred in 1897 had been liquidated. This happy result was attained through the exceptionally large amount of legacies (over £17,000) received this year. The purely charitable income—viz., annual subscriptions and donations—has not been quite equal to that of 1898, but the falling off has probably been due to the national efforts made for the sufferers from the war.

London County Asylum, Claybury, Essex (Annual Report for 1899).—The average number of patients resident during the year was 2482 and comprised 1035 males and 1447 females. During the year 556 cases were admitted, and of these 291 were males and 265 were females. Of the 556 admissions only about one-half of the cases suffering from a first attack of insanity were received within three months of the onset of their disease. Dr. Robert Jones, the medical superintendent, states in his report that the earlier such cases come under treatment the greater is the chance of recovery. "The chances of recovery diminish considerably and progressively, as the time before commencing treatment increases in length. Insanity also is more likely to be fatal in direct proportion to the delay which has taken place before commencing treatment." Of insanity associated with senile decay only 10 per cent. were over 60 years of age, as against 18 per cent. during the previous year. General paralysis has been found in 11 per cent. of the male admissions and in nearly 4 per cent. of the female. "There has been a high percentage of insanity from alcohol, and more than double the number of women than men have been admitted suffering from *mania a potû*." It is also ascertained that women relapse into insanity from alcohol and are re-admitted with far greater frequency than men. Their weakened inhibition appears to be unable to withstand the slightest temptation, and Dr. Jones points out that the best treatment for such cases is that of long detention in inebriate homes, which naturally cannot apply to asylums from which patients are discharged when mentally fit. Previous attacks and hereditary influences were ascertained to be the most probable cause of insanity in 34 per cent. of the admissions. Several patients who were admitted had delusions that they were "hounded by Kruger's relatives" and that "Spion Kop" was hissed into their ears. During the year 197 patients were discharged as recovered, or 7 93 per cent. of the average number resident. Of these 197 recoveries 55 had been in residence from three to six months, 33 from six to nine months, 32 were under three months, while 31 were from one to two years The deaths during the year amounted to 265—viz, 130 males and 135 females—or 10 68 per cent. of the average number resident. Of the deaths 46 were due to general paralysis of the insane, 20 to cardiac valvular disease, 39 to pneumonia, and 21 to phthisis. Of the 21 patients who died from phthisis it is probable that 15 contracted the disease in the asylum, having been in residence over two years "Hitherto no special precautionary measures for isolating cases of phthisis have been adopted here, ... but the matter has been before the sub-committee. I suspect that phthisis is more frequent in asylums than statistics tend to demonstrate and that the tubercle bacillus may be present and unsuspected in cases of death which are certified to have been due to other causes." An outbreak of colitis has caused 33 deaths (16 males and 17 females), a proportion of over 12 per cent. of the total deaths. In July, 1899, all cases of colitis were isolated in the detached hospital, and the staff of the latter was increased by six attendants (male and female) on account of the extra nursing required. A female patient pregnant on admission was safely delivered of a daughter. Miss Margaret Orange, M.D. Brux, one of the assistant medical officers, received injuries from a patient and was granted leave of absence for six months on full pay.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 33 of the largest English towns 6270 births and 3744 deaths were registered during the week ending Dec. 15th. The annual rate of mortality in these towns, which had been 18·0 and 17·7 per 1000 in the two preceding weeks, further declined last week to 16·8. In London the death-rate was equal to 16·5 per 1000, while it averaged 17 0 in the 32 large provincial towns. The lowest death-rates in these towns were 8 6 in Norwich, 11·2 in Oldham, 11·8 in Preston, and 11 9 in Croydon; the highest rates were 20 0 in Gateshead and in Liverpool, 21·3 in Bolton, 22·1 in Nottingham, and 22·2 in Manchester. The 3744 deaths in these towns included 328 which were referred to the principal zymotic diseases, against 356 and 363 in the two preceding weeks; of these, 77 resulted from diphtheria, 68 from whooping-cough, 58 from "fever" (principally enteric), 49 from measles, 42 from scarlet fever, and 34 from diarrhœa. No death from any of these diseases occurred last week in Norwich or in Huddersfield; in the other towns they caused the lowest death-rates in Plymouth, Cardiff, Halifax, and Gateshead, and the highest rates in Swansea, Nottingham, Bolton, Sheffield, and Sunderland. The greatest mortality from measles occurred in Swansea; from whooping-cough, in Nottingham, Sheffield, and Sunderland; from "fever" in Preston; and from diarrhœa in Burnley. The mortality from scarlet fever showed no marked excess in any of the large towns. The 77 deaths from diphtheria included 20 in London, 12 in Sheffield, six in Leeds, and six in Leicester. No fatal case of small-pox was registered last week in any of the 33 towns, and only one small-pox patient remained under treatment on Saturday last, Dec. 15th, in the Metropolitan Asylums hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2617, against 2727 and 2687 on the two preceding Saturdays; 255 new cases were admitted during the week, against 246, 279, and 259 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 436 and 400 in the two preceding weeks, further declined last week to 349, and were 97 below the corrected average. The causes of 42, or 1·1 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Leeds, and in sixteen other smaller towns. The largest proportions of uncertified deaths were registered in Leicester, Liverpool, Sheffield, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·7 and 20 7 per 1000 in the two preceding weeks, further declined to 19 3 during the week ending Dec. 15th, but showed an excess of 2·5 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 16 6 in Leith and 18 1 in Edinburgh to 19 7 in Glasgow and in Greenock and 28·7 in Perth. The 596 deaths in these towns included 33 which were referred to whooping-cough, 16 to measles, 10 to diarrhœa, eight to scarlet fever, six to "fever," three to small-pox, and three to diphtheria. In all 79 deaths resulted from these principal zymotic diseases, against 89 and 87 in the two preceding weeks. These 79 deaths were equal to an annual rate of 2·6 per 1000, which was 1·1 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had been 42 and 31 in the two preceding weeks, rose again last week to 33, of which 27 occurred in Glasgow and three in Greenock. The deaths from measles, which had been eight, 12, and 15 in the three preceding weeks, further rose to 16 last week, and included nine in Aberdeen, four in Glasgow, and three in Edinburgh. The fatal cases of diarrhœa, which had been 20, 19, and 18 in the three preceding weeks, further declined last week to 10, of which four were registered in Glasgow and three in Aberdeen. The deaths from scarlet fever, which had been five and nine in the two preceding weeks, declined again to eight last week, and included four in Glasgow and two in Edinburgh. The deaths referred to different forms of "fever" which had been four in each of the two preceding weeks, increased last week to six, of which four occurred in Glasgow, where the three fatal cases of small-pox were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 160 and 151 in the two preceding weeks, further decreased last week to 136, and showed a decline of 36 from the number in the corresponding period of last year. The causes of 17, or nearly 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·5 and 27·4 per 1000 in the two preceding weeks, declined again to 25·8 during the week ending Dec. 15th. During the past four weeks the death-rate in the city has averaged 26·0 per 1000, the rate during the same period being 17 3 in London and 19 7 in Edinburgh. The 173 deaths belonging to Dublin registered during the week under notice were 9 less than the number in the preceding week, and included 12 which were referred to the principal zymotic diseases, against 11 in each of the two preceding weeks; of these, seven resulted from whooping-cough, two from diarrhœa, one from measles, one from scarlet fever, and one from "fever" These 12 deaths were equal to an annual rate of 1·8 per 1000, the zymotic death-rate during the same period being 1·2 in London and 1·0 in Edinburgh. The deaths referred to whooping-cough, which had been six and four in the two preceding weeks, rose again last week to seven. The mortality both from "fever," and from diarrhœa was below that recorded in the preceding week. The 173 deaths in Dublin last week included 26 of infants under one year of age and 47 of persons aged upwards of 60 years; the deaths of infants showed a marked decline, while those of elderly persons slightly exceeded the number in the preceding week. Eight inquest cases and four deaths from violence were registered, and 59, or more than a third, of the deaths occurred in public institutions. The causes of 10, or nearly 6 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1900.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the 43 sanitary areas of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 10·0 per 1000 of the population, estimated at 4,589,129 persons in the middle of the year. In the three preceding months the rates had been 6·0, 8·7, and 10·7 per 1000 respectively. The rates were considerably below the average in Paddington, St. George Hanover-square, St. Martin-in-the-Fields, Clerkenwell, St. Olave Southwark, and Lee; while they showed the largest excess in Hammersmith, Fulham, St. Pancras, Stoke Newington, Limehouse, and Poplar sanitary areas. Three cases of small-pox were notified in London last month, and belonged respectively to Fulham, Chelsea, and Islington sanitary areas. Two small-pox patients were admitted into the Metropolitan Asylums hospitals during the month, and both remained under treatment on Saturday, Dec. 1st. The prevalence of scarlet fever showed a slight diminution from that in the preceding month; among the various sanitary areas this disease was proportionally most prevalent in Hammersmith, Stoke Newington, Strand, Poplar, Greenwich, and Lewisham. The Metropolitan Asylums hospitals contained 2659 scarlet fever patients at the end of November, against 1657, 1899, and 2569 at the end of the three preceding months; the weekly admissions averaged 259, against 152, 215, and 314 in the three preceding months. The prevalence of diphtheria showed a decline from that recorded in the preceding month; the greatest proportional prevalence of this disease occurred in Fulham, Stoke Newington, Poplar, Limehouse, Newington, and Lewisham sanitary areas. There were 1524 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of November, against 1171, 1231, and 1458 at the end of the three preceding months; the weekly admissions averaged 185, against 142, 185, and 206 in the three preceding

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING NOVEMBER, 1900.

(*Specially compiled for* THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1900.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,539,129	3	1365	1058	—	570	5	29	486	—	3526	10·0	1	94	33	118	79	1	69	—	61	476	1·4	5697	16·8	151
West Districts																										
Paddington	130,104	—	37	11	—	9	—	—	10	—	67	6·7	—	1	1	1	3	—	2	—	2	10	1·0	150	15·0	149
Kensington	173,603	—	32	40	—	15	—	2	18	—	107	8·0	—	—	1	4	3	—	1	—	1	10	0·8	184	13·8	200
Hammersmith	110,203	—	52	28	—	16	—	1	13	—	110	13·0	—	3	—	1	—	—	1	—	—	5	0·6	121	14·3	123
Fulham	136,383	1	54	71	—	8	—	2	22	—	158	15·1	—	3	2	2	3	—	1	—	4	16	1·4	145	13·9	121
Chelsea	66,715	1	13	23	—	14	—	—	7	—	58	7·8	—	—	—	3	3	—	2	—	2	10	1·3	111	15·0	120
St. George Hanover-square	81,133	—	14	12	—	5	—	—	1	—	32	5·1	—	—	—	1	1	1	1	—	1	5	0·8	88	14·1	156
Westminster	51,657	—	9	11	—	7	—	—	6	—	33	8·3	—	—	—	—	—	—	2	—	—	2	0·5	86	21·7	231
St. James Westminster	21,457	—	9	—	—	5	—	—	2	—	16	9·7	—	—	—	—	—	—	1	—	1	2	1·2	22	13·4	190
North Districts.																										
Marylebone	139,777	—	50	24	—	11	—	—	17	—	102	9·5	—	—	2	3	3	—	—	—	1	9	0·8	192	17·9	126
Hampstead	81,766	—	18	21	—	11	—	1	5	—	56	8·9	—	—	—	3	—	—	3	—	—	6	1·0	71	11·3	134
St Pancras	245,651	—	80	54	—	86	—	—	22	—	242	12·8	—	3	—	6	3	—	9	—	4	25	1·3	313	16·6	146
Islington	351,541	1	135	64	—	35	—	3	31	—	269	10·0	1	3	2	10	10	—	7	—	5	38	1·4	414	15·4	125
Stoke Newington	35,718	—	17	18	—	4	—	—	1	—	40	14·6	—	1	—	4	—	—	1	—	—	6	2·2	31	11·3	67
Hackney	225,519	—	51	51	—	20	1	3	30	—	156	9·0	—	4	—	2	—	—	2	—	2	10	0·6	265	15·3	150
Central Districts.																										
St. Giles	36,870	—	14	5	—	4	—	—	3	—	26	9·2	—	—	—	3	1	—	—	—	—	4	1·4	49	17·3	75
St. Martin-in the-Fields	11,665	—	4	—	—	2	—	—	—	—	6	6·6	—	—	—	—	—	—	1	—	—	1	1·1	12	13·2	222
Strand	22,748	—	12	3	—	1	—	—	—	—	16	9·2	—	—	—	—	—	—	—	—	1	1	0·6	41	23·5	69
Holborn	29,188	—	7	8	—	3	—	—	4	—	22	9·8	—	—	—	—	—	—	—	—	—	—	—	58	25·9	255
Clerkenwell	66,007	—	13	4	—	10	—	1	5	—	33	6·5	—	—	—	—	—	—	—	—	1	1	0·2	103	20·3	162
St. Luke	40,655	—	8	6	—	8	—	1	4	—	27	8·7	—	7	—	—	—	—	2	—	1	10	3·2	86	27·6	180
City of London	26,922	—	7	4	—	3	—	—	2	—	16	7·7	—	—	—	—	—	—	—	—	—	—	—	34	16·5	125
East Districts.																										
Shoreditch	120,641	—	28	21	—	20	1	—	21	—	91	9·8	—	10	1	5	4	—	2	—	3	25	2·7	213	23·0	226
Bethnal Green	128,831	—	23	20	—	24	—	1	24	—	92	9·3	—	2	1	1	—	—	4	—	4	12	1·2	214	21·7	177
Whitechapel	82,220	—	17	9	—	13	—	—	14	—	53	8·4	—	—	2	—	—	—	3	—	1	6	1·0	106	16·8	127
St. George in the East	48,875	—	2	4	—	5	—	2	13	—	26	6·9	—	—	—	3	1	—	1	—	2	7	1·9	92	24·5	118
Limehouse	58,944	—	13	20	—	11	—	—	18	—	62	13·7	—	12	1	3	1	—	3	—	—	20	4·4	121	26·8	173
Mile End Old Town	113,781	—	26	21	—	14	—	1	13	—	75	8·6	—	1	1	4	1	—	2	—	2	11	1·3	147	16·8	133
Poplar	170,968	—	77	111	—	29	1	1	26	—	245	18·7	—	6	1	12	3	—	2	—	3	27	2·1	256	19·5	194
South Districts.																										
St. Saviour Southwark	23,854	—	5	3	—	7	—	—	—	—	15	8·2	—	2	—	—	1	—	1	—	—	4	2·2	48	26·2	222
St. George Southwark	60,597	—	16	15	—	14	1	1	7	—	54	11·6	—	3	—	4	5	—	3	—	—	15	3·2	130	28·0	250
Newington	125,138	—	40	39	—	12	—	2	15	—	108	11·3	—	3	3	5	2	—	3	—	1	17	1·8	211	22·0	217
St. Olave Southwark	10,909	—	—	—	—	1	—	—	1	—	2	2·4	—	—	—	—	—	—	—	—	—	—		13	15·5	107
Bermondsey	85,920	—	27	24	—	16	—	1	6	—	74	11·2	—	8	1	5	3	—	1	—	2	20	3·0	146	22·2	215
Rotherhithe	41,246	—	4	8	—	4	—	1	8	—	25	7·9	—	—	—	2	2	—	2	—	—	6	1·9	59	18·6	227
Lambeth	312,152	—	88	61	—	25	—	—	25	—	199	8·3	—	—	5	3	11	—	5	—	3	27	1·1	379	15·8	138
Battersea	178,100	—	50	19	—	22	—	—	18	—	109	8·0	—	7	1	2	5	—	3	—	2	20	1·5	182	13·3	146
Wandsworth	217,004	—	78	45	—	16	—	3	18	—	160	9·6	—	2	4	6	2	—	5	—	1	20	1·2	227	13·6	135
Camberwell	268,457	—	75	83	—	15	—	—	21	—	194	9·4	—	1	1	11	1	—	4	—	3	21	1·0	325	15·8	161
Greenwich	164,582	—	85	43	—	20	—	1	20	—	169	11·9	—	8	2	3	2	—	5	—	4	24	1·7	210	14·8	109
Lewisham (excluding Penge)	93,548	—	44	32	—	4	—	1	6	—	87	12·1	—	2	—	3	2	—	2	—	2	11	1·5	87	12·1	71
Woolwich	41,600	—	4	8	—	6	—	—	4	—	22	6·9	—	—	1	2	1	—	1	—	1	6	1·9	49	15·4	143
Lee	40,722	—	10	6	—	2	—	—	—	—	18	6·8	—		—	—	—	—	—	—	1	1	0·3	44	14·1	66
Plumstead	65,558	—	17	18	—	10	1	—	5	—	51	10·1	—	2	—	1	2	—	1	—	—	6	1·2	62	12·3	101
Port of London	—	—	—	—	—	3	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 22 cases of membranous croup.

† Including deaths from membranous croup.

NOTE.—The changes made under the London Government Act (1899) are not taken into account until the commencement of next year.

months. The prevalence of enteric fever showed a continued increase over that recorded in recent months; among the various sanitary areas this disease was proportionally most prevalent in St. James Westminster, St. Pancras, St. Luke, Limehouse, St. Saviour Southwark, and St. George Southwark. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 170, 329, and 444 at the end of the three preceding months, had declined again to 436 at the end of November; the weekly admissions averaged 61, against 32, 69, and 61 in the three preceding months. Erysipelas was proportionally most prevalent in Shoreditch, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, and Rotherhithe sanitary areas. The 29 cases of puerperal fever included three in Islington, three in Hackney, three in Wandsworth, two in Kensington, two in Fulham, two in St George-in-the-East, and two in Newington sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the public institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Dec. 1st the deaths of 5897 persons belonging to London were registered, equal to an annual rate of 16·8 per 1000, against 19·4, 16·5, and 15·3 per 1000 in the three preceding months. The lowest death-rates last month in the various sanitary areas were 11·3 in Hampstead and in Stoke Newington, 12·1 in Lewisham, 12·3 in Plumstead, 13·2 in St. Martin-in-the-Fields, 13·3 in Battersea, and 13·4 in St. James Westminster; the highest rates were 24·5 in St. George-in-the-East, 25·9 in Holborn, 26·2 in St. Saviour Southwark, 26 8 in Limehouse, 27·6 in St. Luke, and 28 0 in St. George Southwark. During the four weeks of November 476 deaths were referred to the principal zymotic diseases; of these, one resulted from small-pox, 94 from measles, 33 from scarlet fever, 118 from diphtheria, 79 from whooping-cough, one from typhus fever, 89 from enteric fever, and 61 from diarrhœa. No death from any of these diseases occurred last month in Holborn, City of London, or St. Olave Southwark; in the other sanitary areas they caused the lowest death-rates in Hammersmith, Westminster, Hackney, Strand, Clerkenwell, and Lee; and the highest rates in Stoke Newington, St. Luke, Shoreditch, Limehouse, St. Saviour Southwark, St. George Southwark, and Bermondsey. The fatal case of small-pox was that of a person belonging to Islington sanitary area. The 94 deaths from measles showed a decline of 110 from the corrected average; this disease was proportionally most fatal in St. Luke, Shoreditch, Limehouse, St. Saviour Southwark, St. George Southwark, and Bermondsey. The fatal cases of scarlet fever were only 33, against an average of 86 in the corresponding periods of the 10 preceding years; the greatest proportional mortality from this disease occurred in Fulham, Marylebone, Whitechapel, Newington, Lambeth, and Wandsworth sanitary areas. The 118 deaths from diphtheria were 97 below the corrected average; among the various sanitary areas this disease was proportionally most fatal in Stoke Newington, St. Giles, St. George-in-the-East, Poplar, St. George Southwark, and Bermondsey. The 79 fatal cases of whooping-cough were 28 below the average number in the corresponding periods of the 10 preceding years; this disease showed the highest proportional fatality in Shoreditch, St. Saviour Southwark, St. George Southwark, Bermondsey, Rotherhithe, and Lambeth. The 90 deaths referred to "fever" were equal to the corrected average; among the various sanitary areas the "fever" death-rate was highest in Westminster, Hampstead, St. Luke, Limehouse, St. George Southwark, and Rotherhithe. The 61 fatal cases of diarrhœa were slightly below the average number in the corresponding periods of the 10 preceding years; this disease was proportionally most fatal in Fulham, St. James Westminster, Strand, Bethnal Green, and St. George-in-the-East. In conclusion, it may be stated that the aggregate mortality from these principal zymotic diseases in London during November was nearly 38 per cent. below the average.

Infant mortality in London last month, measured by the proportion of deaths of children under one year of age to registered births, was equal to 151 per 1000. The lowest rates of infant mortality were recorded in Stoke Newington, St. Giles, Strand, Lewisham, Lee, and Plumstead; and the highest rates in Westminster, St. Martin-in-the-Fields, Holborn, Shoreditch, St. Saviour Southwark, St. George Southwark, and Rotherhithe sanitary areas.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet-Surgeons: J. O'B. Williams to the Royal Marines, Plymouth, and R. Bentham to the *Magnificent*. Surgeons: H. C. Adams, W. E. Gribbell, and H. V. Wells to the *Vivid*; L. Lindop, J. Whelan, and J. Verdon to the *Duke of Wellington*; C. L. W. Bunton to the *Forte*; S. Croneen to the *Raven*; and J. M. H. Conway, A. J. Sheldon, and C. R. Rickard to the *Wildfire*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel M. W. Kerin has arrived at Colchester for duty. Major S. O. Stuart is instructed to proceed to Woolwich for duty. Lieutenant P. C. Douglass has joined at Woolwich. Majors J. C. Weir and L. P. Mumby are appointed Sanitary Officers, Punjab Command. Lieutenant W. S. Crosthwaite is posted to the Station Hospital, Shorncliffe for duty.

The undermentioned surgeons-on-probation to be Lieutenants:—Henry James McGrigor, William Richard Power Goodwin, John Handfield Brunskill, Arthur Cameron Duffey, Arthur William Gibson, Charles Duncan Myles, Rochford Noel Hunt, Henry Edward Joseph Alphonsus Howley, Ralph Frankland Morris Fawcett, William Lawrence Steele, Hugh Allan Davidson, Thomas Finucane, John Weir West, William Riach, Herbert Raymond Bateman, Horace George Pinches, Thomas White, James Crawford Kennedy, Arthur Ruscombe Crane Parsons, John Burton Cautley, William Moore Bell Sparkes, Samuel Boylan Smith, Eyre William Powell, and John Jones.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major G. R. T. Phillips to be Surgeon-Lieutenant-Colonel. Surgeon-Captain Thomas W. J. Allen having resigned his appointment in the Volunteers ceases to belong to the Army Medical Reserve.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Captain Adam Robert Hamilton Oakley, from the 1st Volunteer Battalion the Essex Regiment, to be Surgeon-Captain. Captain William Vernor Sinclair, from the 3rd Volunteer Battalion the Devonshire Regiment, to be Surgeon-Lieutenant. Surgeon-Lieutenant William Edward Manderson Corbett, from the 2nd Volunteer Battalion the Devonshire Regiment, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Gloucestershire: Surgeon-Major J. H. Wathen resigns his commission, with permission to retain his rank and to wear the uniform of the corps on retirement. *Royal Engineers*: 1st London: The undermentioned officer resigns his commission: Surgeon-Captain S. R. Dyer. *Rifle*: 8th (Scottish) Volunteer Battalion the King's (Liverpool Regiment): Charles John Macalister, formerly Surgeon-Captain, 2nd Volunteer Battalion, to be Surgeon-Captain. 2nd Volunteer Battalion the East Surrey Regiment: Brigade-Surgeon-Lieutenant-Colonel E. Pocklington resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement, vacating thereby his appointment as Senior Medical Officer to the Surrey Volunteer Infantry Brigade. 2nd Volunteer Battalion the Duke of Wellington's (West Riding Regiment): The undermentioned Surgeon-Lieutenants to be Surgeon-Captains: L. P. Demetriadi and H. W. Williams. 2nd Volunteer Battalion the Durham Light Infantry: William Bratton to be Surgeon-Lieutenant.

TRANSVAAL WAR NOTES.

Colonel W. H. Otter, Commander Royal Canadian Regiment, in a letter to Major-General the Hon. Herbert Eaton, the secretary of the Colonial Troops Entertainment Committee, has expressed his heartfelt appreciation and that of the non-commissioned officers and men of the Royal Canadian regiment for the care and kindness shown to them. The committee are much in need of further subscriptions. One of the principal firms in the city has promised £1000 and a nobleman has promised £500 towards the funds, conditionally on other subscriptions being received for equivalent amounts or something approaching them.

On Dec. 7th the Mayor of Cardiff (Mr. T. Andrews, J.P.) entertained Mr. Lynn Thomas, F.R.C.S. Eng., at a banquet on the occasion of his safe return from South Africa, and also to acknowledge the great services voluntarily rendered by him in connexion with the Welsh hospital. Amongst those present were Lieutenant-General Sir James Hills-Johnes, V.C., G.C.B., Dr. Edwards, and Canon Thompson. After the dinner the Mayor presented Mr. Lynn Thomas with a silver salver which bore an inscription recording the recipient's services in South Africa.—At a special meeting of the committee of the Cardiff *Infirmary held* on Dec. 14th the *resolution passed by the governor on* Dec. 7th requesting Mr. Lynn Thomas, F.R.C.S. Eng., to accept the full position of honorary surgeon to the institution in appreciation of the valuable services rendered by him in connexion with the Welsh Hospital in South Africa was unanimously confirmed on the motion of the chairman (Major-General Lee).

The *Canada* which is due at Southampton about Jan. 2nd has on board Lord and Lady Roberts and the Misses Roberts and the following members of the medical profession:—Indian Medical Service: Major W. R. Edwards. *Royal Army Medical Corps*: Major H. B. Mathias, Civil Surgeon C. Franks, and Civil Surgeon A. Ricketts. The following invalids are also on board:—Royal Army Medical Corps: Major E. M. Hassard, Captain H. W. H. O'Reilly, Lieutenant S. G. Butler, Lieutenant R. S. Rodger, and Civil Surgeon F. W. Robinson.

Civil Surgeon Englebach, reported missing at Nooitgedacht on *Dec.* 13th, was killed in action.

Civil Surgeon B. A. Nicoll left Cape Town for England in the *Aroca* on Dec. 9th.

The following officers have been discharged from hospital *to duty*: Major G. A. Wade, R.A.M.C., Civil Surgeons R. Williams, G. L. Hayden, Ed. H. Worth, A. Young, Lieutenant N. J. C. Rutherford, R.A.M.C., and Civil Surgeon D. W. Johnson.

Civil Surgeon R. M. Cowie, reported dangerously ill at Wynberg on Dec. 15th, is now reported to be improving.

A TRIBUTE TO MEDICAL GALLANTRY.

A Reuter's correspondent in a realistic account of the action in which Colonel Le Gallais was killed published in the *Times* of Dec. 17th concludes as follows: "It is not, luckily, an uncommon thing to chronicle the gallantry of the Medical Corps. Captain Surgeon Naismith behaved throughout the whole day with the utmost coolness. He tended the wounded wherever he found them, regardless of bullets, and apparently unconscious of them. Captain Newmarsh, an Australian doctor, volunteered to stay with the wounded at the farmhouse. The Boers behaved very kindly and put a sentry on the house with orders to allow no one to approach. When he left Captain Newmarsh presented them with some provisions in return for their kindness."

DEATHS IN THE SERVICES.

Surgeon-General George Vernon Currie, I.M.S., late 10th Bengal Lancers, recently at Eastbourne-terrace, Hyde Park, W., aged 72 years. He served in the Indian Mutiny campaign against the Mohmunds on the North-west Frontier in 1858, in the Eusofzai and Swat Expedition of 1866, and in the Afghan War of 1879.

Correspondence.

"Audi alteram partem."

"ISOLATION HOSPITALS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 15th, p. 1759, Mr. E. D. Marriott gives certain figures and draws a particular lesson from them, the lesson being that—"judged by results"—he has "brought the failure of the isolation hospital, so far as scarlet fever is concerned, to an absolute demonstration." Now, Sirs, I think, when the figures he has given are carefully examined they will be seen to prove no such "absolute demonstration." All his figures are taken from the "returns" of medical officers of health for some of the years between 1891 and 1898, some time during which period an epidemic of scarlet fever was prevalent in all the large towns of England. He also gives the "returns" for Nottingham and Bolton in detail from 1883 and 1879 respectively, until 1899, the former town commencing isolation in 1885 and the latter in 1884; and he claims that these "returns" supply the "most complete object lesson" that increase of scarlet fever followed the opening of isolation hospitals. Now, if the returns from these two towns be drawn up in the form of a chart, such as is given below, it will be seen that such is not the case, but that there has been a rise and fall in the number of scarlet fever notifications, which rise and fall takes place in well-known and recognised periodic waves, each wave occupying somewhere about 10 years.

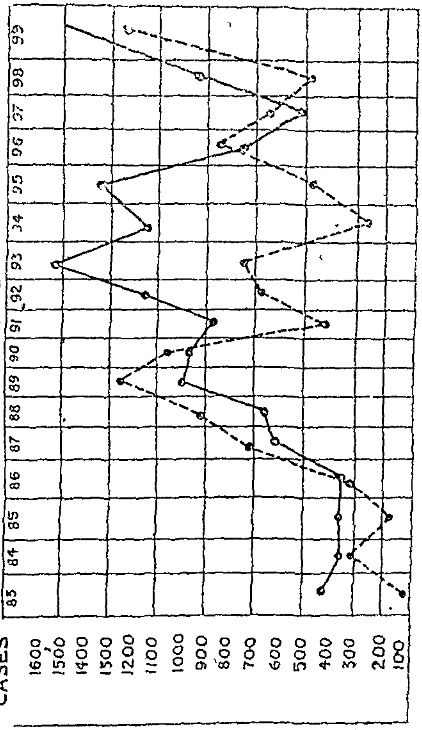

Chart showing the rise and fall of cases of scarlet fever notified in Nottingham (plain line) and Bolton (broken line).

Now, by comparison with the rises in the other large towns mentioned it will be seen that the maximum in them took place about the same time as in the two towns given as "object lessons." Fortunately for Mr. Marriott's deductions the towns taken to demonstrate the "complete object lesson" opened their isolation hospitals when the wave was at its lowest, and were consequently followed—not in the next year, however—by a rise. Mr. Marriott wishes to show that the rise was due to the aggregation of the cases; in fact, he says that "the opening of the hospital [referring to Bolton] was signalised by an increase in the number of notified cases too gradual to leave us in doubt as to the cause." I think that he misreads his information and thus draws a very incorrect lesson. If the towns named had delayed the opening of their hospitals for four or five years such openings would then have been followed by an immediate and considerable fall and then Mr. Marriott could not have deduced his "object lesson." Can he prove that if the Nottingham and Bolton hospitals had not been opened these rises would not have occurred, or that they would have been smaller? and how does he explain the fall which followed the rise? Would not the rises have been a good deal higher if those hospitals had not been opened? Were, in fact, the rises not due to natural and uninterpreted causes perfectly independent of aggregation?

Mr. Marriott further states that "discharged patients are *all* a source of danger." Some of them are decidedly dangerous, but certainly not all. The dangerous ones, from some 2 to 5 per cent., are so either in themselves or merely as carriers of infection from others. It seems to me that the danger does not prove in any way the failure of aggregation, as Mr. Marriott implies, but rather that we are yet unacquainted with the nature of scarlet fever infection and the manner of its conveyance by these dangerous individuals, for return cases occur amongst patients discharged early as well as amongst those detained for a lengthy period; amongst patients having discharges (nasal and aural) and such as have none; amongst those discharged from acute as well as from convalescent wards. Again, is the evidence absolute enough to prove that the phenomenon of return cases is entirely a hospital one? How long does a house remain a centre of infection after a patient has been removed to hospital? for I have known other patients admitted into hospital from the same house on the same day and immediately before the previous patient had been discharged.

Return cases are few—from 2 to 5 per cent. of the discharges. Now, if the other 95 to 98 per cent. of the cases notified were not removed to hospital would there have been no other infections from them? This supposition seems to me incredible.

All these are questions which will have to be discussed and determined in the near future, and if Mr. Marriott's letter sets such inquiries on foot he will have done some good, but the "object lesson" he endeavours to demonstrate from the figures he gives is, in my firm belief, fallacious.

I am, Sirs, yours faithfully,

Manchester, Dec. 16th, 1900. A. J. TONKIN, M.B. R.U.I.

"POISON IN BEER."

To the Editors of THE LANCET.

SIRS,—As there will be no opportunity of raising this question in Parliament for some time, will you allow me, on behalf of my fellow-Members and others interested in the Pure Beer movement, to offer a few observations upon the present aspect of affairs from our point of view?

We have now had an opportunity of questioning members of the Government whose departments are in some way or other supposed to have jurisdiction, and from the answers received it would appear that the duty of conducting an inquiry into the circumstances connected with the recent epidemic has devolved upon the Local Government Board. Here I may say that we are so far fortunate in having at the head of that department a man of undoubted courage and one who may be relied upon, once he is satisfied of his facts, to do his duty unflinchingly. We cannot help thinking, however, that it would have been more reassuring to the public mind if a strong expert committee, such as the Manchester Brewers' Association organised, had been immediately appointed by Her Majesty's Government, in which case they would no doubt have retained the services of the official analysts to the Home Office, both of whom are now members of the Brewers' Committee. In France such an epidemic as this would be at once investigated by the Council of Hygiene, or in Germany by the Imperial Board of Health.

In this country, wherever the interest of the beer-drinker crops up it is difficult to find under which thimble the pea really is, but to us it is very clear where the actual responsibility lies. When the advocates for a definition of beer withdrew their Bill in 1896 the Chancellor of the Exchequer promised to appoint a committee, which was subsequently instructed to report "whether legislation is required to prevent the use of deleterious substances in the manufacture of beer." The majority of this committee (a departmental not a parliamentary committee) reported that "the Treasury are empowered to prohibit the use in the manufacture of beer of any substance or liquor of a noxious or detrimental nature. It is the duty of the chemists employed in the Government Laboratory to keep a vigilant watch in this respect over all beer brewed and sold, and they have ample opportunities for so doing." Yesterday we were told by the Secretary to the Treasury that the power alluded to was conferred upon the Treasury by the Inland Revenue Act, but that "the duty of providing proper securities for the wholesomeness of beer, like other articles of food, is placed by law on the local authorities subject, if necessary, to the Local Government Board or Board of Agriculture," and that therefore "the Treasury had not exercised this power." A pretty puzzle this. Between the Treasury, the Inland Revenue chemists, the local authorities, the Local Government Board, and the Board of Agriculture, where is the beer-drinker?

Although the Inland Revenue authorities know what firms use substitutes they have resolutely declined to give that information to Parliament and the public. On this point the majority of the committee expressed their opinion that it would be "an inquisitorial interference with business of a rather invidious kind"; but as their report was practically a justification of the use of these substitutes, it is difficult to see how it would be "invidious" to state who used them. No, Sirs, the Inland Revenue officials consider it their duty to see that as much liquor as possible pays duty, and the brewers who do not confine themselves to malt and hops say that the public like the substitutes, although they have not sufficient confidence in their compounds to call them by any other name than "beer."

It is quite likely that the policy pursued by the Inland Revenue may yet have the opposite result to that anticipated. The present scare has already brought about a considerable diminution in the consumption of beer, to the consequent detriment of the revenue. We believe that the more people are satisfied as to the purity of beer, the more generally they will drink it and the more will the revenue be augmented. Therefore, to our minds, everything points to the desirability of an early enactment defining "beer," and extending to it the same principle that Parliament has already sanctioned with respect to other important articles of diet. If these objects are to be secured it will be necessary, unless the Government are wise enough to take the matter into their own hands, to have a powerful organisation in order to focus the great volume of public feeling which exists throughout the country and of which ample evidence is afforded by the stream of resolutions of public bodies, as well as private correspondents, which pours in upon me every day.

No one who has read the minority report of the committee above referred to can say that this calamity has come upon the Government and the people without warning. We only hope that the sickness and death amongst our fellow-countrymen in the North, sad as it is, will have the result of bringing about a much-needed reform, but this can never be effected until the masses of the people realise and impress unmistakably upon the Government how vitally their interests are concerned with the purity of the national beverage.—I am, Sirs, yours faithfully,

CUTHBERT QUILTER.

House of Commons, Dec. 14th, 1900.

A GERMAN CRITICISM OF THE PRESENT STATE OF OTOLOGY IN GREAT BRITAIN.

To the Editors of THE LANCET.

SIRS,—The debt of gratitude which we owe to our English colleagues, who were the first to promote the study of otology on a sound scientific basis, will always remain in our memory. Toynbee founded the pathological anatomy of the ear and was the first to build up those principles which stamped otology as a science. Nevertheless, his countrymen neglected to gather in the fruits of the seed he had sown and so the leadership of scientific progress in otology passed into the hands of other nations.

However, the growth of otological works in England during the last ten years points to the fact that fresh endeavours are being made to recover lost ground. Still, those who make a point of systematically reading the English literature are often astonished at the apparently almost complete ignorance of all foreign writings, and I really am unable to account for this remarkable fact. It may perhaps be due to their ignorance of foreign languages, so often noticeable in our English colleagues, which prevents them from making use of foreign literature, or perhaps owing to their extensive private practice they have not sufficient spare time to peruse the German scientific writings. This fault alone cannot help giving the experienced reader the impression that the work is not up to date. Many otological writings are published by the English press which no German journal would accept because their contents are already out of date, and many therapeutical suggestions are published as *new* which every aural surgeon in Germany has long been acquainted with. If our desire to enlighten our English colleagues on this question is to be of any practical value we must above all prove the accuracy of our assertions. In this I limit myself to a few striking examples. Although the question with regard to ligaturing the jugular vein in cases of sinus phlebitis ex otitide is still under discussion, yet it is generally acknowledged that for specified cases the ligaturing of the vena jugularis interna is an important step forward in the treatment of sinus thrombosis. Further, all German otologists are now unanimously of the opinion that in cases where the diagnosis of sinus thrombosis has been made with certainty the sinus should be laid open and the infected thrombus removed. To Zaufal (Prague) are we indebted for having suggested this operation. As long ago as 1880 he recommended the opening of the diseased sinus as well as the ligaturing of the vena jugularis interna,[1] and in 1884[2] he was the first to perform the operation, or at least to wash out and drain a sinus already opened by ulceration.

In 1886, six years after Zaufal, Horsley[3] suggested the same operative treatment, but without even mentioning Zaufal's name, showing that he was in complete ignorance of the well-known professor of otology in Prague. This operation performed two years later (1888) by Horsley himself ended fatally. That this operation has become popular through the favourable results obtained by our English colleagues, Lane[4] and Ballance,[5] has nothing to do with the question of priority.

As a further proof of the accuracy of the above stated assertions let us take Macewen's well-known book "Pyogenic Infective Diseases of the Brain and Spinal Cord, Meningitis, Abscess of the Brain, Infective Sinus Thrombosis," which was published in 1893, and was received in Germany not only by otologists but by general surgeons and neurologists as well with universal approbation. The large mass of carefully observed clinical material, the infinite pains taken in the working out of the anatomy, the almost too surprisingly successful results from operation which opened up a hitherto undreamed of field in the treatment of intracranial complications are tokens of the great scientific value of this book. Nevertheless, the book shows evidence of its author's very superficial knowledge of the German literature on the subject, only those writings translated into English being apparently known to him. Also the promise made in the preface to publish later an appendix of the literature on the subject has not yet been fulfilled. The fact that much is considered by Macewen as being *new* which in reality has long been known can only be explained by his lack of knowledge of the literature, and this is especially brought out in his description of the mastoid operation.

As regards the indications for this operation Macewen still holds the same views as Schwartze did 20 years before him. If he had referred to the above mentioned author he would have been aware that Schwartze had considerably modified his earlier views and that he now pointed out cases where, in opposition to the previous simple opening of the antrum, he recommended the so-called "radical" operation (*Totalaufmeisselung der Mittelohrraume*) as being more suitable and in which the healing would be more rapid. The operation which Macewen advocates is in many cases insufficient and has now become obsolete. The extensive and more recent literature on this subject which the introduction of the more radical methods of operation (Kuster, Zaufal, Stacke, &c.) gave rise to, and especially the chapter on "Operations" in Schwartze's book on the Diseases of the Ear (Schwartze's Handbook, Band ii., 1892), are, if we may judge from what he has written on the subject, apparently unknown to him.

The paper by Ballance above referred to shows the same want of familiarity with the current literature and may be taken as an example from the most recent publications to again point out the justness of my previous assertions. The title of this paper is as follows: "The Conduct of the Mastoid Operation for the Cure of Chronic Purulent Otorrhœa with Special Reference to the Immediate Healing of the Cavity in the Bone left by the Operation by means of Epithelial Grafts."[6] The author describes in this paper the "radical" operation as a "description of my *own* plan of operation which has been developed from no inconsiderable experience." Instead of being contented with a single operation which has usually been considered sufficient he divides his operation into two parts—(1) the operation for the removal of the disease and (2) the operation for the healing of the wound. The description of *his* first operation differs only in unimportant details—*viz.*, the use of specially constructed "burrs" driven by an electro-motor—from the operation which has been in vogue in Germany during the last ten years. The second operation which is carried out, in the case of children after an interval of a week, in adults in two or three weeks, after the first operation consists in covering in the most painstaking manner the newly granulating surface of the bony cavity with "skin grafts." The only important difference in his method to that usually employed in Germany is that he makes a point of dividing the mastoid operation into two parts, whereas in this country the "skin-grafting" is only undertaken as a secondary operation in special cases. Although at the first cursory glance the favourable results of his cases seem to prove that his proposed method has met with success, still we do not feel disposed to attach very great weight to his statistics owing to the cases having been watched for much too short a period. Of what value is it when in a series of cases he only tells us that the discharge has ceased if nothing be said as regards the condition of the surface of the cavity, as to whether the cavity be covered with opaque or glistening epithelium, or whether on any part of its surface there be crusts or not? For any aural surgeon who has had any experience knows that the cessation of the discharge by no means guarantees a permanent cure.

I cannot, however, in principle agree with Ballance's proposed operation because it is not always possible to remove thoroughly all the diseased bone by operation. Quite apart from the fact that our hand is often stayed in operation in order not to damage the function of hearing or the facial nerve, and also that carious spots on the promontory, on the floor of the cavum tympani, and in the region of the bony Eustachian tube are not amenable to operation, it is often not possible for the eye to distinguish between the sound and diseased area of bone, so that later in the course of the after-treatment parts often prove to be diseased which at the time of operation were supposed to be healthy.

Now I come to the main point of the subject. Although the author in his description of the "first operation" makes no mention whatever, with the exception of a short reference to Stacke's paper, to the extensive German writings bearing on this subject, it may be that he is only giving his countrymen a paper on a subject well known to everyone. But his description of the "second operation" cannot help impressing the reader with the idea that the method of "skin-grafting" the mastoid cavity in order to accelerate the healing was devised by him.

He is evidently unaware that several German authors have prior claims to this method. Therefore I may as well point out here that, for instance, Siebenmann,[7] as early as 1893, recommended this method (*Thiersch's epithelial skin grafts*) after operating on cavities containing cholesteatoma, and that before this several others had already made the same experiment elsewhere. I think that the foregoing example will be sufficient to convince our English colleagues of the justness of my previous *remarks*. Our English-speaking colleagues on the other side of the Atlantic have been far quicker in obtaining knowledge and dexterity in theory and practice from the sources of scientific progress themselves, with what result can be seen from their recent literature, the excellence of which may be taken as a sure sign of their advancing scientific knowledge.

I am, Sirs, yours faithfully,
Professor Dr. Grunert.
Assistant Surgeon to the Clinic for Diseases of the Ear in the Royal University of Halle a/S (Professor H. Schwartze).

A NEW AND PROBABLE SOURCE OF ARSENIC IN BEER.

To the Editors of The Lancet.

Sirs,—My researches as to the source of arsenic in beer confirm those of Mr. Kirkby of Owens College—namely, that the greatest source is arsenicated sulphuric acid used in making glucose and invert sugar. There is, however, one possible and probable source of contamination of beer that I have not seen reported on. My attention was drawn to it by the fact that some of the arsenicated beers of Bacup were made from malt and hops only, no glucose or invert sugar being used. The brewers and analysts concerned were puzzled to account for it. The amount present was probably less than one grain of arsenic in 280,000. One brewer found that I had taken the first draw from the pump in the morning and suggested that the pipes and indiarubber tubing leading from the pumps to the barrel might be the cause. Samples of beer were taken from the wood or barrel and they were found to be absolutely free from arsenic by the most delicate tests known. It was clear, therefore, that the contamination must be after the beer left the barrel. I obtained a new pipe of the kind used in the trade and found arsenic present. I then obtained indiarubber tubing which had been used; arsenic was present in much larger quantity.

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[1] Prager Medicinische Wochenschrift, 1880, pp. 516–517.

[2] Ibid., p. 474.

[3] St. Thomas's Hospital Reports, vol. xviii.

[4] Brit. Med. Jour., May 4th, 1889, p 997; and June 28th, 1890, p. 1480.

[5] Ibid., April 5th, 1890, p 783.

[6] London: H. K. Lewis. 1900.

[7] Berliner Klinische Wochenschrift, 1893, No. 1.

As regards the main cause of this arsenical poisoning epidemic, it is obvious that the amount of arsenic present in the rubber tubing used would not be of very serious account, as it is probably less than one part in 280,000; nevertheless, one can easily understand that beer having stood in the tubing all night, or for some considerable period, may be distinctly marred from this source. By Gutzeit's test there was distinct evidence of arsenic being present in both new and old indiarubber tubing, also in old and new lead piping. The old rubber tubing having been dissected into three layers, each was submitted separately to this test, also the layers together, and the results were compared. In old rubber tubing (1) the inner coat showed an appreciable quantity of arsenic easily detected (the beer passing into the tube was found to be arsenicated); (2) the middle coat or canvas layer gave the most marked result, arsenic being present in distinct quantity; and (3) the outer coat showed a very faint, almost inappreciable, quantity. On comparing the canvas layer or middle coat with the result of the three layers together it was quite clear that this coat was the most highly charged. *New rubber* tubing analysed similarly gave the following results: (1) the inner coat was practically free; (2) the middle coat again gave evidence of arsenic being present in somewhat similar quantities to those found in the old tubing; and (3) the outer coat gave distinct traces. On comparing the canvas coat with the three layers together the results again showed the middle coat to be the chief source of arsenic. The quantity used in the above investigations was one gramme.

I am, Sirs, yours faithfully,
Bacup, Dec. 19th, 1900. JOHN BROWN, M.D., D.P.H. Vict.

ARSENIC AND AERATED WATERS.

To the Editors of THE LANCET.

SIRS,—I referred in my communication to you *re* arsenic in beer[1] as to the possibility of aerated waters prepared from arseniated sulphuric acid being contaminated. I am now glad to be able to report that no trace of arsenic could be found after exhaustive analysis in specimens of soda water, hop ale, and lemonade submitted for examination, although an impure specimen of sulphuric acid had been used in their manufacture. A very faint trace of lead was found in the lemonade, probably derived from the citric acid used. I may add that the impure sulphuric acid was at once returned to the manufacturers.

I am, Sirs, yours faithfully,
A. H. BAMPTON, M.D. R.U.I.
Ilkley-in-Wharfedale, Dec. 15th, 1900.

"A RECENT DEVELOPMENT IN ADVERTISING."

To the Editors of THE LANCET.

SIRS,—First let me thank you for the excellent advertisement you have given to Craigside Hydro, Llandudno, free of charge, in your leaderette in the issue of THE LANCET of Dec. 15th, under the above heading. In the leaderette you have thought it necessary to condemn the method of advertising adopted by its directors, which method you describe as "evil," and moreover charge medical men who take advantage of the directors' invitation with sacrifice of self-respect.

I cannot help feeling that you have made these charges with a very slight knowledge of what you write about, probably without seeing the letter accompanying the coupon. I cannot think that you object to a hydropathic establishment advertising, otherwise you would not admit advertisements of hydros to your advertisement columns. Nor can I think that you object to directors of such institutions bringing their establishment to the notice of the medical profession, otherwise the *raison d'être* for your advertisement pages is abolished. I conclude, therefore that it is the suggestion that medical men should at the cost (in some cases considerable) of their railway fare only be invited to visit the establishment to which they are asked to entrust their patients for, it may be, a considerable time.

I enclose a copy of the letter which accompanied the coupon and from this you will see that it is a straightforward request to medical men to send their patients to this establishment. It would be unreasonable to expect a doctor to send a patient to an establishment with which he was unacquainted; surely, therefore, the fact that he may once in his lifetime visit it for three days free of charge to satisfy himself that it is a suitable place to which a patient may be sent can scarcely involve such charges as the delicately hinted "bribery" and "corruption" and badly expressed "loss of self-respect" which you make in your article. I should like to draw attention to the following sentence: "It says in effect 'We will pay you for a three days' holiday here, afterwards send your patients who will pay us.'" Owing to your lack of knowledge of facts I hope, and not to a desire to "score" by innuendo, you have missed the object of the letter. You should have said: "It says, in fact, 'Come and stay for three days without charge, and if you find things as you wish send your patients who will pay us, as we consider our establishment suitable for patients whom you wish to send to the seaside.'"

I am pleased to say that your prognosis as to the manner in which the advertisement would be received by the profession has already proved incorrect, as the directors have received numerous letters from doctors thanking them for the invitation and expressing the intention of the writers to avail themselves of the same, and have, moreover, cashed a considerable number of the coupons. It may be news to you, but it is nevertheless the fact, that it is not by any means an uncommon occurrence for medical men who write applying for charges for a holiday at a hydropathic establishment to ask for a reduction of terms in consequence of their profession and of their ability to recommend patients. As I said before, I enclose you the coupon and letter and trust you will be able to avail yourself of the directors' invitation.

I am, Sirs, yours faithfully,
Llandudno, Dec. 16th, 1900. J. MILES CHAMBERS,
Managing Director.

To the Editors of THE LANCET.

SIRS,—I write in the interests of mere justice (for I have no other interest in the matter) to protest against the tone of your annotation concerning the above. I for one can see no objection to the offer of entertaining medical men for three days in order to let them practically experience what manner of establishment is open for the reception of their patients if they please to recommend it. It is in no sense a constructive *bribe*, for no testimonial or *quid pro quo* is sought. If the medical man thinks the place worthy he can send his patients there—not unless. I have received advertisements from other establishments offering *commission* for sending patients, which is certainly objectionable; and from others offering to receive patients recommended by oneself at reduced charges, which might be open to abuse. But to the Craigside practice I cannot discern any honest objection. It is a perfectly fair and legitimate means of advertising—and without advertising how can such establishments become widely known? It is a guarantee to the public of the genuineness of the advantages of the establishment to submit it to such a practical test. To characterise it as an *implied bribe* to medical men is to lay the profession open to a most unworthy aspersion.

I am, Sirs, yours faithfully,
C. E. RICHMOND, F.R.C.S. Eng.
Manchester, Dec. 18th, 1900.

"NEW-LAID EGGS AND FRESH EGGS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 15th, p. 1758, I was pleased to read in the letter of Sir W. T. Gairdner about the system of his "very dear old relative" practised by her in greasing the new-laid eggs the instant they were laid with the practical result that the eggs remained fresh, by which means they were kept good for an indefinite period. Some 40 to 50 years ago my mother (God rest her soul) had a large number of hens, turkeys, and geese. The hens' eggs were brought in by one of the dairymaids when laid and they were "buttered." The large number of eggs that accumulated induced my mother to add to her "pin money" by selling them. Her buyers came, but though offered the buttered eggs they declined them as "not saleable." The result was that the eggs for home consumption were buttered, but those for sale were not. I fear, then, from this experience that if buyers of eggs are of the same opinion now as when my dear mother had to do with them the new-laid buttered eggs would not be acceptable to the trade, though much the public would lose in their freshness. The market and the middleman trader would have to be trained to the knowledge to induce a sale of preserved new-laid eggs to the public. If the "system" could only be promoted by poultry-farmers in general and adopted, what blessings would be given by the housekeepers and housewives of the metropolis and lodging-house boarders in having an egg for breakfast that was eatable.

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[1] THE LANCET, Dec. 8th, 1900, p. 1675.

I am, Sirs, yours faithfully,
F. A. PURCELL, M.D. R.U.I.

Manchester-square, W., Dec. 18th, 1900.

"KIRKES' PHYSIOLOGY AND AMERICAN PIRACY."

To the Editors of THE LANCET.

SIRS,—Not having seen the letter of Mr. John Murray upon the subject, Professor Halliburton's communication in THE LANCET of Dec. 15th, 1900, p. 1761, was the first intimation to me that my name continues to appear upon the title-page of what may be called an *unauthorised edition* of Kirkes' Handbook of Physiology published in America, as joint editor with (the late) Mr. Morrant Baker. The well-informed reviewer of the *Boston Medical and Surgical Journal*, quoted by Professor Halliburton, gives a pretty accurate account of the history of the book in question. The first edition of Kirkes' Physiology was brought out in 1848 by Dr. Kirkes, assisted by Mr., afterwards Sir James, Paget, and these names appeared upon the title-page, I think, until 1869 when Mr. Morrant Baker edited the sixth edition. Mr. Baker continued to be sole editor until 1880 when I assisted him in bringing out the tenth edition. The book continued under our joint editorship until 1892 when the thirteenth edition was published; this was revised in 1894 and was, according to the preface, to be looked upon "in certain respects as a new edition." As far as I can recollect this revision was done by me. After the issue of this revised edition Mr. Morrant Baker and I ceased to be editors—the former in consequence of failing health and I because I had given up the teaching of physiology. The next edition was edited by Professor Halliburton and was to a large extent a new book with a complete rearrangement of the subjects and a much enlarged scope. The editor and the publisher were certainly justified in looking upon the fourteenth edition, therefore, as practically a new work upon physiology. Perhaps it would have been better if the old title had been given up, but there were, no doubt, cogent reasons against this. Since 1894, then, neither Mr. Morrant Baker (whose lamented death occurred in 1896) nor I have had anything whatever to do with the editing of "Kirkes' Handbook" and the continued use of our names in this connexion is a most unwarranted and unjustifiable proceeding.

I am, Sirs, your faithfully,
Queen Anne-street, W., Dec. 18th, 1900. VINCENT D. HARRIS.

"MERCANTILE MARINE MEDICAL OFFICERS."

To the Editors of THE LANCET.

SIRS,—There is an interesting letter in THE LANCET of Dec. 1st from your Paris correspondent dealing with, *inter alia*, mercantile marine medical officers. The perusal of this note and reading in the *Daily Telegraph* of Dec. 13th Admiral Hopkins's "Hints on the Navy of the New Century" reminded me that some few years ago I advocated the necessity of a medical adviser at the Board of Trade where just such matters as your correspondent alludes to should be dealt with, as well as others of a cognate character, by a specialist instead of the ordinary laymen. At that time you, Sirs, deemed my proposition "rather a large order." Perhaps the subject might now be worthy of reconsideration. And as there is a new President at the office the coming session of Parliament would be a favourable time to induct an official medical head at the Board following on the lines of the suggestion of Admiral Hopkins for the appointment of a flag officer at the Admiralty.

There are many measures in regard to the office of ship's surgeon and the conduct of affairs connected with that position requiring improvement, and notably the clearing of tramp steamers and short ships, *without inspection*, going long voyages, sometimes with incompetent men, and almost invariably ill-provided with medicines and instruments. The receiving and tabulating of medical reports of the diseases treated on board as well as those noted at different places of call—attention to the eyes of the ship—these and other strictly professional work in the interests of the sea-borne population as well as for the dwellers on land would well repay the expense of such an official. I simply throw out these suggestions in the hope, Sirs, that if you think favourably of them they may have the benefit of the powerful advocacy of THE LANCET in your own way.

I am, Sirs, yours faithfully,
R. A. CALDWELL.

Bournemouth, Dec. 17th, 1900.

THE RATING OF HOSPITALS.

To the Editors of THE LANCET.

SIRS,—With reference to the question I asked in the House of Commons last Friday, as to relieving hospitals and kindred institutions from the burden of paying rates, the following reply was given me by the Government:—

> I beg to inform my honourable friend that the matter is one of considerable difficulty and forms part of the subject now under the consideration of the Royal Commission on Local Taxation. I cannot at present give any promise as to its being dealt with by the Government.

For your information you may be interested to know that I shall not relax my efforts in the direction of the subject-matter of my question

I am, Sirs, yours faithfully,
Dec 20th, 1900. FRED. HORNER.

"THE TREATMENT OF MALARIA BY HOMŒOPATHIC MEASURES."

To the Editors of THE LANCET.

SIRS,—It is only two days ago that my attention was drawn to your article on "Malaria and Homœopathy" in your issue of Nov. 24th, and to the letter from my father, with your peculiar "editoral note" appended, which appeared in your succeeding issue. Your "note" provides a really interesting study, as it shows how uncontrollable temper and sense are not found at the same time in the same individual. Your quibbling as regards "qualified homœopath," is not only puerile, but utterly false.

Homœopathy is merely a higher branch of the therapeutics (?) [The query is Dr. Hayward's—ED. L.] taught at all our universities. Following out your argument, there are no "qualified nerve specialists," "qualified medical electricians," or "qualified serum therapists," as each of these departments is a higher development of its subject as taught in the universities. Not one of them was included either in the examination or curriculum, when you or I obtained our diplomas; although they have each (most decidedly including homœopathy—but in this case mystifying the source) since been more and more incorporated in the teaching of each of our colleges. All the most honoured men in our profession are therefore, according to your idea, "unqualified" in their special branch, an opinion which even you dare not put into print. I sympathise with you in the very unfortunate "analogy" you use, but consider that your execrable taste in using it fully merits the recoil it possesses. It is difficult to follow your analogy between honourable medical men—though homœopaths—and the characters you mention, but one is at once struck by the amazingly close resemblance between an editor who uses falsehood and mud to besmirch honourable opponents and another character who did the same thing—Pigot—and who is naturally suggested by your examples, but whose villany was of a distinctly meaner type than theirs.

I am sorry for the honourable profession which has to regard you in your official capacity as some sort of a figure-head when it sees you stooping to the gutter to grab the most unsavoury filth you can find so as to throw it at men as honourable as any others in the profession, men who have had the same medical training as yourself, who have satisfied the same examiners, and who have obtained at least as good diplomas as you yourself can hold. And after throwing the mud, with your hands still reeking of the gutter-filth, you "shut down" your columns so as to preclude the possibility of any protest from the gentlemen you have tried to vilify, or from honourable men on your own side who might desire to remonstrate with you.

I am afraid it is too much to expect you to re-open your columns so as to publish this letter, but if you could see your way to re-considering your decision I am sure it would give pleasure to your readers, for you know gentlemen are always pleased to see a gutter-snipe thrashed by one of the respectable people whose clothes he has attempted to dirty, even when—as in this case—he has only succeeded in soiling his own hands without in any way tarnishing the lustre of the object of his attack. I do not think the general profession will be glad to find that they have entrusted the management of an old and—excepting as regards the "editorial columns and notes"—a still honoured journal, to a man who, while having no pretence to gentlemanly feelings, mistakes falsehood and vituperation for the intelligence which should be as necessary as gentility in anyone managing such a property. However, so that some at least of the profession may be satisfied that your footnote "cannot give any more space to this matter.—ED. L.," has not stifled all protest, I am sending copies of this letter to two other medical journals, in which not only is the honour of the entire profession carefully guarded, but where gentlemanly conduct controls not only the outside contributions and advertisements, but—which differentiates them from your journal—in which it also regulates the editorial columns and comments.

I am, yours truly,
CHARLES W. HAYWARD, Barrister-at law, M.D., C.M., D.P.H., M.R.C.S., L.R.C.P.
Liverpool, Dec. 14th, 1900.

*** Dr. Hayward asks for the publication of his letter. Here it is.—ED. L.

"INFAMOUS."

To the Editors of THE LANCET.

SIRS,—Your report of the proceedings of the General Medical Council in its decision in the case of the Birmingham Consultative Institute cannot fail to give rise to a feeling of insecurity amongst members of the profession who hold public appointments. It would greatly tend to the public advantage if the Council would condescend to explain the subtleties which must lie beneath the surface of their decision of last week.

Why should it be "infamous" for a medical man's name to be printed on the prospectus of a company who have elected him as their medical officer, whilst at the same time the names of hundreds of medical men, bearing office in hospitals, insurance companies, medical clubs, &c., are scattered broadcast over the country in thousands of hospital reports, prospectuses, &c., with impunity? Again, the hydropathic institutions of this country advertise the name of their medical officer in pamphlet and poster. Is it not time that the General Medical Council, in addition to its other important duties, should revise the wording of their verdicts?

The word "infamous" means "having a reputation of the worst kind; publicly branded with odium for vice or guilt; base, scandalous, and notoriously vile; held in abhorrence; branded with infamy by conviction of a crime." It will be interesting if the Council will deign to point out which of the foregoing definitions apply to the Birmingham consultant. If "infamous" is a term to be employed as the official utterance against alleged advertising of a company's officer, why is not every holder of a public office equally "infamous"? Our public officer of health—a most worthy soul—is "infamous" under this ruling every week. Again, may I ask what is the proper term to employ in speaking of a medical man found guilty of criminal abortion?

I am, Sirs, yours faithfully,
Dec. 9th, 1900. A HOSPITAL SURGEON.

"THE LIABILITY OF THE BREWER IN THE RECENT EPIDEMIC OF PERIPHERAL NEURITIS."

To the Editors of THE LANCET.

SIRS,—The writer of the leading article in THE LANCET of Dec. 15th on the legal aspects of the recent epidemic of peripheral neuritis might have cited in support of his contentions cases which have attracted notice recently, such as the action of Smith *v.* the Inns of Court Hotel, in which it was alleged that guests had been poisoned by food eaten in the hotel; or an action which excited some amusement in 1896, brought by a plaintiff who claimed to have suffered from drinking beer out of a bottle containing a dead mouse. It will be found, I believe, that each of these cases turned on the question whether there had been negligence, and that it was not said in either that there was any implied warranty that the food or drink was fit for the purpose for which it was sold. From analogy thus supplied it seems clear, therefore, that any claims that may arise out of the epidemic will resolve themselves into the question whether the brewers were negligent.

Now neither the manufacture of glucose nor that of sulphuric acid is in the nature of a trade secret or an obscure scientific process. "Glucose in commerce = the sugar syrup obtained by the conversion of starch into sugar by sulphuric acid." "The sulphuric acid of commerce is never pure, but may contain lead sulphate, arsenic, and other impurities." These are not extracts from even a text-book on chemistry; I find them in the Century Dictionary under the words "glucose" and "sulphuric acid." On the other hand, the extent to which glucose and "invert" sugar are used in brewing, their sources, the prices paid for them, and the elements influencing such prices are matters intimately concerning individual brewers and are not easily scrutinised or controlled by others.

It seems, therefore, to me that there will be evidence that the brewers might have known, and must have known, that the chemical preparations they used were liable to contain arsenic or that they had no business to use them if they knew nothing about them. That knowing they might contain arsenic they ought to have analysed them in order to ascertain that they were pure, and that their neglecting to do so will be evidence of negligence on their part. You have in your columns shown the kind of scientific evidence at the disposal of plaintiffs and the evidence to prove that the negligence of the brewers was the cause of suffering and death to customers in public-houses owned by them for the exclusive sale of their own beers, and it further seems probable that juries will not be inclined to spare them. The precise evidence that will connect each case with the beer of the particular brewer will be a matter for the consideration of the individual litigant; the probable scope and general character of the case to be presented by those who have themselves been poisoned or who claim because they have lost relatives upon whom they depended you have pretty clearly indicated.

I am, Sirs, yours faithfully,
Dec. 19th, 1900. M. A.

P.S.—It is now stated that certain malts have been found to contain arsenic. Whether they do so owing to some new or secret process in their preparation has not yet been shown. It is, however, clear that brewers' chemists will have to master the details of the preparation of all materials that brewers use and analyse with a view to detecting all dangerous ingredients that known processes of manufacture are likely to introduce into them.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Bogus American Diplomas in India.—Typhoid Fever and the Water supply of Rangoon.—The Water-supply of Calcutta.—The Plague in India.—The "Barefoot Theory" of Plague Inoculation.

INDIA has apparently been a good market for the sale of bogus diplomas to native medical practitioners, for the Government has found it advisable to warn the public against certain American degrees. In a country like India, where there is no medical registration of any kind and where any knave can assume any title he likes, such a warning was especially necessary. There are certain persons in this country who are known to practise on these bogus degrees. It is therefore gratifying to find that action has been successfully taken in Chicago, and that one practitioner in Calcutta and another in Bombay have had their negotiations for these degrees cut short. Not much good can be accomplished, however, so long as the crowds of native untrained men are permitted to impose on their credulous fellow-countrymen.

In consequence of a severe outbreak of typhoid fever in Rangoon Major Davis was appointed by the local government to inquire into the condition of the water-supply. The result is a severe condemnation of the water from the standpipes, wells, and royal lakes. Of the latter Major Davis says: "The physical characteristics were so bad that I think it unfit for drinking. ...... The lake is also obviously liable to contamination." It appears that the causes of contamination are the deposits of manure on the land of Dalhousie Park for gardening purposes and the absence of sanitary precautions to prevent pollution by the large assemblage of low-class Burmans and other natives on the shores of the royal lake during the week's celebration of Burmese aquatic sports. In these days of advanced sanitation it is astonishing that the authorities should have allowed these things to exist. As a remedy the health officer advocates the hurrying on of the water scheme at Thamaing.

The city of Calcutta is also very improperly supplied with water. For drinking purposes the water is taken from the Hoogly several miles up the river and then filtered, but the supply is turned on only twice a day for a few hours. The consequence is that the natives largely use dirty pond water and equally dirty well water. The water used for the roads is the water from the river unfiltered. It is satisfactory to hear that a change is contemplated. A visit of certain corporation officials has been made to the filtering grounds and it is said that an improvement both in the quantity and quality of the water is promised. The city is also to have a continuous supply of filtered water. The pressure in the mains will also be increased, so that water may rise to the second, or even to the third, storey. At present it barely reaches the first. I find it reported that the commissioners have stopped the grazing of cattle in the grounds. Here, again, one cannot help expressing astonishment that such a thing should have been permitted. Calcutta has been described as the home of cholera. It is obvious, however, that the disease cannot be eradicated so long as the natives are permitted to use the numerous sewage-polluted ponds and wells.

The return of deaths from plague throughout India during the past week shows that the epidemic is not on the increase. There were recorded 1939 deaths as compared with 2192 for the preceding seven days and with 2080 for the corresponding week last year. The Mysore State is chiefly affected, but Calcutta, Monghyr, Saran, Patna, and Gaya in the Bengal Presidency continue to return double and treble figures Most of the deaths from plague in Calcutta are now returned as suspicious, but anyone acquainted with the facts can easily read between the lines. As the mortality in Calcutta as well as in Bombay keeps unusually and unexplainedly high it is very probable that there is more plague existing than is reported. I am pleased to record that plague has now again almost disappeared from the Punjab. In Bombay city there has been a slight increase over the previous returns.

The port health officer of Bombay, in his report for 1899, expresses himself very decidedly on the means of infection in plague as follows: "The majority of plague cases in the East contract the disease by inoculation through cracks, fissures, or ulcers on the feet, as the large majority of the population go barefoot." He goes on to express the opinion that "as long as plague in the East is confined to the bubonic type the people at European ports, and the other ports where the population wear boots and shoes, will not suffer from the disease in an epidemic form." The great care which is taken at the Bombay port against the spread of plague is probably the explanation why the disease has not been readily conveyed to other places. The "bare-foot theory" is open to question seeing that groin buboes are of common occurrence amongst Europeans and others who wear boots.

A further decrease of 142,135 persons in receipt of famine relief is recorded for this week. There are still 173 161 persons on relief works, the remainder receiving gratuitous relief. The various Native States have 59,573 persons on relief.

Nov. 30th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Epidemic of Peripheral Neuritis.

THERE have been 30 cases of peripheral neuritis in the Birkenhead Workhouse hospital since the middle of October. A coroner's inquest was held a few days ago in Birkenhead touching the death of a female who was suspected of having died from arsenical poisoning. Mr. G. S. Stansfield, the medical officer of the Birkenhead Workhouse, attributed the death to peripheral neuritis caused by arsenic or some other irritant poison. The inquest was adjourned for a fortnight to enable a thorough analysis to be made. In the Liverpool Workhouse several cases of peripheral neuritis are under treatment.

Death of Henry Greenwood Rawdon, M.D. St. And.

The news of the unexpected death of Dr. H. G. Rawdon at Elstree, Hertfordshire, was received by his numerous friends in Liverpool with great regret. Dr. Rawdon received his medical education at the old Liverpool School of Medicine and at Guy's Hospital, becoming a Member of the Royal College of Surgeons of England in 1858. Later he graduated as M.D. at the University of St. Andrews, and became a Fellow of the Royal College of Surgeons of Edinburgh in 1885. Dr. Rawdon was an excellent surgeon, his reputation being very high at the Liverpool Infirmary for Children (where he held the post of honorary surgeon for a number of years) owing to his successful and original operations for the repair of hare-lip and cleft palate. Upon his retirement from the Infirmary for Children he was appointed honorary surgeon at the Royal Southern Hospital. He retired from practice upwards of two years ago and removed to Elstree in Hertfordshire, devoting himself to rural occupations, which possessed a great charm for him. Dr. Rawdon had the misfortune to lose his wife 12 months ago, and his grief probably hastened his decease, which was due to apoplexy. He was in his sixty-fourth year and leaves no issue. Dr. Rawdon was descended from an old Yorkshire family, some of whose members served in the Parliamentary army during the Civil War in the reign of Charles I.

Dec. 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Physicians of Edinburgh: the Morison Lectures.

AT the annual meeting of the Royal College of Physicians of Edinburgh, held on Dec. 6th, the following Fellows were elected office-bearers of the College:—President: Dr. Thomas Richard Fraser. Vice-President: Dr. James Andrew. Council: Dr. J Wyllie, Sir John Batty Tuke, Dr. T. S. Clouston, Dr. G. A Gibson, and Dr. D. Berry Hart, along with the President and Vice-President.—The Morison Lectures were this year delivered by Dr. G. W. Balfour. The first lecture was delivered on Dec 4th in the hall of the Royal College of Physicians of Edinburgh, Dr. Andrew, President of the College, being in the chair. The title of the lectures was "On the Borderland," and in his first lecture Dr. Balfour discussed the many instances in history of persons who, judged by modern ideas, would be considered more or less insane, but who in their own time exerted a great and important influence on the nations among whom they lived. Quoting Dryden's dictum that "great wit to madness sure is near allied," he referred to the hallucinations of Socrates, the strange story of Joan of Arc, and the career of Mahomet, whom the lecturer held to be even more unmistakably insane than Joan of Arc. Turning to the realm of literature Dr. Balfour showed that many of the noblest works in literature had been produced by men who dwelt on the borderland, as examples of whom he cited Jonathan Swift and William Cowper. He also demonstrated that persons who might be classed in that category were often distinguished by remarkable activity of mind and body. The second lecture was delivered on Dec. 11th, Professor T. R. Fraser, the new President of the College, being in the chair. Dr. Balfour in continuing his subject dealt with what he called the epidemic insanities which had from time to time swept over the world. Examples of epidemic insanities were seen chiefly in the Middle Ages, though even in their own time there had been thought-waves of insanity which had only been noticed when criticised by another age. The most outstanding example was the occurrence of the Crusades. These were aroused by Peter the Hermit, being an attempt to drive the Mahomedans from the Holy Land, and they culminated in the tragedy of the Children's Crusades. The Crusades had left their influence on the world: they caused the breaking-up of feudalism and gave an impulse to commerce; moreover, by bringing leaders of men into closer contact with the Church they had brought about a closer scrutiny of the Papal system and paved the way for the Reformation. The Turk still ruled in Palestine, but Europe had benefited by the Crusades. No other epidemic of insanity, however, had been of advantage to the world. Dr. Balfour then referred to the pandemic dancing mania which appeared about the end of the fourteenth century and spread over Europe for 200 years. This choreiform insanity was finally put an end to by the Thirty Years' War. A remarkable form of epidemic insanity had occurred in this century—namely, table-turning, table-talking, and thought-reading. In 1851 there had been an epidemic of mesmeric mania which had left many enfeebled bodies and minds. Hypnotism had not been able to hold its place as a method of treatment and had now passed out of the region of medicine. Another form of insanity which had existed in all times, but which was more endemic than epidemic, was spiritualism. No single fact of any importance had been revealed by those calling themselves spiritualists. In conclusion Dr. Balfour drew the following lessons: 1. Insanity was a disease of which no one need be ashamed. It was a disease of the brain, not of the intellect, and might occur in persons possessing the finest minds. 2. As the object of all education was to control the emotions, so any excitement which tended to weaken the will and emancipate the lower part of the being was to be avoided. At the conclusion of the lecture Professor Fraser expressed thanks to Dr. Balfour in the name of the College. At both lectures there was a large attendance of ladies and gentlemen.

The Edinburgh Hospital and Dispensary for Women and Children.

On Dec. 10th the annual meeting of the friends of the Edinburgh Hospital and Dispensary for Women and Children was held in the Society of Arts Hall, George-street, Mrs. Steel, wife of the Lord Provost, being in the chair. This hospital has recently entered on a new phase of its existence, having been transferred from Grove-street to Bruntsfield Lodge. The new hospital is very well equipped and is, moreover, a home-like and cheerful building. Since it was opened some months ago many serious cases have been treated in its wards which could not have been undertaken in the Grove-street days. The medical officers hope in the coming year to work a similar reformation in the dispensary department which is still stationed in Grove-street. Among those who took part in the meeting were Lady Chalmers, Dr. Beatrice Russell, Dr. Emily Thomson, Dr. George W. Balfour, and Sir A. Christison.

Queen Victoria Jubilee Institute for Nurses.

The annual meeting of the subscribers to the Scottish Branch of the Queen Victoria Jubilee Institute for Nurses was held in the Training Home, Castle-terrace, Edinburgh, on Dec. 11th, Sheriff Guthrie, Q.C., being in the chair. During the past year 35 nurses completed their training as Queen's nurses in Edinburgh, while 13 nurses completed their training in the smaller training homes in other towns. Since the opening of the institute 271 nurses have been trained. There are now 199 Queen's nurses in Scotland working under 111 associations. Additional pecuniary assistance is much needed as the committee contemplate in the future trying to send nurses to districts where the people are too poor to support the nurses.

Appointment for the Medical Officer of Health of Leith.

Dr. W. Leslie Mackenzie, medical officer of health of Leith, has been appointed Inspector to the Local Government Board and has therefore resigned his post as medical officer of health of Leith. The resignation took effect on Dec. 15th and a successor to Dr. Mackenzie is to be advertised for at a salary of £400 per annum.

Dr. Alexander Edington on Malaria.

At last week's meeting of the Glasgow Philosophical Society Dr. Edington, director of the bacteriological institute of Cape Colony, gave an account of his nine years' work in South Africa. He dealt chiefly with the questions of "horse sickness," rinderpest, and Texas fever, referring to the striking success which had attended the practice of prophylactic immunisation by bacteriological methods, particularly in rinderpest. In passing he made an interesting reference to malarial fever. While giving his assent to the mosquito theory he warned his audience not to assume that this was the only way in which malaria may be acquired by the human subject, and in support of this warning he quoted the fact that while in Rhodesia mosquitoes were always present malarial fever prevailed only during three months of the year; and as evidence against the view that the anopheles host must have previously bitten a human being who was the subject of malaria he referred to the case of four young men who went hunting in an absolutely uninhabited district, three of whom died in a short time from malignant malaria, while the fourth was barely able to struggle home.

Glasgow Main Drainage.

The city engineer has issued a long and valuable memorandum on the progress of these works and the applicability of the bacterial method of purification of Glasgow sewage. Experimental plant for testing the bacterial method of dealing with sewage had been set down in the east end of the city, this experiment being the outcome of a report published by a committee which visited the bacterial sewage tank at Manchester, in which report the effluent is spoken of as being satisfactory, while "an enormous quantity of sludge which would otherwise accumulate is destroyed in this way." The most recent report from Manchester, however, shows that 4000 tons of putrid sludge had accumulated in this tank and was with difficulty taken out to sea, as the gases evolved caused the sludge to froth up over the valves on to the deck of the sludge steamer. In the experimental tank at Glasgow also the effluent is all that could be desired, but there is already evidence that sludge is collecting in the open septic tank. The cost of the proposed works for the bacterial treatment of sewage, moreover, puts the plan out of court as a practical scheme; in round figures it amounts, for the purposes of a city like Glasgow, to £1,500,000 for plant alone, with, further, the cost of 80 additional acres of land required for such plant. This and the large and at present incalculable working expenses and the cost of disposing of sludge form prohibitive obstacles to the scheme. Against this the cost of the precipitation plant is put at only £150,000 and the space required at 22 acres. All this refers of course only to the sewage plant at Dalmuir and not to the many miles of sewers required to connect the city with these works.

Glasgow Victoria Infirmary.

The annual report of this institution includes an appreciative reference to the late Sir Renny Watson who was for many years chairman of the infirmary. It also announces the completion of the nurses' home and gives the usual statistics, which show a generally satisfactory state of affairs, including the financial department. The Lord Provost, who presided, moved the adoption of the report and in his speech he argued against the suggestion that the infirmaries should be kept up by the public rates rather than, as at present, be dependant on private liberality. One of the most interesting features of the meeting was a proposal to place two ladies on the board of directors. A similar proposal has been adopted in connexion with the other large general infirmaries in Glasgow, but in spite of this precedent the supporters of the Victoria Infirmary would not be convinced and, somewhat ungallantly, placed the ladies at the bottom of the poll.

Glasgow University.

At the December meeting of the University Court the secretary read a letter from Dr. Thomas Reid resigning his appointment as university lecturer on diseases of the eye. The Court accepted the resignation and resolved to record in the minutes an expression of regret at the loss of Dr. Reid's services. Dr. Reid has held the lectureship for more than 30 years. It was resolved that the regulations of the "Coats Memorial Scholarship," founded in memory of the late Professor Joseph Coats, should include a condition to the effect that the holder of the scholarship must engage in "research work in pathology during a winter and a a summer session either at the Western Infirmary or in some other laboratory approved by the medical faculty" The Court appointed Dr. D. O. McVail as its representative on the committee of management of the Glasgow Samaritan Hospital; and re-elected Dr. Charles Workman as lecturer and examiner in pathology. A gift to the library of 1080 volumes from Sir W. T. Gairdner, K.C.B., was announced, and also a number of recent surgical works from Dr. J. H. Nicoll. It has been decided that the academic celebration of the ninth jubilee of the University shall be held on June 12th, 13th, and 14th, 1901. In connexion with this event a fund is to be raised to extend the University laboratories. As a contribution to this fund a donation of £5000 from Mr. J. Templeton is announced, and several donations of £1000 have also been promised.

Death of Thomas Wilson Jenkins, M.D., C.M. Glasg.

There are many, both at home and abroad, who will hear with deep regret of the death from phthisis pulmonalis, and at the early age of 38 years, of this able gynæcologist. His kindliness of disposition, his skill and thoroughness in work, and his ready help in consultation, will be greatly missed by his colleagues in the Victoria Infirmary and the Glasgow Samaritan Hospital and by a large professional circle in and round Glasgow. The pathos of his death lies largely in the fact that he has been cut down just as he had begun to reap the fruits of many years' honest work in the shape of a large and increasing consulting practice.

Degrees in Public Health and Science at Glasgow University.

The General Council of Glasgow University has made a representation to the University Court advocating the establishment of degrees in science and public health, on the understanding that laboratory instruction of the kind desiderated by the late Universities Commission was now given in the University. In 1895 the commissioners wrote that they could not have such degrees in Glasgow University till proper laboratory accommodation was provided. The required laboratory accommodation was duly obtained, but then a proposal was made by Professor Sir W. T. Gairdner to have a professorship of public health separate from that of medical jurisprudence, and while this was under consideration the matters came to a standstill. The whole matter has been remitted to a committee of the University Court for information and report.

Medical Appointments and Vacancies.

The following gentlemen having passed the necessary examinations have been elected Fellows of the Faculty of Physicians and Surgeons of Glasgow: Mr. William Donald Anderson, Dr. James G. Connal, Dr. Alexander Macphail, and Dr. John H Teacher.—The positions of obstetric physician and assistant obstetric physician to the Glasgow Maternity Hospital are advertised as being vacant, the term of office of Dr. Malcolm Black and Dr. Munro Kerr respectively having expired.—The University of Glasgow has received from the War Office a communication stating that a number of medical men are required for service in South Africa to replace others whose period of service is about to expire. The engagement is for a year, the pay being £1 a day with free passage and allowances for rations, horse, and service, and two months' full pay on satisfactory completion of the term of service. Applicants must apply personally to the Dean of the Medical Faculty. Dr. Robert Steel has resigned his appointment as assistant dispensary physician to the Glasgow Royal Infirmary.

Aberdeen Hospital Saturday Fund.

Last year's total income of the Aberdeen Hospital Saturday Fund amounted to £1009 10*s.* 7*d.*, and the aggregate expenditure to £281 7*s.* 2*d.*, leaving in the bank the sum of £728 3*s.* 5*d.*

Dec. 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Dr. Steevens' Hospital, Dublin.

AT a meeting of the governors and guardians of Dr. Steevens' Hospital, held on Dec 11th, the following appointments were made on the staff: Assistant physician: T. Percy C. Kirkpatrick, M.D. Dub. Pathologist: Francis C. Purser, M.B. Dub.

Royal College of Surgeons in Ireland.

At a meeting of the Fellows, held on Dec. 17th, Sir William Thomson was elected a Member of Council of the Royal College of Surgeons in Ireland.

Coombe Lying-in Hospital, Dublin: Election of Master.

Dr. Frederic Kidd's term as master of the Coombe Lying-in Hospital having expired, the election to the vacant office—tenable for the next seven years—took place on Dec. 16th in the board room of the institution. There was a full attendance of the governors of the hospital, the Lord Mayor filling the chair. The election was by ballot, but as each of the candidates—Dr. Cole-Baker and Mr. Thomas G. Stevens—received an equal number of votes the matter was decided by the Lord Mayor who gave his casting vote in favour of Mr. Stevens. The closely contested election created much interest in medical circles. Mr. Stevens, who is a Fellow of the Royal College of Surgeons in Ireland, was formerly assistant master to the Coombe Hospital.

Will of the late Sir William Stokes.

The personalty of Sir William Stokes of 5, Merrion-square, Dublin, President of the Royal College of Surgeons in Ireland, 1886, surgeon-in-ordinary to the Queen, who died at Pietermaritzburg on August 18th, is entered at Somerset House as £11,646. Letters of administration to the deceased's estate have been granted to his widow.

Catholic University Medical School.

The first annual dinner of the students of the Medical School of the Catholic University was held on Dec. 13th under the presidency of Sir Christopher Nixon, M.D. R U.I. Dr. More Madden proposed in eloquent terms the toast of "The School and its Teaching Staff," which was responded to by the chairman, who mentioned the following interesting facts. In 1880 there were 577 medical students in Dublin; of these Trinity College had 220, the Royal College of Surgeons 243, and the Catholic University 114. In 1900 the total number of students was 401, of which Trinity College held 120, the Royal College of Surgeons 125, and the Catholic University 156.

The Cookstown Guardians and the Appointment of Midwives.

The Local Government Board having urged the guardians of Cookstown, Co. Tyrone, to appoint a midwife for the Stewartstown district they declined, notwithstanding that the medical inspector of the Local Government Board attended their meeting and urged them to do so. The matter came up again at the weekly meeting of the guardians on Dec. 9th, when the chairman moved that steps should be taken to appoint a midwife for Stewartstown, but he was beaten by a majority of 20 votes to 4. The objection made to the appointment was that it meant the cost of £2 for each case, while it would be better for the guardians to employ a medical man to attend such cases and to give him the usual fee of 10*s.* The next step in the matter rests with the Local Government Board.

New Departments in the Royal Hospital, Belfast.

The Board of Management have just given their consent to a suggestion from the medical staff to establish a new special department for dermatology (the work to be done by one of the present staff), and to appoint two anæsthetists, whose duty it will be to administer ether, chloroform, &c. It is felt that the time has come to specialise in the administration of anæsthetics and also to teach students in such important medical duties.

The Ulster Medical Society.

The second meeting of this session was held in the Museum, Belfast, on Dec. 6th, Professor W. H. Thompson, the President, occupying the chair.—Professor J. W. Byers showed an Ovarian Cyst in the interior of which at one place, after removal, some papillomatous growths were detected. There was no sprouting through the cyst wall. The patient made an uninterrupted recovery, but two weeks afterwards a small papillomatous warty growth appeared in the wound. At the time of operation the peritoneum was healthy but vascular. Professor Byers also showed a large Fibroid Tumour enucleated from the right wall of the vagina. The patient, a married woman, aged 27 years, was confined of her third child in January, 1900, and had no difficulty at the birth. In the previous October she had first noticed a swelling in the vulva. A month before admission to the Royal Victoria Hospital (Nov. 12th, 1900) she had suffered from a foul-smelling discharge and the swelling had enlarged. On admission she was in a state of septic intoxication (sapræmia), with high fever and small pulse. Protruding from the vulva was a decomposing tumour which bulged out the right side of the perineum and which had caused a perforation by sloughing immediately outside the greater labium. The tumour was attached by its base to the vaginal wall, from which it was enucleated, and was œdematous and larger than a fœtal head at term. It had no connexion with the cervix or uterus, which were natural in size, but were pushed upwards and to the left by the vaginal mass. The cavity out of which the tumour was shelled was brought together by sutures and gauze-packed. The patient made a good recovery. Professor Byers spoke of the rarity of vaginal fibroids; it was the first he had removed. He referred to A. R. Simpson's, Pozzi's, Breisky's, Lewers's, and Veit's articles on the subject.—Dr. John Campbell showed a Moveable Kidney removed by Lumbar Nephrectomy on account of advanced suppuration (probably tuberculous), a Fibroma of the Ovary (simulating a uterine fibroid on the back of that organ) removed by Vaginal Section, two Uteri removed by Vaginal Hysterectomy for Cancer of the Cervix, an Ovarian Cyst with Myomatous Degeneration, a Papillomatous Ovarian Cyst, and a Fibroid removed by Retroperitoneal Hysterectomy.—An interesting discussion followed, the special points referred to being the presence of malignancy in ovarian tumours, the frequency of moveable kidney, and the rarity of vaginal fibroids.—Dr. W. Calwell showed a Brain from a case of Hæmorrhage into the Pons and gave an account of the case. He also showed the specimens from a patient who had died with deep jaundice. No tumour could be discovered during life, but post mortem the head of the pancreas was invaded by a small malignant growth which completely compressed the bile-ducts.—Dr. V. G. L. Fielden read a paper on the Relative Value of the Various General Anæsthetics, in which he discussed fully the properties of nitrous oxide, chloroform, ether, A.C.E. mixture and methylene, and the use of morphia preceding chloroform.—A long discussion ensued in which Dr. John Campbell, Dr. A. B. Mitchell, Dr. Charles Kevin, Professor T. Sinclair, Dr. A. Fullerton, and Professor Byers took part.

Banbridge Union Hospital.

Mr. James Waddell has been appointed medical officer to the Banbridge Union Infirmary and Fever Hospital in succession to the late Dr. J. Hawthorne.

The late Professor Cuming, M.D. R.U.I.

On Dec. 14th, in the presence of many of the late Professor Cuming's colleagues and medical and personal friends, Mrs. Pirrie unveiled his portrait. Mrs. Pirrie has done much for medical charities in Belfast and was a most intimate friend and patient of Professor Cuming. The memorial portrait, which his admirers had determined to be the most suitable reminiscence of his connexion with Queen's College, Belfast, where he was Professor of Medicine, will remain in the Examination Hall of the College. The President of the College occupied the chair at the unveiling and speeches eulogistic of Professor Cuming were delivered. The portrait, which has been painted by a local artist, is a good likeness; and is to be hung in the Examination Hall in line with other pictures of former professors.

Dispensary Medical Officers' Holidays and Substitutes.

The Ballymoney Guardians have agreed to appoint a committee consisting of two members of each dispensary district to confer with the medical officers and, if possible, come to an arrangement with them, under which they will accept a certain fixed sum per annum, arranging for their own vacations and substitutes. The committee is to report to the board.

Dec. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Phosphaturia in Dyspeptics.

M. ALBERT ROBIN, who is specially interested in the clinical chemistry of urine and also in the treatment of dyspepsia, read a most interesting paper at a recent meeting of the Academy of Medicine. The paper dealt with that class of patients who from time to time pass urine which is milky from the presence of a quantity of phosphate of lime in suspension. Up to now as a rule these patients have been described as prone to calculi, to phosphaturia, or to neurasthenia, whereas in reality they only suffer from atonic dyspepsia, either occasional or chronic, and exhibit in an exaggerated form a phenomenon which exists in a less pronounced form in the majority of atonic dyspeptics. Such patients may be divided into two classes, according as to whether their urine is simply milky or a chalky liquid looking somewhat gritty, the passage of which often gives rise to extremely painful vesico-urethral crises. These patients also present other groups of symptoms generally connected with the nervous, cardiac, cutaneous, or muscular system, the whole forming a very consistent physiological picture which the physician is soon easily able to recognise if he notes the gastric derangement which is generally overlooked but which is nevertheless always present in such cases. If an analysis be made of the contents of the stomach there will be found to be a considerable excess of hydrochloric acid with a slight amount of ferments. Peptonisation is efficiently performed but amylaceous digestion is most insufficient. The metabolism of nitrogenous materials is but slightly modified. These patients are not real phosphaturics, in the sense that the total quantity of phosphoric acid eliminated and calculated as so much per kilogramme of body weight in 24 hours is not as a rule increased, neither is its ratio to the total nitrogen. The form under which the acid is excreted is that of a bicalcic phosphate. It is this salt of lime which, passing out in the urine, makes it milky and a lessened acidity of the urine is one of the conditions which favour the occurrence of this deposit. An important point to notice is that this precipitation of phosphates may take place not only in the bladder but also in the pelvis and tubules of the kidney—a condition which may possibly lead to cystitis, pyelitis, pyelo-nephritis, and hæmaturia, while the irritation caused by the constant passage of the little crystals of calcium phosphate opens the door to sundry infections, as, for instance, that caused by a catheter. In these patients examination often reveals the presence of white corpuscles in the urinary sediment. They commonly suffer from albuminuria and anæmia. The treatment, said M. Robin, should be directed towards relieving the dyspepsia. The patient should be kept for eight days upon a strictly milk diet. Then the phosphaturia may be attacked by the administration during meals of a few drops of a mixture of sulphuric acid, nitric acid, and alcohol. The attacks of pain are best met by prescribing two or three tumblerfuls of some mineral water and the general nutrition should be attended to and tonics, such as iron, arsenic, and the hypophosphites, may be given.

A Coöperative Restaurant for Students.

A coöperative society has just been organised in Paris with a view to open in the Latin Quarter a restaurant for the exclusive use of students. This restaurant will be carried on under special conditions of a nature which will be eminently suitable to the student's purse, which is never too well furnished. The total capital is to be 30,000 francs, divided into 1200 shares of 25 francs each. The sum to be paid on application is one-tenth—i.e., 2·50 francs—being the smallest proportion allowed by the law to be paid on application, so that the poorest student will be able to apply. The remainder of the sum—namely, 22·50 francs—will be paid off by instalments of five centimes at every meal, so that after 450 meals, or in seven and a half months, the student, almost without knowing it, will have fully paid up his holding. The share will carry interest at the rate of 4 per cent., the maximum allowed by law whatever be the profits. The latter will be divided proportionally to the meals taken. This philanthropic notion has been warmly welcomed in university circles and the managing committee teems with the names of the most distinguished graduates. A meeting of shareholders will be held to decide sundry questions, such as whether meals shall be served *à la carte* or *à prix fixe*, whether past students shall participate, and whether students may bring guests, and the like. The provisional committee hopes to open the restaurant in February next. The idea is derived from that of a working men's society at Lille which was opened eight years ago. Commencing with ten members and a capital of ten francs, it now numbers 6000 families and possesses a recreation room, a library, a benefit club, a savings bank, a brewery, a bakery, and other branches. The bakery in 1899 made a profit of 200,000 francs. These results are encouraging for French students.

The Small-pox Epidemic.

The epidemic of small-pox to which I have already referred shows no sign of decreasing. During the past week there have been 17 deaths, which is as high a death rate as any recorded since the beginning of the epidemic. The incidence of the disease is particularly heavy in the *arrondissements* of the north and east. The prefect of police is carrying through vigorous measures for revaccination, and the stations for free revaccination which have been opened at all the hospitals and at most of the *mairies* are thronged all day long.

Dec. 19th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Siege of the Peking Legations.

DR. VELDE, the medical officer to the German Embassy in Peking, has published in the *Deutsche Medicinische Wochenschrift* an account of the siege of the embassies by the Chinese during last June, July, and part of August. His narrative, which is highly interesting from a general as well as from a medical point of view, states that the Europeans besieged in the embassies numbered 1000, of whom 400 were officers and men of the international forces and 200 were women and children. Moreover, about 3000 Chinese Christians had come to the international area for protection. The women and children were all brought to the British Embassy, which was less exposed than the other embassies to the Chinese shells. The food-supply of the besieged Europeans was generally sufficient but very monotonous, consisting principally of horseflesh, rice, and bread, whilst milk and fresh vegetables were altogether wanting. Some eggs were brought into the embassies surreptitiously during the last stage of the siege. On the arrival of the relieving force food for about a fortnight still remained In the Peitang Cathedral, which was also besieged by the Chinese but had no communication whatever with the embassies during these events, the quantity of food remaining when the siege was raised was only 55 lb. of rice for no less than 3000 people Hygienic measures were taken from the beginning with a view to the prevention of an epidemic. To this end the Chinese families were isolated as much as possible from the Europeans, and the surroundings of the water fountains were kept scrupulously clean. Arrangements were also made for the disposal of fæcal matter and rubbish and a place of interment was provided. The health of the besieged was relatively good, but intestinal complaints were prevalent, especially in infants, owing to the want of milk. Five children died from cholerine and there were 15 cases of dysentery with two deaths exclusively among certain sailors whose commanding officer, although repeatedly warned of the risk he was running, allowed his men to drink from a suspected water-fountain in order, as he said, to accustom them to it. There were four cases of enteric fever with one death, and four cases of scarlet fever, also with one death. An international hospital was established in the precincts of the chancery of the British Embassy, containing a room for operations and five wards for patients. Linen and beds were provided by spontaneous gifts of the besieged families; surgical instruments and dressing materials were contributed by the German and British surgeons. The supply of cotton-wool and gauze failed towards the end of the seige, so that peat (Torf) and saw-dust sterilised by steam had to be used as dressings. Dr. Poole, the medical officer to the British Embassy, and Dr. Velde were in charge of the hospital, the other medical men attending the patients in the other embassies. The medical men were assisted by four men respectively from the British, German, Italian, and American army or navy medical corps. An English trained nurse was at the head of the nursing staff, consisting of four English and American nurses, two French nuns, and six other ladies. Dr. Velde speaks in high commendation of the work performed by them. In the hospital six different languages (English, German, French, Italian, Russian, and Japanese) were spoken, and Chinese had to be used in speaking to the servants. The Russian ladies, who all spoke several languages, proved to be very valuable as interpreters. The hospital was opened on June 20th and closed on August 18th. The number of patients was 166, of whom five were already dead when admitted, 17 died from wounds (13 of them within 24 hours), and two died from dysentery, so that the number of deaths was 24. 126 of the patients were wounded, 40 were sick. As to their nationality there were 55 British, 21 Germans, 18 Russians, 17 Americans, 17 French, 17 Italians, 14 Japanese, six Austrians, and one Dutchman. The weapons used by the Chinese were of every description, from the most antiquated to the most modern rifles and artillery. Fortunately they were very inexpert in using them, so that the number of wounded was relatively small. 97 men were wounded by rifle bullets, 18 by artillery fire, 10 by stones, and one by a lance. Of the wounds 33 were in the head, seven in the neck, 13 in the back and thorax, six in the abdomen, 37 in the shoulder and upper extremity, and 41 in the lower extremity. The principle adopted in the treatment of the wounds was to cleanse them and to apply an antiseptic dressing without plugging the wound. The results were very favourable. Apart from two cases of tetanus no complication happened. Nine primary operations were performed with eight deaths, the operations being three tracheotomies, one laryngotomy, one laparotomy, two cases of trephining, and two cases of ligature of large arteries. Ten secondary operations were performed without a death happening. In general the wounds made by rifle bullets were not very severe, but those made by the Mannlicher bullets were attended with laceration of the surrounding parts owing to the fact that the Chinese had not kept the cartridges in closed boxes but had allowed them to become damp. The casing of the bullets therefore became corroded and they produced explosive effects resembling those of the Dum-Dum bullets.

Illegitimate Children.

At a meeting of the Berlin Society for Public Health Dr. Neumann gave an account of an interesting investigation made by him as to the condition of illegitimate children. With the assistance of various associations, public officials, &c., he was enabled to collect full particulars relative to no less than 7229 children born out of wedlock in 1897. He noted whether the child was born in a hospital, an asylum, &c., or in a private house, whether it was subsequently legitimatised by the marriage of the parents, whether the mother took care of it afterwards or whether it was left in charge of other persons or handed over to the district council for orphans, whether it was alive after one year and if not at what age it died. Dr. Neumann has obtained the remarkable result that about 50 per cent. of these children were taken care of during the first year of life either by their mothers or by both parents, and that about 5000 out of 7200 required no assistance from the district councils for orphans. Dr. Neumann then made some recommendations, the principal one being that homes should be established where pregnant women could live during the last months of pregnancy. Unmarried women, after they were discharged from the lying in hospitals, ought to be provided for until they were able to resume their employment. Illegitimate children ought to be attended by specially-appointed medical men and nurses under the control of the municipal authorities, and a special council ought to be formed whose duty would be to look after these children, as has already been done in Leipzig. Owing to the fact that assistance was required for only about 30 per cent. of the illegitimate children the work of the council and the expenses incurred by the municipalities would be less than might be expected.

Dec. 17th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

An Outbreak of Weil's Disease.

SEVERAL cases of this malady, some of them fatal, have lately been seen in the Roman hospitals. In Italy morbus Weilii is known as febrile jaundice. The fever lasts as a rule 8, 10, or 12 days, and besides jaundice is associated with muscular pains and tenderness, occasional diarrhœa, albuminuria, and polyuria. The temperature tends to oscillate, free perspirations accompanying each fall. There is no characteristic rash, but roseolous spots are occasionally present. As the fever comes to an end the other symptoms also subside, but after an apyrexial interval of some days a relapse usually occurs and the whole syndrome is repeated. There may even be a second relapse. Grave cases are indicated by signs of cardiac weakness, subcutaneous hæmorrhages, and diminution of urine with increase of albumin and abundant tube-casts. Nothing has been found which throws light upon the etiology of the complaint or accounts for its infectious character, nor do the pathological appearances satisfactorily explain the jaundice, the biliary passages presenting nothing abnormal.

The Legislation as to Foreign Practitioners.

The Parliamentary Commission, consisting of six deputies, three of whom are medical men, appointed to examine Santini's draft law for the regulation of foreign medical practice in Italy has accepted the Bill as it stands and has rejected an amendment by the Minister for Foreign Affairs, Visconti Venosta, proposing that existing rights be respected. The Bill will next be submitted to the Chamber of Deputies which it is thought will pass it with little or no alteration. Some opposition is expected in the Senate, but that body is not likely to negative a measure which has passed the Representative Chamber unless for strong reasons of a political kind. The agitation against the foreign medical men is thus approaching its climax, and unless the unexpected happens will soon have attained its object, which is the total abolition of foreign practice, and not the ostensible one of securing reciprocity with other countries. The refusal to respect the rights of those already established in practice will have ruinous effects upon the older men and is a very serious matter for all concerned. Many still find it impossible to believe that the Italian Parliament will perpetrate such a cruel injustice as thus suddenly and without warning to deprive a class of men of their means of subsistence in order to gratify the malignant jealousy of the few bigoted agitators who pretend to represent the medical profession here and who, by persistent abuse, unscrupulous misrepresentations, and false accusations, have done their worst to bring the foreign medical man into disrepute with Government and people. But, unfortunately, it seems only too likely that, yielding to cunning appeals to their patriotism and mostly indifferent to the interests of a class of whom they hear nothing but abuse, the legislature will pass the proposed law without making any provision against the cruel hardships which it will certainly occasion.

Dec. 17th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The International Sanitary Board.

ONE of the principal subjects of discussion at the present time is the difficulty which has arisen at the International Sanitary Board. Two sittings of the International Sanitary Commission or Superior Sanitary Council have already been interrupted by the foreign sanitary representatives leaving—a course which the ambassadors of their respective countries had instructed them to take because the Turkish Government seem to have forgotten the special regulations defining the composition and work of the sanitary board. The management of the Turkish Sanitary Board is in the hands of a council consisting of 21 members, 13 of whom are foreigners representing the following 13 foreign Governments: Great Britain, Germany, France, Austria, Russia, Italy, Greece, Spain, Holland, Belgium, Sweden, Persia, and the United States of America. The 13 foreign members have each the degree of M.D. except the representatives of Belgium and Sweden. Of the eight members who represent the Turkish Government only three are medical men and only two are not Mahomedans. Of the six Mahomedans only one is a medical man. The Turkish representatives who are not Mahomedans must, according to the stipulations, be medical men: they are the inspector-general of the sanitary service and the inspector-adjoint. Both of them have become well known to the sanitary world, having represented the Turkish Government at the various sanitary conferences held in Dresden, Paris, and Venice in order to decide on the measures to be adopted for the repression of cholera and plague. The inspector-adjoint, Dr. Vitalis, died about three weeks ago in Freiburg after an operation, and the Turkish Government thought that the vacancy thus created might be filled by the appointment of a successor who was not a medical man and had never been in the sanitary service, but who had up to that time been an official in the custom-house. The Turkish Government thereby attempted to infringe the regulations relative to the sanitary board, for these regulations provide that the sanitary inspectors as well as all the officials of the sanitary service shall be appointed by the Superior Sanitary Council. This council meets every Tuesday, and at the meeting held on Dec. 4th a memorandum by the 12 sanitary representatives was read, appointing as inspector-adjoint Dr. Duca Bey, who at present holds the position of Turkish sanitary delegate to the Alexandria International Sanitary Council. He has been an official of the sanitary service for the last 27 years and has visited various provinces of the Turkish empire where epidemics happened to be in progress. Among his services in this respect may be mentioned his work during the epidemic of cholera in Syria in 1875, the epidemic of plague in Mesopotamia, and the epidemic of plague in the province of Yemen in 1880; he also superintended the establishment of the lazaretto of Camaran in the Red Sea in 1883. All the members of the Superior Sanitary Council, the senior of whom is Dr. Mordtmann, the German representative, are of opinion that Dr. Duca Bey is the right man for the place, and the ambassadors have already signified their approval of the appointment. The Sultan has still to sanction it, and it remains to be seen whether he will find a way of defeating the intentions of the Superior Sanitary Council supported by the ambassadors, and of maintaining the appointment of the custom-house official to be a member of the sanitary board. It would not be astonishing if he should prove to be successful. The vice-president of the Superior Sanitary Council is a very respectable person, a novelist and a poet, but he is not a medical man; of the other Turkish members one is the chief accountant of the sanitary board, one is the secretary-general, and one is a medical man, as already stated. Their salary is about £T50 per month, the vice-president's being £T80 per month, paid regularly out of the sanitary funds. During the year completed at the end of February, 1900, the revenues of the Turkish sanitary administration were 6,510,920 piastres, representing about £60,000 sterling. Of this sum 50 per cent. was paid by the British, 15 per cent. by the Greeks, and the remainder by the other nationalities.

Persian Hospital in Constantinople.

In THE LANCET of Oct. 27th, p. 1245, I mentioned that the Shah of Persia during his visit to Constantinople granted £T500 to the Persian Hospital which is to be established here and he has also intimated his intention of paying a like amount annually. The hospital will at first have 25 beds, and only poor Persians will be treated gratuitously. Patients belonging to other nationalities will only be admitted on payment. The same practice is followed in the other foreign hospitals here, except in the British Hospital, where British sailors are almost the only patients, British subjects of other occupations being very rarely admitted and women never.

The Pasteur Institute.

In THE LANCET of Sept. 8th, p. 780, I remarked with respect to the Pasteur Institute in Constantinople that the former director, Dr. Zoeros Pasha, had been removed and succeeded by Dr. Mari in consequence of the death of an officer of the Turkish army who had been bitten by a rabid dog but not sent to the Pasteur Institute for treatment until the symptoms of rabies had manifested themselves. Since the removal of Dr. Zoeros Pasha many deaths from rabies have occurred in spite of treatment. A fresh case was reported on Dec. 7th, the patient being an Albanian who received antirabic treatment in the Pasteur Institute, but three days after being discharged he showed symptoms of rabies which eventually proved fatal.

Dec. 14th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Small-pox in New York City.

SMALL-POX has broken out on a somewhat large scale on the west side of New York city. As a matter of fact there must have been several cases of the disease existing for some little time, but it was not until Thursday, Nov. 29th, that the outbreak was sufficiently alarming to be brought to the notice of the health authorities. On that day upwards of 30 persons, mostly children, were found to be suffering from the disease, and that the contagion will spread further seems certain. The epidemic is believed to have originated from two negro vaudevillists from Pittsburg. The authorities declare that there is no reason for unusual alarm, but the occurrence will tend to impress upon people who may have imagined themselves outside the zone of possible contagion the wisdom of having themselves and their families vaccinated. The vaccinators are now working by night and day in the tenements of the district infected. At present, so far as is known, the malady is confined to one block, most of the tenants of which are negroes, and the victims thus far are mainly children. Dr. Benedict of the Health Board stated as his opinion that further cases must be inevitably looked for in the course of the next few weeks as the exposure had been too great to admit of the hope that all the cases had been already reported. The action of the Health Board in epidemics of a contagious nature is judiciously energetic. When a case of small-pox is discovered every inhabitant of the tenement or dwelling-house is vaccinated, the building is fumigated from top to bottom, and the inspectors visit it once in every 24 hours, keeping up such visits for two or three weeks. There is small room for wonder that small-pox has been brought to this city, as there are many cases in the northern part of the State and in Maryland on the east and south. Communication both by ship and train takes place between these localities and New York every day. It is said that so many cases have not been discovered in one day since an outbreak which occurred about eight years ago. The reason given for the disease gaining so much ground before detection is that the poor population inhabiting the district regard sickness, especially among children, as of little account, and that until it became too grave to be longer neglected parents saw no necessity for calling in a medical man, and thus many were exposed ere medical aid was invoked. It is, however, satisfactory to state that the physicians of the Board of Health declare that there is no cause for needless alarm and express the opinion that the course of the disease will be checked and a widespread epidemic be avoided.

Tainted Water-supply of New York City.

The inhabitants of this city have been seriously alarmed for the past three or four weeks at the condition of the water-supply. The water has had a decidedly unpleasant, oily, fishy taste in addition to being very turbid. Things have come at last to such a pass that an investigation has been demanded and the city has appointed a commission to make an exhaustive inquiry into the whole matter. This commission commenced its session on Nov. 26th, when several witnesses were called upon to give evidence. Among others were Dr. George F. Shrady, editor of the *Medical Record*, and Dr. Charles F. Roberts, chief sanitary inspector of the New York Board of Health. Dr. Shrady was not called as an expert, but rather in the capacity of a private citizen. The proceedings of the commission were *in camerâ*, but we believe that both Dr. Shrady and Dr. Roberts gave it as their opinion that while there was no denying that the water was unpalatable to a degree—in fact, almost nauseous—it was not especially prejudicial to the health of the consumers. Dr. Shrady suggested, and Dr. Roberts recommended as a remedy, that a filtration plant should be constructed. The reason given, and undoubtedly the right one, for the contaminated water is the long-continued drought. It always happens that in May and November the water department has to blow off the hydrants to get rid of the accumulation of organic matter. This year the trouble has been aggravated owing to the scant supply of water in the lakes and reservoirs. This is the season of the year when the fish move. As is well known they always seek deep water, and for months past they have have been compelled to go lower and lower. In moving they stir up the sediment, and the water becomes charged with organic matter. Again, the bottom of the reservoirs and lakes are more or less covered with vegetable growth, and when the water is very low some of the vegetable matter becomes decomposed and communicates its taste to the water. That such is the case has been amply demonstrated within the past few days. On Nov. 24th heavy rain began in New York and the neighbourhood which lasted off and on until almost three inches had fallen. As soon as the water in the reservoirs had risen considerably the supply was much less turbid and somewhat less tainted. The fear has been widespread that the water contained germs of disease and rumours have been current that an outbreak of typhoid fever might be anticipated. Dr. Murphy, president of the Board of Health, ordered the water to be examined by bacteriologists and chemists. Dr. Hermann F. Biggs, pathologist to the Board of Health, said that bacteriological and chemical analyses had not revealed any disease-breeding germs in the water; vegetable organisms were found, but nothing particularly deleterious to health. Illnesses caused by digestive disturbances might result but there would be no likelihood of an epidemic of typhoid fever. Of course this is satisfactory as far as it goes and has reassured the inhabitants of New York, but it is plainly evident that steps should be taken to prevent any tainting of water which is intended for domestic consumption, however harmless. It would appear that if the suggestion of Dr. Shrady and Dr. Roberts that a filtration plant should be established in New York were carried out all fear of danger or unpleasantness from drinking the New York water would be obviated. The expense, it is true, would be large It is estimated that a filtration plant sufficient for Greater New York would cost a sum of about $15,000,000 (£3,000,000), but after all a system which ensured a pure water-supply would be well worth the outlay. By some it is urged that the only effectual remedy would be to get a larger water-supply somewhere. If, however, this were done the water would most probably have to be filtered. The conclusions of the commission after it has received and duly weighed the necessary evidence will be awaited with much interest. It seems certain that radical measures will be taken to procure for New York a pure as well as bountiful water-supply. The Health Board of New York, which is a model of what health boards should be, has in this matter, as in every question affecting the hygiene of the city, exerted itself to the utmost.

Dec. 12th.

Obituary.

JAMES MICHELL WINN, M.D. GLASG., M.R.C.P. LOND.

WE regret to announce the death of this gentleman, one of the fathers of the profession, at his residence, 87, Goldhurst-terrace, Hampstead, on Dec. 8th in his ninety-second year. Dr. Winn was the oldest M.D. of Glasgow University and also the fourth in the list of the Members of the Royal College of Physicians of London, being the eldest in point of age, although there is a senior to him by six months among the Fellows of the College. Dr. Winn was born in the parish of Budock in Cornwall on Dec. 25th, 1808. When about five years of age he went to reside with his parents at Lisbon and was a resident in the Peninsula when the battle of Vittoria was fought in 1813. On returning to England his family resided for several years in London. Dr. Winn was educated at the Stockwell Park Academy. He commenced his medical studies at St. George's Hospital under Sir Benjamin Brodie and Dr. Chambers, who were then on the staff of that hospital On leaving St. George's Hospital he went, in 1832, to the University of Glasgow to study for the M.D. degree. At that time the cholera had made its first appearance in England and the average daily deaths at Glasgow amounted to upwards of 100 This gave Dr. Winn a good opportunity for studying the nature and treatment of that complaint at the Glasgow Cholera Hospital. On returning to England he commenced to practise as a consulting physician and was appointed honorary physician to the Royal Cornwall Infirmary at Truro, a position which he retained for 14 years. In 1852 he came to London, where he made psychology his chief study and contributed numerous articles on that subject to the *Journal of Psychological Medicine*, in which he combated the doctrines of the materialistic school. He also published treatises on "Materialism" and "Collapse of Scientific Atheism." He had written previously to this, in 1848, "A Critical Treatise on the General Paralysis of the Insane," which was very favourably referred to by Dr. Conolly in his Croonian lectures delivered by him before the Royal College of Physicians of London. Dr. Winn's chief work was on the "Nature and Treatment of Hereditary Disease," published in 1869 In this he propounded the theory that all hereditary disease was interchangeable—in other words, mutually convertible. From this generalisation Dr. Winn deduced rules for the regulation of marriages. The late Sir Thomas Watson, in a letter to Dr. Winn, said, referring to this theory of hereditary inter-changeableness in disease: "You appear to me to be probably correct and suggest to me a wide practical application." Dr. Winn's last work was published a few years ago and in this brochure he made his final onslaught on the materialists. Dr. Winn was buried at Kensal-green Cemetery on Dec 12th. He will be remembered as a devoted Christian, kind to those in adversity, and a peacemaker, and his death will be regretted by all who knew him.

CHARLES SEYMOUR STRICKLAND DUNLOP, L.R.C.P. LOND., M.R.C.S. ENG.

IN our list of deaths to-day on page 1852 is the name of Mr. Charles Seymour Strickland Dunlop. We are very sorry to have to record Mr. Dunlop's death. He was the son of Dr. Andrew Dunlop of Jersey who is not only much esteemed in the profession but who had eight sons, all in Her Majesty's service and most of them in Africa. Two of them were in Ladysmith during the long siege. One of them unfortunately died from enteric fever, the other did valuable work as transport officer in Cæsar's Camp. And now we have to notice the death of another son near Lagos. Mr. C. S. S. Dunlop was the eldest son, a member of Dr. Dunlop's own profession, to whom he looked for help at home, for, according to his contract, he should have left West Africa on Sept. 17th.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Duplouy, formerly chief of the French Naval Medical Department.—Dr. Deroide, Professor of Pharmacy in Lille.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations at the October Quarterly Examination have been admitted Members of the College and have received their diplomas—viz.:

Harry Cole Alderman, Yorkshire College and Royal Infirmary, Leeds; Percy Francis Alderson, Middlesex Hospital; Arthur Ponsonby Moore Anderson and Arthur de Chair Baker, Cambridge University and London Hospital; Walter Biggar Bannerman, London Hospital; Douglas James Bedford, Cambridge University, St. Thomas's Hospital, and Mason University College, Birmingham; Herbert Arthur Beetham, Yorkshire College and General Infirmary, Leeds; Kenneth Hugh Bennett and Sidney Brée, University College Hospital; Henry Arthur Bramsdon Bransbury, St. George's Hospital; Henry Braund and James Alfred Butler, Guy's Hospital; Richard Henry Botham, King's College Hospital; Allen Bathurst Brown and Charles Richard Verling Brown, St. Bartholomew's Hospital; Frederic Ernest Brunner, Cambridge University and St. Bartholomew's Hospital; Reginald Shirley Burd, Mason University College, Queen's, and General Hospitals, Birmingham; Adrian Caddy, St. George's Hospital; Percy William Leopold Camps, Guy's Hospital; Frederick Charles Carlé, King's College Hospital; Hector Alfred Colwell, St. Bartholomew's Hospital; Herbert Edward Crawley, Oxford University and St. Mary's Hospital; David Morgan Davies, St Mungo's College, Glasgow, and London Hospital; William Stewart Dickie, St. Mungo's College and Royal Infirmary, Glasgow; Robert Dunstan, London Hospital; Arthur Edmunds, King's College Hospital; Frank Payne Edwards, Cambridge University and Westminster Hospital; Gerald Dundas Edwards, Cambridge, Bristol, and St. George's Hospital; Reginald Ambrose Facey, Percy Reginald Fort, and Arthur Herbert Foster, St. Mary's Hospital; George Victor Hamlyn Fairhall, Melbourne University and Westminster Hospital; Louis Patrick Farrell, Dalhousie University and University College Hospital; Edgar Hall Felton and David Forsyth, Guy's Hospital; Benjamin Gregory Fiddian, University College, Cardiff, and Charing Cross Hospital; Welby Earle Fisher, University of Dunedin, New Zealand, and University College Hospital; Cecil Hughes Francis-Williams, St George's Hospital; John Stansfield Gayner, St. Bartholomew's Hospital, Kenneth Weldon Goadby, Guy's Hospital; Lachlan Gollan, University of Melbourne and St. Mungo's College and Royal Infirmary, Glasgow; Ernest Victor Gostling, Cambridge University and St. Thomas's Hospital; John Maxwell Gover, University of Durham; William Henry Clayton Greene, Cambridge University and St. Mary's Hospital; William Wilfrid Halsted, St. Thomas's Hospital; George Hamilton, University of Dunedin, New Zealand, and Middlesex Hospital; Harold Charles Harrison, Firth College, Sheffield, and St. Bartholomew's Hospital Charles Montague Heanley, St. George's Hospital; Charles Edward Hicks and Stanley Hodgson, Guy's Hospital; Cyril Evelyn Hogan, St. Bartholomew's Hospital; Ernest Henry Hogg, Middlesex Hospital; Hugh Hughes, University College and Royal Infirmary, Liverpool; Thomas Hugh James Ellis Hughes, King's College and St. Mary's Hospital; Edmund Henderson Hunt, Oxford University and St. Bartholomew's Hospital; Bertram Fowler Hussey, St. Mary's Hospital; Robert Jaques, University College, Liverpool, and King's College Hospital; Edward Angas Johnson, Adelaide and Melbourne Universities, St. Bartholomew's and London Hospitals; Duncan Matheson Johnston, Durham University and St. Bartholomew's Hospital; Ernest William Julius Ladell, Edward Vaughan Lindsey, John Allden Lloyd, and Francis Henry Lowe, St. Bartholomew's Hospital; Peter N. Lakshmanan, University of Madras and King's College Hospital; Brinley Richard Lloyd, University College, Cardiff, and Charing Cross Hospital; Richard Ernest Lloyd, University College Hospital; Ernest John Manning, St. Mary's Hospital; James Cole Marshall, and Samuel Mason, St. Bartholomew's Hospital; Talbot Carter Mitchell, Yorkshire College and General Infirmary, Leeds; Harry Tudor Newling, Royal Infirmary, Durham, and St Mary's Hospital; William Walker Maxwell, Edinburgh University and King's College Hospital; John Campin Newman, Cambridge University and St. Bartholomew's Hospital; John Chalmers Norton, University College and General Infirmary, Bristol; James Christopher Oates, Mason College, Queen's and General Hospitals, Birmingham; William Sidney Page, St. Mary's Hospital; Hugh McDowall Parrott, Guy's Hospital; Eustace Murray Bruce Payne, St. Bartholomew's Hospital; John Shirley Steele Perkins, Cambridge University and Guy's Hospital; Philip Meyler Perkins, Durham University and St. Bartholomew's Hospital; Miles Harris Phillips, University College and Royal Infirmary, Bristol; Lionel James Picton, Oxford University and St. Bartholomew's Hospital; Georges Woodyatt Prodter, Durham University and Middlesex Hospital; John Percy Race, Owens College and Royal Infirmary, Manchester; John Evans Richards, Charing Cross Hospital; Bernard Hamilton St. Clair Roberts, Mason College, Queen's and General Hospitals, Birmingham; Reginald Percy Richardson, Durham University and Westminster Hospital; Alfred Reginald Roche, Cambridge University and Westminster Hospital; Edward Norman Tilly Rogers, Middlesex Hospital; Frederick Colin Rogers, St. Mary's Hospital; William Edward Ruttledge and Thomas Copeland Savage, University College Hospital; Henry Scanlan, McGill College, Montreal, and St. Bartholomew's Hospital; Robert Westley Shaw, Western University, Ontario, and University College; Francis Wheler Sime, Durham University and Guy's Hospital; Fred Algernon Simpson, Cambridge University, St. Mary's and St. George's Hospitals; Frank Blenkinsopp Skerrett, Owens College and Royal Infirmary, Manchester, and St. Thomas's Hospital; Robert William Innes Smith, Edinburgh University and King's College Hospital; Charles Duncan Soutter, Mason University College, Queen's and General Hospital, Birmingham: Harold Robert Dacre Spitta, St George's Hospital and Durham University; Louis Edward Stamm, Guy's Hospital; Charles Mon Stewart, University of Toronto and University College Hospital; Fred Stuart, University of Durham and St. George's Hospital; Walter James Susmann, Cambridge University and St. George's Hospital; John Tattersall, St. Mary's Hospital; Arthur James Tayler, King's College Hospital; Evelyn Davison Telford, Cambridge University, Owens College, and Royal Infirmary, Manchester; William Murray Thomas, Guy's Hospital; George William Thompson, Edinburgh University; Robert Cyril Turnbull, London Hospital; Alexander Robert Tweedie, St. Bartholomew's Hospital; Geoffrey Allen Upcott-Gill, University College Hospital; Charles Ernest West, Oxford University and St. Bartholomew's Hospital; Charles Vaughan White, St. Thomas's Hospital; Clare Aveling Wiggins, St. Mary's Hospital; Archibald Robert Barclay Williamson, Queen's University, Kingston, Canada; and Thomas James White, Guy's Hospital.

UNIVERSITY OF CAMBRIDGE.—At the examinations for Medical and Surgical Degrees, Michaelmas Term, the following candidates were successful:—

FIRST EXAMINATION.

Part I.

Chemistry and Physics—A. G. Atkinson, Trinity; G. F. S. Bailey, Caius; J. H. Board, Pembroke; S. Churchill, Trinity; E. B. Clayton and A. I. Cooke, Caius; W. D. Coplestone, Jesus; H. B. Corry, Caius; G. H. Drew, Christ's; H. B. Ellison, Caius; D. Embleton and H. J. Tardon, B A., Christ's; H. J. Gauvain and S. Gooding, St. John's; J. W. Grice and F. W. W. Griffin, King's; M. Grundy, St. John's; T. S. Hele, Emmanuel; A. L. Hetherington, Trinity; V. C. Honeybourne, St. John's; N. G. Horner, Caius; C. E. M. Jones, King's; P. P. Laidlaw, St. John's; K. A. Lees, King's; L. F. G. Lewis, Christ's; C. Lillingston, Pembroke; J. W. Linnell, St. John's; P. C Litchfield, Trinity Hall; R. B. Lloyd, Emmanuel; S. G. Luker, Pembroke; S. G. MacDonald, St. John's; L. H. L. MacKenzie, Trinity; H. W. Moxon, St. John's; H. F. G. Noyes, Caius; G. G. Packe, Trinity; H. A. Pontifex, Pembroke; J. M. Postlethwaite, Emmanuel; R. L Rawlinson, Trinity; E. Sandbach, King's; W. H. Simpson, Caius; J. M. Smith, Christ's; A. H. C. Suhr, Caius; W. H. R Sutton, Downing; R. Svensson, Caius; H. H. Taylor, Pembroke; C. B. Ticehurst, St. John's; R. Wade, Christ's; S. L. Walker, Sidney Sussex; G. H. H. Waylen, King's; H. P. Weaver, B A., Trinity; and O. K. Wright and R. F. Young, Christ's.

Part II.

Elementary Biology.—A G. Atkinson, Trinity; G. F. S Bailey, Caius; G. B. Bartlett, Sidney Sussex; R. L. Barwick, B.A., Christ's; A. E. Bonny, Sidney Sussex; H. A. Browning, St. John's; R. Burgess, Caius; A. F. Burton, Christ's; C. St A. Coles, Trinity; W. D. Coplestone, Jesus; G. W. Craig, Emmanuel; W. F. Denning, Trinity; G. H. Drew and D. Embleton, Christ's; H. J. Gauvain, St. John's; J. L. Graham-Jones, Emmanuel; F. W. W. Griffin, King's; M. Grundy, St. John's; W. H. Hodgson, Christ's; C. J. R. Hoffmeister, Caius; V. C. Honeybourne, St. John's; N. G. Horner, Caius; P. P. Laidlaw, St. John's; K. A. Lees, King's; R. B. Lloyd, Emmanuel; L. H. L. Mackenzie, Trinity; R. M. Miller, B.A., Clare; H. W. Moxon, St. John's; E. V. Oulton, Christ's; H. A Pontifex, Pembroke; R. L Rawlinson, Trinity; E. Sandbach, King's; E F. Skinner, Corpus Christie; J. M. Smith, Christ's; B. S. Taylor, M.A., Clare; C. B Ticehurst, St. John's; C. H. Treadgold, Clare; J. A. Venning, Trinity; B. Wahby, Non-Collegiate; S. L Walker, Sidney Sussex; D. R. P.

Walther, Pembroke; E. G. Wheat, Christ's; and A. E. Wilson-Hird, Clare.

SECOND EXAMINATION.

Part I.

Pharmaceutical Chemistry.—E. E. Atkin, Caius; J. B. Banister, Jesus; S. Barradell-Smith, St. John's; E. Beaton, Caius; E. M. Brown, B.A., Pembroke; J. W. Chell, St. John's; H. M. Clarke B.A., and H. P. Crampton, B.A., Clare; F. D. Crew, B.A., Emmanuel; H. M. Davies, B.A., and C. E. Droop, B.A., Trinity; T. W. Dunn, Caius; R. G. Elwell, B.A., Trinity; A. H. Fardon, Christ's; J. N.-F. Fergusson, St. John's; R. L. Gamlen, Caius; H. P. B. Gough, Sidney Sussex; W. B. Grandage, Clare; J. R. C. Greenlees, St. John's; J. M. P. Grell, H. Selwyn; C. R. F. Hall, B.A., Trinity; H. S. Hall, Pembroke; A. W. Hayward, St. John's; R. A. P. Hill, Caius; W. R. Honeyburne, B.A., Peterhouse; B. L. Hopper, B.A., Caius; C. W. Hutt, Trinity; J. B. Irving, B.A., and G. S. Keat, St. John's; W. D. Keyworth, H. Selwyn; B. T. Lang, Trinity; W. Lowe, B.A., Caius; F. P. Luard, Downing; J. McIntyre, King's; H. F. Marris, B.A., and A. Morris, B.A., Caius; T. M. Neatby, M.A., St. John's; F. W. M. Palmer, B.A., Jesus; W. O. Pitt and R. Puttock, B.A., Emmanuel; F. P. Roberts, B.A., Caius; D. W. Roy, Sidney Sussex; R. B. S. Sewell, Christ's; E. W. Sheaf, B.A., Downing; P. H. Smith, Pembroke; P. L. Stallard, Caius; B. H. Stewart, B.A., Jesus; C. Strickland, Caius; D. W. Tacy, B.A., Christ's; R. S. Taylor, Downing; H. A. R. E. Unwin, H. Selwyn; H. B. Weir, Trinity; E. Wight, B.A., Sidney Sussex, W. P. Williams, Downing; J. K. Willis, Queens'; and L. Worrall, B.A., Christ's.

THIRD EXAMINATION.

Part I.

Surgery and Midwifery.—H. St A. Alder, B.A., Pembroke; A. P. M. Anderson, B.A., Trinity; E. L. T. Barnett, M.A., St. John's; J. Barnicot, B.A., Pembroke; A. G. Bate, B.A., King's; S. Bousfield, M.A., Caius; A. H. Brehaut, B.A., H. Selwyn; H. O. Butler, B.A., and C. de L. Carey, B.A., Emmanuel; C. J. Coleman, B.A., Trinity; A. J. Fairlie-Clarke, B.A., Emmanuel; H. Gordon-Smith, B.A., Trinity; A. W. Greig, B.A., Jesus; W. Hill, B.A., Emmanuel; A. E. Holder, B.A., King's; E. H. Kitchin, B.A., Downing; J. L. Lock, B.A., Caius; G. W. Micklethwaite, M.A., Trinity; F. E. Murray, B.A., St. John's; H. Spurrier, B.A., Caius; J. Stirling-Hamilton, B.A., Jesus; A. H. Style, B.A., Emmanuel; H. E. Symes-Thompson, M.A., Christ's; A. E. Taylor, B.A., Downing; N. F. Ticehurst, M.A., Clare; B. L. Thurlow, B.A., Caius; E. G. Wales, B.A., Downing; and F. K. Weaver, B.A., and H. H. Weir, Trinity.

FOREIGN UNIVERSITY INTELLIGENCE.—*Budapest:* The Hungarian Ministry of Education has decided to build an Institute of General and Experimental Pathology and Therapeutics; the chair of Children's Diseases, which has hitherto been filled by an extraordinary or assistant professor only, is to be raised to the rank of an "ordinary" professoriate.—*Chicago Medical College:* Dr. John B. Murphy has been appointed to the chair of Surgery.—*Dorpat:* Dr. Raehlmann has resigned the chair of Ophthalmology and Dr. Jewicki of Moscow has been appointed in his place.—*Gratz:* Dr. Meinhard Pfaundler has been recognised as *privat-docent* of Children's Diseases.—*Groningen:* Dr. Wenckebach of Utrecht has been appointed Professor of Clinical Medicine.—*Kiel:* Dr. Ernst Siemerling of Tübingen has been appointed to the chair of Psychiatry.—*Lemberg:* Dr. Victor Wehr, *privat-docent* of Surgery, has been promoted to an Extraordinary Professorship.—*Paris:* Dr. Brissaud, Professor of the History of Medicine, has been appointed to the chair of Medical Pathology.—*Strasburg:* Dr. Goltz, Professor of Physiology and Director of the Physiological Institute, is about to retire at the close of the current session; Professor Fehling of Halle has been elected Professor of Gynæcology in succession to Dr. Freund.—*Tours:* Dr. Delagenière has been appointed Professor of Clinical Surgery and Dr. L. Thomas Professor of Surgical Pathology and Operative Medicine.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Fellows of the College held on Dec. 17th Sir William Thomson was unanimously elected a Member of the Council.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—At the meeting of the Cardiff Town Council held on Dec. 10th the recommendation of the sub-committee that five acres of land in Cathay's Park should be granted for the purposes of erecting new buildings for the University College of South Wales and Monmouthshire was agreed to.

BRISTOL NATURALISTS' SOCIETY.—At a meeting of this society, held at University College, Bristol, on Dec. 8th Mr. W. T. Crank read a paper on The Discovery of a Pre-historic Burial-place at Harlyn Bay, Padstow, Cornwall. Mr. Crank stated that the burial-place, which was accidentally discovered last August, was considered by experts to date from B.C. 500, and he added that Dr. John Beddoe had measured the skulls and bones which had been found and was preparing a report upon them.

HOUSING THE POOR AT SALFORD.—After repeated and much-delayed discussion on the question, the Salford Board has resolved to erect cottage homes at Kenyon Junction, near Culcheth, to accommodate 300 persons, at an outlay of £61,211.

WATER-SUPPLY OF TENBY.—At the meeting of the Tenby Town Council held on Dec. 14th the report of the Water Committee recommending the adoption of a scheme for the filtration of the Ritec water was adopted. The estimated cost was £13 500

BRIXHAM HOSPITAL, DEVON.—At the annual meeting of the supporters of this institution held on Dec. 12th it was reported that during the past year 70 in-patients had been admitted and 885 patients had been attended at their homes (necessitating 10,972 visits). The expenditure was £573, being £13 in excess of the income. Through the generosity of two ladies a new surgery and waiting-room had been added to the hospital.

IN MEMORIAM.—The widow of Mr. Henry Lee, F.R.C.S. Eng., senior consulting surgeon to St. George's Hospital, London, has presented a marble bust of her late husband to the Royal College of Surgeons of England. He was Professor of Surgery and Pathology at the College.—A beautiful bronze relief portrait panel in memory of the late Samuel Gourley, M.D. Glasg., F.R.C.S. Edin., J.P., has recently been put upon one of the walls of the Hartlepools Hospital, where he was for 25 years honorary surgeon.

NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.—A meeting in connexion with the Gloucestershire, Somerset and Wilts branch of this society was held at Chippenham on Dec. 7th under the presidency of Sir John Dickson-Poynder, M.P. An interesting address on the "Nature and Prevention of Consumption" was given by Dr. Lionel A. Weatherly. An appeal is being made for funds for the proposed sanatorium, which is estimated to cost £16,000. Several donations have been announced by the honorary secretary, Mr. A. Murray Gray, L.R.C.P. Edin.

BIRMINGHAM CONSULTATIVE MEDICAL AND SURGICAL INSTITUTION: THE CASE OF DR. HENRY WARD IRVINE.—At a meeting of the representative committee of consultants and specialists held at Birmingham on Dec. 3rd the following resolution was adopted:—

> That this meeting of the representative committee of consultants and specialists of the City of Birmingham desires to congratulate the Medical Defence Union and its able and energetic secretary, Dr. A. G. Bateman, upon the successful result of the prosecution of Dr. Ward Irvine before the General Medical Council, and returns very sincere thanks for the assistance afforded to the medical profession in Birmingham.

FREEMASONRY.—*The Rahere Lodge, No. 2546.*—A meeting of the Rahere Lodge was held at Frascati's Restaurant, Oxford-street, W., on Tuesday, Dec. 11th, W. Bro. Walter Gripper, M.B. Cantab., the W.M., being in the chair. Bro. R. H. Wellington was admitted to the second degree and Mr. Alfred Hepburn, M.R.C.S. Eng., L.S.A., Mr. Arthur Maitland Ware, M.A., M.B., B.C. Cantab., and Mr. Thomas Jessopp Bokenham, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., were initiated into Freemasonry. W. Bro. D'Arcy Sugden, M.R.C.S. Eng., L.R.C.P. Lond., P.M., the Tyrian Lodge, Queensland, was also elected as a joining member. The brethren and a considerable number of guests, who included the W.M. and S.W. of the Sancta Maria Lodge, subsequently dined together.

CARDIFF INFIRMARY.—At a meeting of the executive committee of the Cardiff Infirmary held on Dec. 12th it was stated that the adverse balance of the institution at present amounted to £11,686. £4737 had been received in response to the effort which was made to clear the infirmary from debt; this sum included a conditional promise of £500.—At a special meeting of the governors of the Cardiff Infirmary held on Dec. 14th the new rule which provided that workmen, members of any trade society, club, &c., or the members of any church association, subscribing to the funds of the infirmary shall be entitled to nominate one person out of the members so subscribing as a president, vice-president, or governor, annually or for life, in the same way as ordinary subscribers, was unanimously passed. This new rule has given great satisfaction to the working classes of Cardiff and one of their representatives stated that had working men been recognised in the past their subscriptions to the infirmary would have been doubled.

ARSENIC IN BEER.—The commission of experts appointed by the Manchester Brewers' Central Association have issued their report, in which they confirm what has already been stated—viz , that the arsenic found in deleterious quantities in the beer has been solely due to the contamination by arsenic of the sugars supplied by a Liverpool firm. The arsenic, they add, was undoubtedly derived from the impure sulphuric acid used in the manufacture of these sugars. We may remark that it has since been stated by the analyst of the city of Manchester that he has found arsenic also in similar quantity in malt and in beer known to be brewed from malt and hops only. In another column we report the presence of arsenic in remarkable quantity in superphosphate of lime which is used largely for fertilising purposes. Possibly this may throw some light on the discovery of the analyst of the city of Manchester.

Parliamentary Intelligence.

HOUSE OF LORDS.

FRIDAY, DEC. 14TH.

Sick and Wounded Colonial Soldiers.

LORD BURGHCLERE addressed a question to the Under Secretary of State for War with reference to the medical inspection and treatment of sick and wounded colonial soldiers sent home from South Africa.—Lord **RAGLAN** explained that wherever it was possible these men were sent direct from South Africa to their colonial homes, but in some cases they had been brought to this country, where at Shorncliffe a depôt for them had been formed. He had visited this depôt. A large number of the men were convalescent and were considered well enough to undertake the long voyage to this country and the greater part of them arrived, he was glad to say, in a state of advanced convalescence. In certain cases the men were not medically examined before they went on board the ship. That was an unfortunate circumstance which the War Office very much regretted and in future arrangements would be made to remedy the mistake He assured the House that the men were provided with superior third-class accommodation, two only being in a cabin, and that they had a suitable dietary.—Earl **CARRINGTON**, who had intended to propose a motion on the subject, refrained from doing so, and expressed satisfaction with the manner in which his representations had been received by the War Office.

HOUSE OF COMMONS.

THURSDAY, DEC. 13TH.

Lead Poisoning in the Potteries.

Sir **CHARLES DILKE** asked the Home Secretary if he could state when the Home Office proposals with regard to lead poisoning in the manufacture of china and earthenware which were contained in a circular to manufacturers issued on Dec 14th, 1899, and again submitted to them as proposed special rules in August, 1900, were to be formally issued as special rules.—Mr. **RITCHIE** replied: Much progress has been made towards a settlement of the special rules for the china and earthenware trade, but there are certain points still outstanding and one of them involves a chemical question on which I am now waiting for a report from Dr. Thorpe, principal chemist to the Government. hope to be able formally to issue the new rules early next year.

The Case of Dr. H. P. Veale.

General **LAURIE** asked the Secretary of State for War, whether Dr. H. P Veale, M.B. Cambridge, and the Rev. J. Godfrey, stated to be a clergyman of the Church of England at Pretoria, whose conduct in regard to the treatment of the British prisoners at Pretoria was reported on by Field-Marshal Lord Roberts in his despatch of June 27th last, were respectively British subjects; and, if so, whether their position in the Transvaal was consistent with their nationality; and if any notice could be taken of their behaviour.—Mr. **BRODRICK**: We are not aware whether Dr. Veale and the Rev. J. Godfrey were British subjects at the time when they were concerned with the treatment of the British prisoners at Pretoria. I am advised that Mr. Godfrey is in colonial orders and that we can take no notice of his behaviour. The question of Dr. Veale's position as a member of the Red Cross Society is under consideration.

Poison in Beer.

Colonel **KENYON-SLANEY** asked the Home Secretary whether the official analysts to the department, Dr. Stevenson and Dr. Luff, who were members of the expert committee appointed by the Manchester Brewers' Association, were acting on behalf of the department, or were being remunerated by the Brewers' Association; and if the latter was the case, whether, in view of the great public interests involved, he would consider the advisability of causing a report to be made by some expert analysts entirely unconnected with the trades concerned.—Mr. **RITCHIE** replied: Dr. Stevenson and Dr. Luff are not acting on behalf of the Home Department. I think that the suggestion in the last paragraph of the question is scarcely within my jurisdiction; but I have consulted the President of the Local Government Board and understand that that department has the whole matter under their active consideration.—Mr. **FREDERICK WILSON** asked the Secretary to the Treasury whether, seeing that it was stated in the report of the Committee on Beer Materials, 1899, that the Treasury was empowered to prohibit the use in the manufacture of beer of any substance or liquor of a noxious or detrimental nature, he would state upon how many occasions within the last five years had the Treasury exercised such power, and how many specimens of cheap sulphuric acid such as was apparently used in the manufacture of sugar for brewing purposes had been examined during the current year.—Mr. **AUSTEN CHAMBERLAIN** replied: The power referred to was conferred on the Treasury by Section 5 of the Customs and Inland Revenue Act, 1888, but the duty of providing proper securities for the wholesomeness of beer, like other articles of food, is placed by law on the local authorities, subject if necessary to the Local Government Board or Board of Agriculture. The Treasury therefore has not exercised this power. Sulphuric acid would only come under the cognisance of the Government laboratory in the event of samples being submitted for analysis under a magistrate's order, and no instances of such submission have occurred. It ought not to exist in any sugar found in a brewery.

Preservatives and Colouring Matters in Food.

Mr. **CHANNING** asked the President of the Local Government Board if he could state when the departmental committee appointed to consider the use of preservatives and colouring matter in articles of food was likely to present its report.—Mr. **WALTER LONG** replied: I am informed that it is not expected that the report will be ready till March next. The committee have deemed it desirable to institute inquiries as to dairies in Denmark and Ireland and they are deferring their report until they have before them the result of these inquiries and of certain physiological experiments which they have directed to be made.

The Constituents of Butter.

Sir **MARK STEWART** asked the President of the Board of Agriculture if it was the intention of the Government next session to appoint a departmental committee to inquire and report as to what regulations, if any, might with advantage be made by the Board of Agriculture under Section 4 of the Sale of Food and Drugs Act, 1899, for determining what deficiency in any of the usual constituents of genuine butter or what addition of extraneous matter should, for the purposes of the Sale of Food and Drugs Acts, 1875 to 1899, raise a presumption until the contrary was proved that the butter was not genuine.—Mr. **HANBURY** replied: I will not lose sight of the matter to which my hon. friend refers, but neither my predecessor nor I have yet taken any steps with respect to the setting up of presumptive standards for butter, because it has been thought better to wait and see whether any action can in the first place be taken in the case of milk and cream. The report of the committee appointed to consider the course to be taken with regard to the last-named articles has not yet been received.

FRIDAY, DEC. 14TH.

Inoculation against Enteric Fever.

Mr. **POWELL WILLIAMS**, in reply to a request for information as to the results of inoculation against enteric fever in South Africa, said that statistics are not yet available.

Typhus Fever in the West Highlands.

Mr. **JOHN DEWAR** asked the Lord Advocate whether the Local Government Board for Scotland was aware of an epidemic of typhus fever involving 20 cases (of which six were fatal) between Oct. 1st, 1899, and Feb. 12th, 1900, in the locality between Finsbay and Scadabay in the parish of Harris, in Inverness-shire, having a congested crofter and cottar population of about 1000; and whether the Local Government Board, the county medical officer, and the district medical officer of health failed to visit the locality or to take any steps to check or to assist in checking that epidemic; and whether a public inquiry would be made into the circumstances attending that outbreak.—The **LORD ADVOCATE** replied: The figures given by the hon. Member are, I believe, correct, but the Local Government Board had no special intimation of the outbreak, the existence of which they learned from the regular reports of the medical and sanitary officers. The county medical officer did not visit the locality between the dates specified, but he was in constant communication with the district medical officer who did, and who reported as follows: "The local authority acted very promptly and gave every assistance." On the whole I am satisfied that no more could have been done in the absence of an isolation hospital and I do not see any reason for ordering a public inquiry.

Poison in Beer.

Mr. **WARNER** asked the President of the Local Government Board if he intended to take some further action to stop the sale of poisonous beer, as fresh cases of poisoning were still being reported.—Mr. **WALTER LONG** replied: The Local Government Board have no power to stop the sale of any particular beer, but I may state that there is reason for believing that the cases of illness which are now coming under observation for the first time are in the main those of persons who received the poison some time since.—Mr. **CHAPLIN** asked the President of the Local Government Board if he could state what steps had been taken to ascertain the facts with regard to the alleged poisoning by beer, into which an inquiry had been instituted by the Local Government Board; if he had yet received any information as to the number of persons who had been affected and the number of deaths which were alleged to have been caused by it; and, if not, whether he would make public the information obtained by the Local Government Board as early as might be after he received it.—Mr. **LONG** replied: As this matter has excited considerable public interest perhaps I may be allowed to state somewhat fully the course which has been adopted with respect to it. As regards the steps which have been taken by the Local Government Board I would repeat what was stated by my right hon. friend the First Lord of the Treasury on Tuesday last—viz., that from the first outbreak of the epidemic the Board have had the matter under observation. Dr. G. S. Buchanan, one of the most experienced of their medical inspectors, is visiting the places affected and has been instructed to obtain all possible information on the subject, including the action taken by those interested in the breweries and manufactories of brewers' sugar concerned and by the local authorities for detecting arsenic in beer or other substances which contain chemically manufactured sugar. Moreover, an expert committee, consisting of Sir Lauder Brunton and Dr. Stevenson and Dr. Luff, (the analysts to the Home Office), Mr. Gordon Salamon, Dr. Buckley, and the hon. gentlemen the member for the Launceston Division (Mr. Fletcher-Moulton) have made a careful investigation on behalf of the Manchester Brewers' Central Association. The brewers and manufacturers have given them every possible access to their premises and facilitated in every way their inspection and investigation. The Board's inspector has been in communication with members of the committee and cordial coöperation and assistance have been rendered both to the committee and the inspector by the medical officers of health of Manchester and Salford The House may rest assured that everything practicable is being done to ascertain the facts. I am informed that the association has pledged itself to recall or to destroy all beer in the brewing of which the implicated substances have been used, and that instructions to this effect have been sent to all the brewers of the association The obtaining of information as to the number of persons who have been affected and the number of deaths alleged to have been caused forms part of Dr. Buchanan's inquiry which is not yet complete. His report will be made public as early as practicable after its receipt. I may add that the Board have issued a circular to local authorities recommending them to cause samples to be analysed both of beer and of articles of food in which chemically manufactured sugars may enter.

Proposed Exemption of Hospitals from Rates.

Mr HORNER asked the First Lord of the Treasury whether, in view of the circumstances under which hospitals and institutions of a like kind had to raise funds necessary to carry on their charitable work, it was the intention of Her Majesty's Government to initiate legislation to give effect to the report of the Select Committee of the House of Commons, dated July 13th, 1900, by which it was recommended that the principle of exemption from rates should be applied to hospitals and kindred institutions not carried on for profit or gain and supported wholly or in part by voluntary contributions or endowments, and whether Her Majesty's Government proposed in any way to give effect to the other recommendations of that report.—Mr. WALTER LONG replied to the question, saying: The matter to which the hon Member refers is one of considerable difficulty and forms part of the subject now under consideration by the Royal Commission on Local Taxation. I cannot at present give any promise of its being dealt with by the Government.

SATURDAY, DEC. 15TH.

Close of the Session.

The business of the session was brought to a close to-day, and Parliament was prorogued by commissioners representing Her Majesty. Unless something unexpected happens the new session will not commence before Feb 14th, 1901.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Medical Monograph Series, No. 4: The Syphilis of Children in Everyday Practice. By G. Carpenter, M D. Lond. Edited by David Walsh, M.D. 1901. Price 3s. 6d net

How to Avoid Tubercle. By Tucker Wise, M.D. Third edition. 1900 Price 1s.

The History of Ancient Gynæcology. By W. J. S. McKay, M.B., M.Ch., B Sc 1901. Price 7s 6d net.

Uterine Tumours: their Pathology and Treatment. By W. R. Williams, F.R.C S. 1901. Price 10s 6d. net.

BALE, J., SONS, AND DANIELSSON, Great Titchfield street, London

Outlines for Dissectors Part I.: Upper Extremity, Right and Left. Part II.: Lower Extremity, Right and Left. 1900. Price 1s. 6d. each, net

The British Sanatoria Annual. Illustrated. Reprint. 1901. Price 2s 9d.

BENGAL SECRETARIAT PRESS, Calcutta.

A Manual of Jail Hygiene Adopted officially in all Prisons of Bengal, Bombay, Punjab, Assam, and Central Provinces of India, for the use of Medical Subordinates. By Major W. J Buchanan, B.A., M B, Indian Medical Service. Second edition. 1900. Price 4s.

BLACK, A. & C., London.

The Englishwoman's Year-book and Directory, 1901. Third year of new series Edited by Emily Janes. 1901. Price 2s. 6d. net.

BRADLEY AND SON, Reading.

Reading Pathological Society, incorporated with the Reading Medical and Chirurgical Society: Report of the Fifty ninth Session, 1899–1900.

BURROUGHS, WELLCOME, AND CO, Snow Hill-buildings, London.

Wellcome's Photographic Exposure Record and Diary, 1901.

CARRÉ, GEORGES, ET C. NAUD, Paris.

Leçons de Physiologie Expérimentale. Par R. Dubois et E. Couvreur. 1900.

CHURCHILL, J. & A., Great Marlborough-street, London.

Year book of Pharmacy, 1900, and Transactions of the British Pharmaceutical Conference, July, 1900

Descriptive Catalogue of the Museum of the Sixth International Otological Congress held in London, August, 1899. Compiled and edited by W. Jobson Horne and A. H. Cheatle. Revised edition. 1900 Price 10s. net.

GREEN, WILLIAM, AND SONS, Edinburgh.

Encyclopædia Medica. Under the general Editorship of Chalmers Watson, M.B, M.R.C.P. Edin. Vols. v. and vi. 1900.

KIMPTON, H., Furnival-street, Holborn, London.

A Treatise on Diseases of the Nose and Throat. By Ernest L. Shurly, M.D. Illustrated. 1900.

KNOWLEDGE OFFICE, 326, High Holborn, London.

Knowledge Diary and Scientific Handbook for 1901. 1900. Price 3s.

LEWIS, H. K., Gower street, London.

What to do in Cases of Poisoning By William Murrell, M.D., F.R.C.P. Ninth edition. 1900. Price 1s.

Transactions of the Dermatological Society of Great Britain and Ireland. Edited by W. T. Freeman, M D, F.R.C.S., and C. H. Thompson, M.D. 1899–1900. Vol. vi. Price 5s

LONGMANS, GREEN AND CO, Paternoster-row, London.

The Great Famine and its Causes. By Vaughan Nash. Illustrated, with a Map. 1900. Price 6s.

Transactions of the Clinical Society of London. Vol. xxxiii. 1900.

NAGELE, E, Stuttgart.

Klinische und experimentelle Beiträge zur Lehre von der Bauchfelltuberkulose. Von O. Borchgrevink. 1901.

NEWNES, GEORGE, AND CO, Southampton-street, Strand, London.

The Story of Thought and Feeling. By Fred. Ryland, M.A. 1900. Price 1s.

PENTLAND, Y. J., Edinburgh

The Edinburgh Medical Journal. Edited by G. A. Gibson, M.D., F.R.C.P. Edin. New series, vol. viii. 1900.

SAMPSON LOW, MARSTON, AND CO, Fetter-lane, Fleet-street, London.

The Guide to South Africa. With coloured maps. Edited annually by A. S. Brown and G. G. Brown for the Union Castle Mail Steamship Company. London, 1900–1901. Price 2s 6d.

Mosquitoes and Malaria. By C. Christy, M.B, C.M. Edin With Plates. 1900. Price 6s. net.

SAUNDERS, W. B., AND CO, Philadelphia.

A Text-book of the Diseases of Women. By H. J. Garrigues, A.M., M D. Third edition Illustrated. 1900. Price 18s. net.

Clinical Examination of the Urine and Urinary Diagnosis. By J. B Ogden, M D Illustrated 1900. Price 12s. 6d. net.

A Text-book of Embryology. By J. C. Heisler, M.D. Illustrated. 1899 Price 10s 6d net.

SMITH, ELDER, AND CO., Waterloo-place, London.

On Some Cirrhoses of the Liver. Being the Lumleian Lectures for 1900. By W. B Cheadle, M.A, M.D. Cantab. Illustrated. 1900. Price 5s.

SPOTTISWOODE AND CO, Gracechurch-street, London.

Indian and Colonial Addendum to the British Pharmacopœia, 1898. 1900

TREAT, E. B., AND CO, New York.

Sexual Debility in Man. By F. R. Sturgis, M.D. 1900. Price 12s. 6d.

VIR PUBLISHING COMPANY, Imperial Arcade, Ludgate-circus, London.

Purity and Truth Self and Sex Series: What a Young Man Ought to Know. By S. Stall, D.D. 1900. Price 4s.

A Prescriber's Companion, by Thomas D. Savill, M.D. Lond., D P.H. Camb; third edition, 1900 (J. Bale, Sons, and Danielsson, Great Titchfield street, London), price 1s. post free.—1901. Bale's Dental Surgeons' Daily Diary and Appointment Book (J. Bale, Sons, and Danielsson, London), prices 7s. and 8s. 6d—Saunders' Pocket Medical Formulary, with an Appendix, by W. M. Powell, M.D., sixth edition (H. Kimpton, High Holborn, London), price 7s 6d. net.—Received from Messrs. Bemrose and Sons, 23, Old Bailey, London, Five Calendars for 1901, published at 1s. each.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ARBUCKLE, H. W., M D Aberd, D.P.H. Camb., has been re-appointed Medical Officer of Health by the Thorne District Council.

BARCLAY, W. J, M B, B S Edin, has been appointed Assistant Medical Officer for the Dundee Infirmary.

BODMAN, C. OSMOND, M.B, B Sc. Durh, M.R C.S, L R.C.P. Lond., has been appointed Resident Medical Officer to the Royal Hospital for Children and Women, Waterloo-bridge-road, London.

BROGDEN, G. A., M.B, Ch.B Edin., has been appointed House Physician to the Salisbury Infirmary.

BULLEID, ARTHUR, L.R.C.P., L.R C.S Edin, L.F.P.S Glasg., has been appointed Medical Officer of Health for Midsomer Norton, Somerset, vice Alexander Hastings Whicher, resigned.

CLARK, MR., of Truro, has been appointed Public Analyst by the Truro Corporation.

CLAY, D L, L.R.C.P. Lond., M R C.S., has been appointed Surgeon to the Royal mail steamer *Gothic*

CRAWFORD, A. D, M.B, C M. Glasg., has been re-appointed Medical Officer for the Maxstoke Sanitary District, Meriden Union.

DARLEY, A. R., M.D. Dubl. L.M. R.C P. Irel., has been re-appointed Medical Officer by the Daventry Rural District Council.

DIXON, J., M.D. St. And, L.R.C.P. Lond, M R.C.S, has been appointed, *pro tem*, Medical Officer for Rotherhithe.

EDRIDGE-GREEN, F. W, M.D, F.R.C.S, has been appointed Honorary Secretary for England of the International Psychical Institute

FLACK, FREDERICK HENRY, M.B, Ch.B Vict. Univ., has been appointed Junior House Surgeon to the Blackburn and East Lancashire Infirmary.

GOSTLING, E VICTOR, M R.C.S., L.R.C P, has been appointed House Physician to the Derbyshire Royal Infirmary.

HARRISON, EDWARD, M A., M.D. Cantab., F.R.C S Eng., has been appointed Honorary Surgeon to the Hull Royal Infirmary.

KILVERT, J. ELLIS, M R.C S, L.R.C P., has been appointed House Surgeon to the Derbyshire Royal Infirmary.

MACKENZIE, W. L., M D. Aberd., D P.H, has been appointed Medical Inspector to the Local Government Board for Scotland.

McLaws, J., M.B., M.Ch. Glasg., has been appointed Civil Surgeon to the Forces in South Africa.

Manley, J. H. H., M.B., B.C., M.R.C.S., D.P.H., has been re-appointed Medical Officer by the West Bromwich Town Council.

Montgomery, W. P., M.A. Oxon., M.B., B.S. Lond., F.R.C.S., has been appointed Assistant Surgeon to the Manchester Children's Hospital, Pendlebury.

Newman, G., M.D. Edin., D.P.H. Camb., has been appointed Medical Officer of Health by the Finsbury Borough Council.

Park, W., M.B., M.S. Glasg., has been appointed Civil Surgeon to the Forces in South Africa.

Pozzi, Joseph, M.B., Ch.B. Aberd., has been appointed Deputy Medical Officer for the Nelson and Brierfield Sanitary District of the Burnley Union.

Reidy, W. A., L.R.C.P., L.R.C.S., L.F.P.S. Glasg., has been appointed District Medical Officer and Public Vaccinator by the Newport, Mon., Board of Guardians.

Rice, George, M.D. Durh., has been appointed Honorary Physician to the Derbyshire Royal Infirmary, vice C. A. Greaves, resigned.

Shaw, John C., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Royal Ear Hospital, Frith-street, Soho-square, London.

Shera, J. E. P., L.R.C.P., L.R.C.S. Irel., has been appointed Second Assistant Medical Officer to the Kent County Asylum, Chartham, near Canterbury.

Southern, J. Acton, M.R.C.S., L.R.C.P., has been appointed Honorary Surgeon to the Derbyshire Royal Infirmary, vice W. Grafton Curgenven, resigned.

Tennent, J. T., M.B., C.M. Glasg., has been appointed Civil Surgeon to the Forces in South Africa.

Thomas, J. Lynn, F.R.C.S. Eng., has been appointed Surgeon to the Cardiff Infirmary.

Warrington, W. B., M.D. Lond., M.R.C.P., has been appointed Honorary Assistant Physician to the Stanley Hospital, Liverpool.

Williams, W. R. E., M.B., Ch.B. Edin., has been appointed Civil Surgeon to the Forces in South Africa.

Workman, C., M.D., M.Ch. Irel., F.F.P.S. Glasg., has been appointed Lecturer Examiner in Pathology, University of Glasgow.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Ancoats Hospital, Manchester.—Resident House Physician for in-patients. Salary £80, with board, &c.

Brighton, Hove, and Preston Dispensary.—Three House Surgeons, one for each Branch. Salary £160 per annum, with furnished apartments, coals, gas, washing, and attendance. Apply to Assistant Secretary, 113, Queen's-road, Brighton.

Burgh of Leith.—Medical Officer of Health. Salary £400 a year. Apply to the Town Clerk, Town Clerk's Office, Leith.

Burgh of Partick.—Medical Officer. Salary proposed £150. Apply to the Clerk to Commissioners, Burgh Chambers, Partick, Glasgow.

Chelsea, Brompton, and Belgrave Dispensary, 41, Sloane-square, Chelsea.—Surgeon.

Cheltenham General Hospital.—Junior House Surgeon for two years, unmarried. Salary £45 per annum, with board, lodging, and washing.

Chester General Infirmary.—Second Resident Medical Officer for six months. Salary at the rate of £80 per annum, with residence and maintenance in the house.

City of London Hospital for Diseases of the Chest, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

County Asylum, Whittingham, Lancashire.—Junior Assistant Medical Officer. Salary commencing at £150, increasing to £200, and on promotion to £250, furnished apartments, board, washing, and attendance provided.

Derbyshire Royal Infirmary, Derby.—Honorary Physician.

Doncaster General Infirmary and Dispensary.—Assistant House Surgeon. Salary £50 per annum, with board and residence.

East London Hospital for Children and Dispensary for Women, Glamis-road, Shadwell, E.—Pathologist and Registrar for one year.

Fisherton House Asylum.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.—Apply to Dr. Finch, Salisbury,

General Infirmary at Gloucester and the Gloucestershire Eye Institution, Gloucester.—Assistant House Surgeon for six months. Salary at the rate of £30 per annum, with board, residence, and washing.

Guest Hospital, Dudley.—Senior Resident Medical Officer. Salary £100 per annum, increasing by £10 a year to £120, conditionally, with board, residence, attendance, and washing.

Hospital for Women, Soho-square, London, W.—Assistant Physician. Also Assistant Surgeon.

Hull Royal Infirmary.—Honorary Assistant Surgeon to Out-patient Department for five years. Also Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

Kent County Asylum, Barming Heath, Maidstone.—Fourth Assistant Medical Officer and Pathologist for two years, unmarried. Salary £175 per annum, rising £5 a year, with furnished quarters, attendance, coal, gas, garden produce, and washing.

Leeds Public Dispensary.—Two Junior Resident Medical Officers for one year. Salary £100, with board and lodging, and an increase of £10 on re-appointment.

Leicester Infirmary.—House Physician for 12 months. Salary £100 per annum, with board, apartments, and washing.

Liverpool Stanley Hospital.—Junior House Surgeon. Salary £70, with board, residence, and washing.

Miller Hospital and Royal Kent Dispensary, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary at the rate of £60 per annum, with board, attendance, and washing.

Monkwearmouth and Southwick Hospital, Sunderland.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

North Staffordshire Infirmary and Eye Hospital, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Board, apartments, and washing provided, and at least £10 given as an honorarium.

Nottingham General Dispensary.—Assistant Resident Surgeon. Salary £140 per annum, all found except board.

Radcliffe Infirmary, Oxford.—Honorary Assistant Surgeon.

Royal Boscombe and West Hants Hospital, Bournemouth.—House Surgeon. Salary £60 per annum, with board, lodging, and washing.

Royal College of Surgeons of England.—Examiner.

Royal Free Hospital, Gray's Inn-road, London.—Assistant Surgeon for out-patients.

Royal Hospital for Children and Women, Waterloo Bridge-road, London.—Assistant Surgeon.

Royal Portsmouth, Portsea, and Gosport Hospital.—House Surgeon for one year, unmarried. Salary £100, with board and residence. Also Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

Salford Union.—Assistant Medical Officer, male, at the Union Infirmary, Hope, near Eccles, for one year. Salary £150, with furnished apartments and attendance (no rations) in the Infirmary. Apply to the Clerk to the Guardians, Union Offices, Eccles New-road, Salford.

Salop Infirmary, Shrewsbury.—House Surgeon. Salary £100 per annum, with board, washing, and residence.

Swansea General and Eye Hospital.—House Physician for twelve months. Salary £75, with board, apartments, and washing.

Taunton and Somerset Hospital, Taunton.—Assistant House Surgeon for six months. Salary at the rate of £60 per annum, with board, lodging, and laundry.

The Chief Inspector of Factories gives notice of vacancies for Certifying Surgeons under the Factory Acts at Darwen, in the county of Lancashire; and at Exmouth, in the county of Devon.

Victoria Central Hospital, Liscard.—Specialists for the Ear, Nose, and Throat, and a Gynæcologist.

Victoria Hospital for Children, Queen's-road, Chelsea.—House Surgeon for six months. Honorarium £25, with board and lodging in the hospital.

Western General Dispensary, Marylebone-road, London.—Two Honorary Surgeons.

West Kent General Hospital, Maidstone.—House Surgeon, unmarried. Salary 100 guineas, rising 10 per annum to 120 guineas, with board and residence. Also Assistant House Surgeon for six months. Honorarium at the rate of £50 per annum, with board and residence.

Wolverhampton and Staffordshire General Hospital, Wolverhampton.—Assistant House Surgeon for six months. Honorarium at the rate of £75 per annum will be given. Board, lodging, and washing provided.

Worksop Dispensary and Victoria Hospital, Worksop.—House Surgeon and Dispenser. Salary £150 per annum, with rooms and attendance.

Births, Marriages, and Deaths.

BIRTHS.

Holden.—On Dec. 13th, at Castle Hill, Reading, the wife of George Herbert Rose Holden, M.A., M.D. Cantab., of a son.

Mackintosh.—On Dec. 14th, at Lilybank, Bishopbriggs, the wife of Hugh J. Mackintosh, M.B., C.M., of a son.

Tait.—On Dec. 15th, at Highbury Park, the wife of Edward Sabine Tait, M.D., of a daughter.

MARRIAGES.

Bennett—Tangye.—On the 18th Dec., at Carr's-lane Chapel, Birmingham, by the Rev. J. H. Jowett, W. E. Bennett, F.R.C.S., of 22, Broad-street, Birmingham, son of Wm. Bennett, Hertford-place, Coventry, to Mary Ethel Tangye, only daughter of George Tangye, J.P., of Heathfield Hall, Handsworth, Birmingham.

Gurney—Williams.—On Dec. 15th, at St. John's, Notting-hill, Alexander C. Gurney, M.B., of Gildredge-road, Eastbourne, to Minnie Hallyburton, third daughter of the late Major-General H. E. T. Williams, 108th Regiment, of Ladbroke-gardens, W.

Harston—Harston.—On Dec. 12th, at the Cathedral, Hong-Kong, George Montagu Harston, M.R.C.S., L.R.C.P. Lond., second son of George A. Harston, of Wentworth House, Harrogate, to Mabel Elsie, daughter of E. F. B. Harston, of Trebovir-road, South Kensington, London.

Linington—Sims.—On 15th inst., at All Saints, Norfolk-square, W., by the Rev. William Boyd, M.A., William West Linington, F.R.C.S. Eng., of Folkestone, son of Rev. W. A. Linington, Nightingale-lane, S.W., to Nina Sims, the eldest daughter of Charles Sims, Esq., L.D.S. Eng., of Edgbaston,

DEATHS.

Dunlop.—Near Lagos, West Africa, Charles Seymour Strickland Dunlop, L.R.C.P., M.R.C.S., Assistant Medical Officer Government Railways, eldest son of Andrew Dunlop, M.D., Jersey, aged 27 years.

Laver.—On Dec. 14th, at Rutland Park, Sheffield, Arthur Henry Laver, M.D., aged 50 years.

Morison.—On Dec. 14th, suddenly, at Edinburgh, Donald Morison, M.D., English Presbyterian Mission, Bengal.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"THE MEDICAL PROVIDENT LEAGUE."

To the Editors of THE LANCET.

SIRS,—The question now before the General Medical Council respecting the propriety of medical men employing canvassers and touts in connexion with private clubs cannot fail to expose a number of specific cases which have too long been allowed to remain uninvestigated. And if it is seen that the Council entertains more than a mere "pious opinion" upon this question of ethics the profession at large, I am sure, will be much benefited. It is in the methods of *private* clubs that abuse is most apt to occur and procedure most likely to become unprofessional. If the association of a medical man with a friendly society employing collectors and canvassers is objected to, what can be said of a medical man who himself employs 30 or 40 collectors, many of whom, be it remembered, are agents for other associations as well, whose remuneration is in direct proportion to their success in procuring new members and to the amount of money collected? What can be said of the man who promises his agents the appropriation of the weekly subscriptions for the first two months after joining and 25 per cent. of all moneys collected subsequently?

There is yet another aspect of this sort of practice allowing of the introduction of a system of "sweating" and affecting that most unfortunate section of the profession—the moneyless "qualified assistant" —which may be discussed in this connexion. In our larger towns the penny-a member private medical clubs worked upon the system alluded to soon become so extensive as to be altogether beyond the capacity of a single practitioner to attend to. Several needy assistants are engaged and each has a separate district assigned to his management. Thus the principal is altogether relieved of the unpleasant work so frequently associated with club practices, while he is left to reap all the pecuniary benefits. Of course, assistants are paid a salary, but it will be generally found that such arrangements are made that the fees received from any private practice, which the assistant is encouraged to work up, are amply sufficient to pay all the expenses incurred and leave even a substantial surplus for the pocket of the "club doctor."

I am, Sirs, yours faithfully,

COMPTE RENDU.

Hull, Nov. 11th, 1900.

A WALKING MACHINE FOR PARALYTIC OR OTHERWISE DISABLED PERSONS.

WE have received from Mr. George Thomson, 40, Weaver-street, Glasgow, an illustrated description of an apparatus which he has patented under the name of a walking machine for paralytic or otherwise disabled persons The action of it may obviously be compared to that of a pair of crutches which are slid along the ground progressively and not lifted in the ordinary way alternately with each step that the user takes. The machine consists of a frame, preferably rectangular, composed of four standards or legs connected together by stays at top and bottom on three sides, leaving the fourth space open for the user to enter within it, and fitted with adjustments for varying its height and width The lower end of each of the four standards or legs carries a rubber-tyred castor A crutch to support the user is adjustably fitted on the top stay on each side of the machine, and it is so mounted that its position is capable of variation within wide limits As the frame stands upright on four castors it evidently has considerable stability, and infirm or helpless persons would probably find it useful on many occasions for moving about. It is, in fact, somewhat analogous to the old-fashioned children's "go-cart."

"HAVE MATERNAL IMPRESSIONS ANY EFFECT ON THE FŒTUS IN UTERO?"

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Stuart-Menteath's letter in THE LANCET of Dec. 15th the following facts may interest him. Some 15 years ago I was an ardent fancier and breeder of pigeons and visited the pens of a well known north country fancier to see his stock. He was not a scientific man and the word "atavism" would have driven him to his dictionary. His pens consisted of the usual house opening on one side into a large wire-netting inclosure, the whole structure being divided into five or six compartments, each containing a section of the house and of the inclosure. He complained to me that for some reason—to him unknown—all his birds in the end pen threw young deficient in colour and with a tendency, though he did not express it in these terms, to albinism. The free side of this pen looked on to a lawn, and on inquiry I learnt that this lawn was used almost exclusively for drying the household linen, and that for most days in the week the grass was covered with sheets, &c., put out to bleach in the sun. He also told me that he found when penning pouters in the next compartment to either Turbits or Jacobins, I forget which, the latter birds threw young quite useless for show as they had pouter markings, and he asked me if the proximity of the pouters could possibly be the cause; he did not think it could be so. As my friend was a successful exhibitor in the pigeon shows, having on one occasion at least taken the Crystal Palace Cup (the Columbarian blue riband), and a frequent judge at shows, his management of his own stock of birds entirely precludes any possibility of tainted blood in his breeding pens. That belief in the effect of maternal impressions is of ancient date is apparent from the Biblical account (Gen. xxx.) of how Jacob by means of a trick despoiled his father-in law of the best of his flocks and herds, though, of course, this is not evidence as to the correctness of the belief.

I am, Sirs, yours faithfully,

NORMAN DAVIS, M.D. Durh.

Buntingford, Herts, Dec. 14th, 1900.

"A SUGGESTION FOR THE UNIVERSITIES OF OXFORD AND CAMBRIDGE."

To the Editors of THE LANCET.

SIRS,—The assurance of your correspondent with the lengthy *nom de plume*—if he could even for one moment be taken seriously—is simply astounding. By his proposal he would at once reduce Oxford and Cambridge to the level of examining boards and if this should be done in the matter of medical degrees why should it stop there? Why not in other faculties? Why should not laboratories, schools, colleges, residence, the social life and intercourse, and all that goes to make up the charm of *real* university life and to enhance the value of an Oxford or Cambridge degree, be done away with? And where would be the justice in his proposal to *bonâ fide* graduates—men who have given their time and means and many their life-work to their Alma Mater and who have learnt to love and reverence her with all her hoard of cherished and time-worn traditions? Does he suppose that these men would welcome—would ever permit a host of strangers—outsiders, too often with little better education and little more social standing than a Board school education imparts, to claim a degree simply because they came begging for it with sufficient professional education to pass the final and with the necessary fees in their hands? No grace would ever be vetoed in the senate with more unanimity. The *sang froid* with which your correspondent parades his proposal almost induces me to think that he has not only passed his first half century but that he is nearing the completion of his second. I would that Oxford and Cambridge would take example from Trinity College, Dublin, and enforce the taking of an arts degree before graduation in medicine, and that all three universities would take a leaf out of the book of the Royal University of Ireland and not grant their diplomas in public health to any but their own graduates

I am, Sirs, yours faithfully,

Dec. 17th, 1900 M A. CANTAB., M.A., M.D. DUBLIN.

*** The University of Oxford does enforce the taking of an arts degree before graduation in medicine.—ED. L.

THE BIRMINGHAM CONSULTATIVE MEDICAL AND SURGICAL INSTITUTION.

To the Editors of THE LANCET.

SIRS,—In that town where Egyptian mummies are turned out in a week to resemble the products of a thousand years and where ancient armour worn by some imaginary ancestor may be "made to measure while you wait," we must, I suppose, be flattered to think that they have given a member of our profession fully five years to become a "consultant" At college one was always taught to look upon a consultant with something approaching awe, to regard him in the light of a man who had grown old and white with years of patient toil and careful study ere he had reached that lofty pinnacle of fame and respect. But in Birmingham all this seems to have changed. "Consultants at the shortest notice!" will probably soon be the leading advertisement in the enterprising city. But the experienced—the "wise men" of the profession—what will *they* be called in this new nomenclature? Possibly they will be known in the coming century as "street doctors" After all, "what's in a name?"

I am, Sirs, yours faithfully,

WILFRED KINGDON.

London, N.W, Dec. 18th, 1900.

"ORCHITIC EXTRACT."

To the Editors of THE LANCET.

SIRS,—In answer to your inquirer "Prostate," and seeing your remarks in THE LANCET of Nov. 17th, I would like to give you my experience of the above. Two years ago a patient came to me complaining that he had lost the power of "sexual function"; he was only 35 years old, and after trying the usual tonics, &c, I gave him 10 grains of the above in tabloids three times a day and continued this for three months with the following results. He lost flesh, became very thin, had flabby muscles, and, as he expressed it, was too tired to do anything, and there was no improvement in any way from what he was suffering from. I discontinued this treatment, gave him tonics and cod liver oil, and he became strong and well again as far as his health was concerned. I tried the extract again with the same result but in a more pronounced form; finally, I left it off and reverted to tonics, &c. He regained his general health and former condition with the exception of the one point, which still remains.

I am, Sirs, yours faithfully,

A. CHURCHWARD, M D. BRUX., &c.

THE TREATMENT OF BROMIDROSIS.

To the Editors of The Lancet.

Sirs,—Could any of your readers inform me whether there is any treatment likely to do good in combating most offensive perspirations exuding all over the skin of a young lady, aged 23 years, of sound constitution and with no special history? The slightest exertion brings on these perspirations, more especially, of course, in the summer, and they are so bad as to be considerably interfering with the young lady's happiness and prospects in life. My patient is a good-looking woman, of charming manners, but her prospects of marriage are very poor whilst suffering from such an affliction.

I am, Sirs, yours faithfully,
Dec. 17th, 1900. G. P.

THE DANGERS OF COLONIAL APPOINTMENTS.

To the Editors of The Lancet.

Sirs,—I notice in The Lancet of Dec. 8th an advertisement for assistant medical officers to attend on Government staff constructing railway in West Africa. May I ask what diseases, other than those that may attack one in Britain, a man may risk out there, and in what other ways he may become incapacitated for work? The pay offered is good, but one naturally would like to know is it worth the risk? Could you inform me of the probable costs that would be incurred (1) in outfit suitable to the climate; and (2) costs incidental to living in such a country. The advertisement states that free quarters would be given. Does that mean board and lodging, or simply lodging alone? Knowing no one who can give me information about the matter, I therefore appeal to you. Apologising for troubling,

I am, Sirs, yours faithfully,
Dec. 8th, 1900. Ten[illegible]omy.

FIRST AID WITH A VENGEANCE.

To the Editors of The Lancet.

Sirs,—I was visiting a patient the other morning, and a lady staying in the house had, a few minutes before my arrival, fallen down stairs and badly sprained one of her ankles. I obtained some strapping and applied it to the joint, and she expressed herself gratified for my help and the support the strapping gave. On the following day I made inquiry how the ankle was and received an answer that she would not trouble me to see her, she was being treated by the "butler," who was well acquainted with massage. "First aid" this, with a vengeance.

I am, Sirs, yours faithfully,
Dec. 13th, 1900. Practitioner of 30 Years' Standing.

VACCINATION FEES.

To the Editors of The Lancet.

Sirs,—Would you kindly say if a public vaccinator is entitled to the 1*s*. birth fee for cases vaccinated by him privately, when such children are under the age of four months? *Vide* Local Government Board Orders of October 18th, 1898, Art. III., Sec. (1*a*). My guardians refuse to pay such fees. I am, Sirs, yours faithfully,
Dec. 10th, 1900. Public Vaccinator.

⁎⁎⁎ The vaccinations in question were not performed by the public vaccinator in his official capacity of public vaccinator, and he is therefore not entitled to the birth fee, as the cases in dispute had not been entered on the vaccination officer's birth lists.—Ed. L.

"THE CASE OF DR. PATRICK QUINLIVAN."

The following additional subscriptions have been received towards the fund for the family of the late Dr. Quinlivan:—Mr. and Mrs. F. J. Hamby, £1 1*s*.; Dr. Giusani, £1; Dr. Lehane, £1 1*s*.; and Dr. Dunn, 10*s*. 6*d*.

THE "SOLIS" PIPE.

We have received from Mr. A. Wyllie of 39, York-road, Upton-park, London, E., a patent pipe the object of which is to prevent saliva saturated with nicotine from entering the mouth and also to keep the tobacco dry. The pipe is similar in appearance to an ordinary one, but the bottom of the bowl is bored out and replaced by a plug. Through this plug passes a screw on the top of which is an absorbent plug which presses lightly on a projecting rim within the pipe just above the upper surface of the plug which closes the bottom of the bowl. The smoke and nicotine thus enter a chamber below the tobacco. The object of the screw is to regulate the draught. Although apparently complicated, this pipe is very simple in construction. It may possess all the merits which its inventor claims for it, and it looks as if it does, but the experience of smokers is that some men can manage any pipe and some men can manage none.

"TREATMENT OF CONSUMPTION BY ARSENIC."

To the Editors of The Lancet.

Sirs,—In reference to the inquiry of "L.R.C.P. & S. I." in The Lancet of Dec. 15th for the manufacturers of sodium kakodylate and the solutions for the Gautier treatment, we beg to inform him that we have made and supplied them for several months. If he will communicate with us we shall be pleased to answer any inquiries.

Yours faithfully,
Oxford-street, W., Dec. 18th, 1900. Squire and Sons.

MUSICAL SURGERY.

The multitudinous comic journals that of late years have sprung up like mushrooms are not always humorous, but sometimes they do contain jokes, properly so-called, and not merely verbal inanities. The following really humorous little jest is taken from a recent issue of *Tit-Bits*:—

> Landlady: "Beg pardon, sir, but did I understand as you were a doctor of music?"
>
> Musician: "I am, ma'am; why?"
>
> Landlady: "Well, sir, my Billy 'ave just been and broke 'is concertina, and I thought as 'ow I shud be glad to put a hodd job in yer way."

There is, of course, nothing new under the sun, and this may be an arrant "chestnut," but we do not remember having met with it before.

"ARSENIC IN WHISKY?"

Messrs. Mackie and Co., distillers, of 217, West George-street, Glasgow, point out in reference to the annotation under the above heading in our columns last week that no glucose or substitutes are employed in the manufacture of Scotch whisky whatever. Further, in their distilleries they state that they are licensed to distil from malt only, and as two excise officers are resident at each distillery all the year evasion of the law is impossible even if desired. We may observe that our remarks were not directed to Scotch whisky in particular but to whisky in general. We are glad to learn of the course which Messrs. Mackie and Co. state that they adopt, but they cannot deny surely that much of the ordinary whisky sold is a blend of malt and corn spirit. It was from this fact that suspicion fell upon whisky as possibly containing arsenic, a suspicion which, according to our experiment, is unfounded.

FIRST AID ON RAILWAYS.

The directors of the London and South-Western Railway Company have recently decided to offer, annually, a valuable Challenge Shield and silver medals for competition between the teams chosen from the ambulance classes, which have been organised at many of the principal stations throughout the railway in the past two years. The intention of the directors is to induce their employés to join the ambulance classes. It may be stated that since Jan. 1st, 1899, 636 members have obtained the St. John Ambulance Association certificates of efficiency in first aid. The directors liberally bear the entire outlay in the working of the classes.

THE CONDITION THREE YEARS AFTER OPERATION OF FIFTY SUCCESSFUL CONSECUTIVE OVARIOTOMIES: A CORRECTION.

To the Editors of The Lancet.

Sirs,—In your last issue, p. 1721, first column, lines 7 and 8, the words "December, 1900," should be omitted and the sentence in which they occur should not be in parenthesis. The cases referred to were last seen by me shortly before the paper was read on Dec. 11th, 1899. The sentences in parenthesis were added when I sent the paper to you in September of this year.

I am, Sirs, yours faithfully,
Portman-street, W., Dec. 17th, 1900. John D. Malcolm.

SURGICAL PATHOLOGICAL SPECIMENS.

To the Editors of The Lancet.

Sirs,—Please allow me through The Lancet to ask my fellow practitioners where I can get a good complete set of surgical pathological specimens and a second-hand microscope. I am reading for a surgical examination. I am, Sirs, yours faithfully,
Dec. 10th, 1900. Patella.

◆

Signor S. Bocca.—We are aware of no work dealing with the associated effects of the poisons. The suggestion of associated effects has arisen out of the epidemic of peripheral neuritis at Manchester. The subject is therefore comparatively new and doubtless will be investigated thoroughly in due course. A valued work on the subject of poisons, their effects and detection, is that by Mr. Wynter Blyth, published by Charles Griffin and Co., Exeter-street, Strand, London.

Suburban.—It is true that some members of the medical profession do not set a high value on their services, but the abuse in connexion with medical aid associations is more extensive than is implied in this admission.

A Subscriber to The Lancet, *&c.*, *F. R. C. S.*, *R. C. O.*, and others are thanked for their letters. We do not accept advertisements which on their face propose to sweat medical men, and we are always pleased when our readers will help us by giving us such information.

W. H.—Our correspondent's statement is too generalised and vague. If he will forward us some specific instances of the behaviour to which he alludes we should be more able to give an opinion upon the matter.

A Nurses' Lecturer.—Our correspondent need have no fear in recommending nurses to seek the membership of the Royal British Nurses' Association.

Streatham.—The removal of tattoo marks can sometimes be effected. A surgeon might be consulted.

T. P. J. C. has not favoured us with his name and address.

Bill.—Our correspondent should consult his solicitor.

ERRATA.—In Dr. Poore's Purvis Oration on Dietetic Problems, published in THE LANCET of Dec. 15th, the words "Royal Society" (p. 1715, col. 2, line 60) should be *Royal College of Physicians of London*; "Cheadle" (p. 1715, col. 2, lines 67, 75) should be *Chepmell*; "Taylor" (p. 1716, col. 1, line 53) should be *Thiele*.

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 20th, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain fall	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 a.m.
Dec. 14	30.32	WSW	0.21	68	52	43	43	44	Clear
" 15	30.15	S.W.	...	78	54	44	48	50	Cloudy
" 16	30.37	W.	...	61	50	42	41	42	Cloudy
" 17	30.35	WSW	...	60	48	42	45	47	Overcast
" 18	30.03	S.W.	...	65	52	42	47	48	Overcast
" 19	30.13	W.	0.23	61	50	40	40	40	Overcast
" 20	29.85	WSW	0.01	55	52	40	49	50	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.)

TUESDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (26th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

THURSDAY (27th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (29th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily

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The Bradshaw Lecture

ON

THE ASSOCIATION OF INGUINAL HERNIA WITH THE DESCENT OF THE TESTIS.

Delivered before the Royal College of Surgeons of England on Dec. 12th, 1900,

BY JOHN LANGTON, F.R.C.S. ENG.,

SURGEON TO ST. BARTHOLOMEW'S HOSPITAL; LECTURER ON CLINICAL SURGERY AT ST. BARTHOLOMEW'S HOSPITAL MEDICAL SCHOOL, ETC.

MR. PRESIDENT AND GENTLEMEN,—The first lecture under the Bradshaw bequest was delivered 18 years ago by the late Sir James Paget who since the last lecture by Mr. Howse has passed away full of years and full of honour. From whatever aspect we view his career—be it his professional, scientific, or his *deeply religious life*, or be it his untiring energy, his ceaseless work, or his never failing courtesy—all must feel that he fully upheld the highest traditions of our profession and lived his life a noble example to us and a pattern for all time. The title of his lecture, as many here will recollect, was "Some New and *Rare Diseases.*" I cannot claim such a novel subject for my lecture on "The Association of Inguinal Hernia with the Descent of the Testis," for it is a subject so old that it claims its centuries of literature, it is so common that it affects probably not less than 5 per cent. of the entire population at all ages of life.

The descent of the testis is a developmental process which exerts a dominant influence as a cause of hernia in infants, an influence, however, less powerful as age advances. The journey of the testicle from its original site of development below the kidney to its ultimate destination in the scrotum materially weakens the lower abdominal walls, and thus contributes in no small extent to the extrusion of some of the abdominal viscera, especially if associated with a congenitally elongated mesentery. This want of parietal integrity is chiefly manifested in the early periods of life, but the weakness left by the passage of the testis exists to a greater or less degree throughout life and thus acts as a predisposing factor of hernia at all ages. *Ab initio* the testes are developed in the lumbar regions below the kidneys, and subsequently make their descent about the seventh or eighth month of intra-uterine life towards the scrotum which they have usually reached before birth The left testis descends three weeks in advance of its fellow, so that the complete developmental processes have usually been attained on that side at birth, whereas those on the right side are not complete. Many dissections have been made by Camper, Paletta, Schreyer, Seiler, and others who have demonstrated a failure in the closure of the vaginal process of the peritoneum, amounting on the right side to 21 per cent., on the left side to 13·5 per cent., and on both sides to 35 per cent.[1] It is noteworthy that frequently, probably more often than not, the processus vaginalis is unclosed to a greater or less extent at birth without the occurrence of any protrusion, thus affording a reasonable inference that a hernia does not exclusively depend on the patency of this peritoneal prolongation. At a later period I shall call attention to the fact that the vaginal process of the peritoneum may be completely patent throughout life without the occurrence of a hernial excursion. The more frequent failure at birth of the right vaginal process explains the large preponderance of congenital hernia on the right side as compared with the left. The descent of the testis is accomplished in part by the greater development of the upper part of the body, in part by a vital process, but chiefly by the action of the gubernaculum testis.[2] The gubernaculum, situated between the peritoneum and the psoas muscle, is attached by its upper end or apex to the testis, while its lower end frays out like a goose's foot. One of these lower processes is attached to the pubic crest, another, and by far the largest and strongest part, passes into the scrotum, while the third portion is attached to Poupart's ligament close to the inguinal canal. Sometimes accessory prolongations can be demonstrated passing to the saphenous fascia over Scarpa's triangle and more rarely to the perineum, where it becomes lost in the tissues about the region of the anus and the ischial tuberosities. These aberrant fasciculi account for the abnormal positions in which the ectopic testes are from time to time found.[3]

The testis is invested in front by the peritoneum and in its descent to the scrotum carries with it a peritoneal process which precedes it and eventually forms the tunica vaginalis testis. This serous prolongation does not appear to be dependent on the testicular descent, for instances are not rare in which the testis is completely retained but with the vaginal process lying complete in the scrotum and completely shut off from the general abdominal peritoneal cavity. Specimens illustrating this are seen in most of the museums, and an especially interesting one is in the University College Hospital museum, which was removed from a cryptorchid, showing a well developed processus vaginalis in each half of the scrotum.[4] I have on many occasions seen instances of a long vaginal process containing more or less ordinary hydrocele fluid far in advance of a partially descended testis.

The upper portion of the peritoneal process pushed in front of the testis in its descent into the scrotum normally becomes obliterated by the closure of its canal from the internal abdominal ring to the upper part of the testis and subsequently dwindles into a long, slender cord, whilst the lower portion of the peritoneal pouch forms the tunica vaginalis testis. Failure in the complete developmental process often occurs with the result that the testicular sac communicates directly valvularly with the abdominal peritoneal cavity. A hernia descending through the unobliterated portion into the cavity of the tunica vaginalis testis is called a "congenital hernia" or preferably "a hernia into the cavity of the tunica vaginalis testis." The term "congenital hernia" lacks definiteness, as it may be interpreted in two senses, either that the hernia dates from birth, which is not true, or that it is dependent upon an arrest of development of congenital origin, which is true. This nomenclature should be strictly confined to the anatomical position of the hernia and not to its assumed chronological appearance

In acquired inguinal hernia the protrusion with its sac lies in front of the chord and the testis, the sac being loosely connected with the chord, from which it can be easily detached. In congenital hernia, on the other hand, the constituents of the chord are firmly attached to the sac, so that it needs careful dissection to remove the thin membrane which forms the congenital sac and so adds much difficulty in the operation for the radical cure of this variety of hernia.

Sir William Lawrence in his still admirable "Treatise on Ruptures"—a term, by-the-bye, to which much exception may be taken—and other writers also, felt the inappropriateness of the word "congenital," for the former states in a footnote that in a limited sense the term "congenital hernia" may be condoned, but he further says: "I cannot understand for what reason Mr. Pott and some others have exchanged this for the appellation *congenial* which according to its common use and acceptance must be perfectly absurd as applied to this or any other form of rupture."[5]

The second variety is the *funicular hernia* in which a protrusion takes place into the vaginal peritoneal process closed only at its lower part and consequently separate from the testicular sac, the upper part being still patent.[6] The following diagrams represent the closure of the vaginal process from below upwards but leaving the upper portion still patent into which a hernia descends. In Fig. 1 the lower end of the vaginal process has commenced to be narrowed but still communicates by a large neck with the cavity of the tunica vaginalis testis. This is the commencement of the closure of the canal In this form there is often some fluid which is reduced easily *pari passu* with the intestine into the abdominal peritoneal cavity. In the second stage the funicular sac is further separated from the testis with its tunic but it still communicates with its cavity by a longer and narrower canal. In this stage fluid is also frequently present in the sacs, and when the taxis is applied it is reduced gradually at first, but as the closure progresses the lumen becomes so narrow and tortuous that the fluid is irreducible. The narrow canal becomes more elongated and eventually closed, so that no communication now exists between the testicular and funicular sacs. The long white fibrous cord connecting these two sacs is called the filament fibreux of Cloquet, which frequently encloses a small, narrow canal which at some later period may become expanded by a collection of fluid and form an encysted hydrocele of the chord in Fig. D. This long canal, however, normally becomes completely closed and is converted into a white fibrous cord which is easily recognisable by dissection or during operation.[7] The funicular sac, although usually long, sausage-shaped, may be constricted annularly in one or more places, so as to give the appearance of one or more bulges in a hernial protrusion. In operating for the radical cure we not infrequently come across an annular thickening, usually about the middle and narrowest part of the process, and in two instances I have come across a diverticulum in the sac immediately above the constriction. It is a moot point as to the cause of this ring of fibrous tissue. By some it is ascribed to the displaced neck of the sac, but I think it is due to the attempted closure of the lower part of the vaginal process.[8]

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[1] Camper reports that in 52 cases the vaginal process of the peritoneum was patent in 11 instances on the right side, in six instances on the left side, and in 23 cases on both sides Seiler found the canal still unclosed in *four* cases on both sides, in five on the right side, and in four on the left side out of a total number of 21 cases.

[2] John Hunter Descent of the Testicle in the Animal Economy, London, 1786 Braumann: Archiv für Anatomie und Physiologie, 1821, p. 310 Cleland: Mechanism of the Gubernaculum Testis, 1856, p. 31. Weil: Ueber den descensus Testiculorum, Zeitschrift für Heilkunde, 1884, p 226. Godard Études sur la Monorchidie et la Cryptorchidie chez l'Homme, Comptes Rendus de la Societe de Biologie, Paris, 1857, p 315

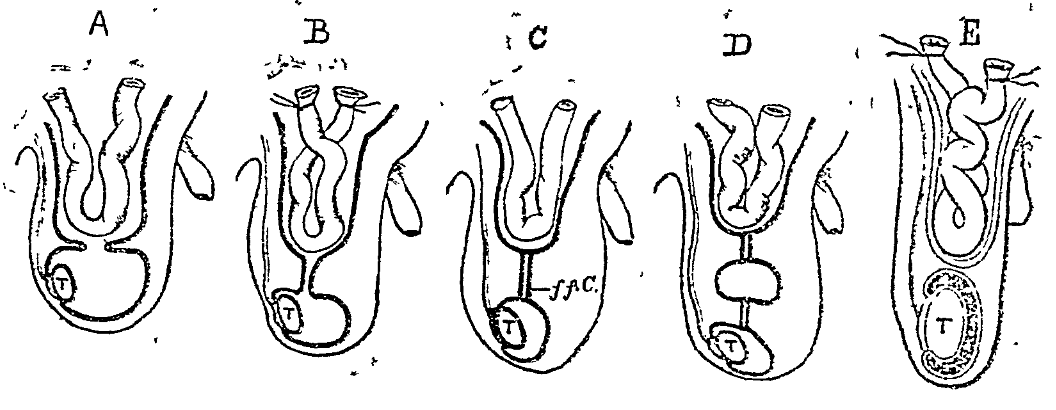
[3] C. B. Lockwood Development and Transition of the Testes, London, 1888, pp 97 and 102 Kocher: Die Krankheiten der Menschlichen Geschlecht-organe, 1887. McCarthy Quain's Dictionary of Medicine, 1882.

[4] University College Hospital Museum, Specimen 1157.

[5] Lawrence: Treatise on Ruptures, p 491.

[6] St. Bartholomew's Hospital Museum, Specimen 2140.

FIG. 1.



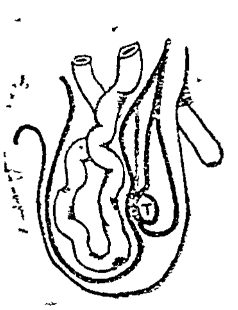
(*After Félizet.*)

Congenital hernia: second variety.—Into the unclosed funicular process and its method of closure—funicular hernia.

a. Hernia into the funicular process with a large patent neck communicating with the cavity of the tunica vaginalis testis. T. testis. *b.* Hernia into the funicular process with a long narrow canal communicating with the patent tunica vaginalis testis. *c.* Hernia into the funicular process connected by a long thin cord to the tunica vaginalis testis. *f.f.C.* Filament fibreux de Cloquet. *d.* Funicular hernia with an encysted hydrocele of the cord between it and the tunica vaginalis testis. *e.* Hernia into the funicular process—funicular hernia.

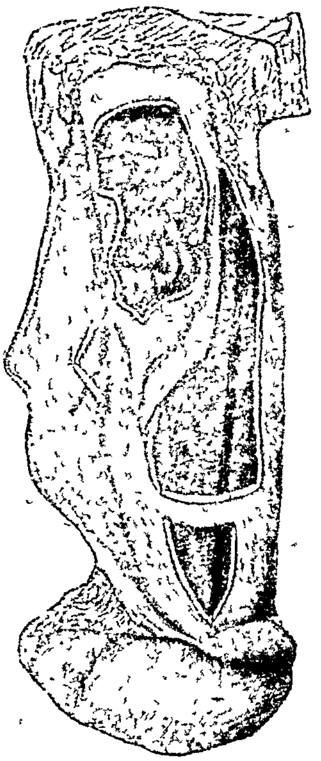
A third variety of congenital hernia known as infantile hernia is seen in an arrested development of the closure of the processus vaginalis except at the extreme upper part, so that the tunica vaginalis testis extends up to the inner ring, where it is closed, in which case a hernia may be protruded behind the process and then descend behind the tunica vaginalis testis to the scrotum, as in Fig. 2. Sometimes the abdominal terminations of the processus vaginalis may be patent, as in Fig. 4, so that it is not essential for this communication to be closed to constitute it an infantile hernia.

FIG. 2.



Congenital hernia: third variety.—Infantile hernia, in which the hernial sac and its contents lie behind the testis, invested by its elongated tunica vaginalis testis.

FIG. 3



Infantile hernia: St. Bartholomew's Hospital Museum, 2140b.

In Fig. 3 the funicular process of the peritoneum is closed at its extreme upper end at a level with the internal ring, but for the rest of its extent it remains as an oval tube. A hernia descending posteriorly to the inner ring has made its way behind the unclosed funicular process.[9] An infantile hernia, as before said, exists with a patent mouth in which a hernia has pushed a sac behind it and into which it is probable that a hernia has passed, as also into the anterior patent processus vaginalis In this instance it is evident that the infantile hernia was not the outcome of a closed vaginal process at the inner ring

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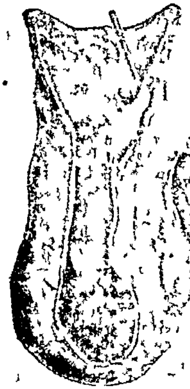
[7] John Birkett: Holmes's System of Surgery.

[8] St. Bartholomew's Hospital Museum, Specimen 2123.

[9] St. Bartholomew's Hospital Museum, Specimen 2140b.

FIG 4



Congenital hernia third variety —Infantile hernia into a sac behind the cavity of a patent tunica vaginalis testis into which a hernia also passed

Another variety of infantile hernia is observed from time to time where the hernia, instead of continuing its descent behind the cord and testis, pushes itself forwards into the unclosed vaginal process, which on being opened reveals a convex tumour bulging the posterior wall forwards and occupying more or less of the vaginal sac This is without doubt one of the forms of the so-called encysted hernia of Hey and others, and its pathology has been described by Mr Lockwood in which he shows that it is a modified variety of the first form of infantile hernia

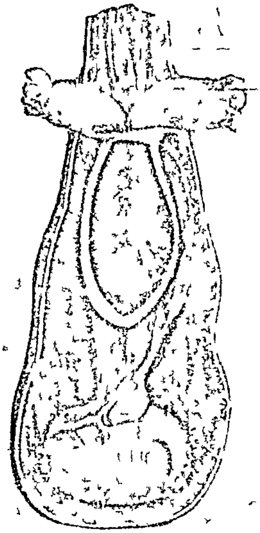
There is another form which may be included in the infantile herniæ but which presents such differences that it might be classified as a distinct variety of congenital hernia It consists of an oval fibrous sac which is pushed vertically downwards into an unobliterated vaginal process and attached by its neck to the inner ring The sac hangs free in the vaginal cavity and differs from the firm, fleshy, and globular sac of the variety just described In an illustration of Cooper's work (Plate xi) there is represented an oval fibrous sac containing a loop of intestine hanging by its neck in the cavity of an enclosed tunica vaginalis testis This is an encysted hernia

Some months ago I operated at St Bartholomew's Hospital for the radical cure on a young man who, we believed, suffered from an ordinary funicular hernia but with thicker walls than usual I opened what was thought to be the sac of the hernia, but I discovered that it contained about two ounces of ordinary hydrocele fluid in a sac which extended as high as the inner ring On evacuation of the fluid an oval sac of the size of a large olive was found hanging by its neck in the hydrocele sac The second sac, which was firm, fibrous, and thin, on being opened was found to be empty and it communicated by a large oval mouth with the abdominal peritoneal cavity At the time of the operation the sac was empty, but it had evidently contained some entero epiplocele The sac was dependent from the neck of the hydrocele sac and was placed immediately above and not behind the chord as seen in ordinary infantile hernia The case may by some be considered as an instance of an infantile hernia but its connexions, situation, and structure were so different from that usually considered as an infantile hernia, that it must clearly be relegated to a distinct variety of infantile hernia[10] My explanation of this specimen is that a large sac containing hydrocele fluid was a funicular hydrocele separated from the testicular sac and that into it had descended an invaginal hernial sac or an encysted hernia

Experience shows that hernia in male infants under six months is much more frequent than in females of the same age Inguinal hernia occurs eleven times more often in boys than in girls under the age of 12 months, the exact figures being 3215 infant boys to 290 infant girls These numbers refer to the date of the first application of the patients for relief and not to the date of the first discovery of the lesion The importance of differentiating these is at once apparent, as the first refers only to the age of examination by the surgeon when the patient is under the age of one year, and therefore cannot fail to be correct, whereas the second includes not only these but also all patients who come for relief at later ages and date the first occurrence of their hernia to birth, but whose statements cannot be accepted as absolutely reliable The proportion, as already stated, is under the first class as 15 males to one female while in the second class of patients who date their hernia from birth it is as 16 to one

Inguinal hernia in infant boys is three times more frequent on the right side than on the left, whereas in infant girls the two sides are nearly equal This disproportion between the two sides in boys is explained by Camper and others by the fact that the processus vaginalis is much more commonly patent in boys at birth on the right side than on the left The consistent preponderance of ruptured boys as against ruptured girls which repeats itself so persistently year after year in our records at the City of London Truss Society may be accounted for, firstly, in the structural weakness in the abdominal walls caused by the passage of the testis through them during intra uterine life, whereby the walls are unable effectually to resist the constant pressure from within, and, secondly, to the failure in the perfect occlusion at birth of the processus vaginalis

FIG 5



Encysted hernia Guy's Hospital Museum

The following table states the relative proportion of the frequency of hernia in each quinquennial period as given by the patients as the date of the first discovery of the hernia. It shows that during the first year of life hernia in boys reaches the high percentage of 15 22 of the total number, whereas in the case of girls it is only 8 55 per cent There must therefore be some other dominant cause of hernia in boys beyond the general tendency to hernia in both sexes and this factor is the descent of the testis

Children born prematurely are very liable to hernia at birth and, so far as my experience goes, the hernia is more frequently on both sides than when infants are born at full term The cause of this is not far to seek, as under these circumstances the vaginal processes are patent on both sides That inguinal hernia preponderates in infant life over other ages accords not only with our expectancy but also with statistics. The subjoined table corroborates this and thus supports the theory that the descent of the testis is largely responsible as an active cause of hernia. I have also appended a table for infant girls on the same lines as that for infant boys, and it shows the great numerical difference between the two sexes in the lessened aggregate and proportionate numbers in herniated females.

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[10] St Bartholomew's Hospital Museum, Specimen 2140c.

TABLE I.—*Showing the Percentages in each Lustrum, of Inguinal Hernia, in Males and Females, at the Time of First Discovery.*

Ages.	Males.	Females.	Ages.	Males.	Females.
0—1	15·22 ...	8·55	46—50	6·56 ...	4·39
1—5	4·32 ...	7·08	51—55	4·61 ...	2·77
6—10	2·86 ...	6·91	56—60	3·65 ...	1·68
11—15	3·71 ...	5·75	61—65	2·15 ...	1·65
16—20	8·88 .	9·90	66—70	1·21 ...	1·35
21—25	9·67 ...	11·55	71—75	0·43 ...	0·45
26—30	11·10 ...	12·53	76—80	0·21 ...	0·10
31—35	9·08 ...	9·88	81—	0·01 ...	—
36—40	9·30 ...	9·98			
41—45	7·03 ...	5·78		100·0 ...	100·0

TABLE II.—*Showing the Relative Frequency of Right, Left, and Double Inguinal Hernia in Males in Successive Lustra at the Time of First Discovery.*

Ages.	Right.	Left.	Double.
Congenital	2610	822	495
1—5	743	283	87
6—10	483	267	49
11—15	581	347	67
16—20	1318	814	193
21—25	1416	993	296
26—30	1428	1171	327
31—35	1161	984	271
36—40	1215	917	264
41—45	843	710	296
46—50	819	615	196
51—55	609	511	136
56—60	472	329	113
61—65	287	193	64
66—70	179	88	38
71—95	118	61	29
—	15312	9105	2901
—	Total 27318		

TABLE III.—*Showing the Number of Cases of Inguinal Hernia in Females in Successive Lustra, and the Percentages of Right and Left Herniæ at the Time of First Discovery.*

Ages.	Right.	Left.	Double.	Percentages.	
				Right.	Left.
Congenital ...	198	154	54	56·0	44·0
1—5	227	99	28	70·0	30·0
6—10	168	107	28	60·0	40·0
11—15	138	94	16	60·0	40·0
16—20	234	159	27	60·0	40·0
21—25	220	251	40	46·7	53·3
26—30	235	238	55	49·9	50·1
31—35	187	193	40	49·9	50·1
36—40	190	204	33	48·2	51·8
41—45	95	135	22	41·0	59·0
46—50	90	78	20	53·0	47·0
51—55	52	58	8	47·0	53·0
56—60	31	39	8	44·3	58·7
61—65	33	37	5	47·0	53·0
66—70	26	26	3	50·0	50·0
71—95	8	16	2	33·3	66·6

Retained, partially descended, and ectopic testes.—Herniæ are largely associated with testes which fail to descend to their normal position in the scrotum. Under such conditions they may be completely retained within the abdomen or they may be arrested in their descent within the inguinal canal or in the inguino-scrotal region. They may further be misplaced in regions outside their normal course and may be found in the thigh, perineum, and peno-pubal regions. Ectopic testes may be associated with a hernia, but this is of rare occurrence. If the testes have passed beyond the internal abdominal ring they are usually associated with a hernia, but they may be situated in any abnormal region without such association. In infants under 12 months of age one or both testes may be apparently retained within the canal, but a little traction will suffice to overcome the action of the cremaster muscle and thus enable us to bring them down to their normal position in the scrotum. Their range of locomotion is proportionately in excess of that in adults, and in health they are usually situated high up in the scrotum, being maintained in this position by the vigorous cremaster and dartos muscles.

Instances frequently occur of testes permanently retained in the canal without a hernia. This condition need not engage our attention so long as they are not associated with hernia, but it must be remembered that the two conditions often go together. It is stated, often authoritatively, that retained testes are liable in later years to become the seat of malignant disease. From my own experience in public practice, but especially in private, I believe this statement to be devoid of any foundation in fact, and on reference to the Registrar-General's reports my experience is fully corroborated. The opportunity of collecting any reliable statistics bearing on the frequency of hernia with malposition of the testis is not very ready, but I have no doubt that this non-association is not rare.

Misplaced testes, in which also must be included ectopic testes, though often dependent on different causes, should be classified under the anatomical positions which they occupy, as follows: (*a*) complete retention within the abdomen; (*b*) retention within the inguinal canal; (*c*) placed outside the external abdominal ring; (*d*) situated high up in the scrotum, in the inguino-scrotal region; (*e*) placed in a skin pouch in the cleft between the scrotum and the thigh without any dartos tissue (these are sometimes, though maladroitly, designated "cruro-scrotal testes," for these organs are neither in the thigh nor in the scrotum); and (*f*) ectopic testes placed in unusual positions by the action of an errant gubernaculum in the thigh, perineum, or peno-pubal regions or displaced by a hernia. I have examined the records of patients of whom careful notes have been taken, which reach a total of 7661 males who were the subjects of hernia, and I have not thought it expedient to chronicle a larger number, as the very largeness is apt to bewilder us, and, moreover, it does not ensure greater accuracy or afford us any additional knowledge. Of this number 4310 were situated on the right side, 2812 on the left side, and 539 on both sides. Statistics record that in 174 cases the testes were misplaced in the positions shown in the following table:—

TABLE IV.—*Giving an Analysis of the Different Situations in which Malposed Testes are found.*

Testes.	Right.	Left.	Double.	Total.
1. Completely retained in the abdomen	9	4	3	16
2. In the inguinal canal ...	24	15	13	52
3. At the mouth of the external abdominal ring; small	43	27	3	73
4. At the mouth of the external ring; testes fully developed	—	1	1	2
5. Ectopic testes	2	—	—	2
6. Cruro-scrotal	2	1	—	3
7. Small testes placed normally in the scrotum ...	10	1	5	16
8. Malposed testes without hernia	2	8	—	10
	92	57	25	174

It is only in the first four and the last classes that the testes have been arrested in some part of their journey and have failed to reach their destination in the scrotum. These may be described as *misplaced testes* Classes 5 and 6 are *displaced testes* by an errant action of the gubernaculum testis; while in Class 7 the testes are small only but are situated normally in the scrotum. With the exception of the last class all the others were associated with hernia and small ill-developed testes. This table shows that in 16 cases the testes were completely retained within the abdomen, nine being on the right side, four on the left, while in three cases both testes were retained. In 52 patients the testes were retained within the inguinal canal and could not be extruded through the external ring; of these 24 were on the right side, 15 on the left, and 13 on both sides at once. In 73 instances the testis was situated immediately outside the external ring, in the inguino-scrotal region, the right side claiming 43 instances, the left side 27, and both sides three examples. In only two instances were fully developed testes placed at the mouth of the external ring, one on the left side and in one case on both sides The fifth and sixth classes of ectopic testis comprise only five examples, the right side claiming four cases and the left side one instance, while in the double division there is no representative. In 16 cases the testes were small and ill-developed in the scrotum, 10 being on the right side, one on the left, and five on both sides. In 10 cases the testes were malposed, two on the right side and eight on the left side. Probably this number does not correctly represent the relative frequency of misplaced testes, inasmuch as patients would not seek advice for this uncomplicated condition. In every class but one the right side claims the predominance of malposition of the testis, for this side has 92 instances against 57 in the left out of a total number of 149 cases, the proportion being 6 to 4 in favour of the right side. In nearly all cases the testes were small and ill-developed, most being soft and flattened and frequently more tender and more highly sensitive than fully-developed organs During operations I have frequently found that testes retained in the canal are relatively larger than those situated outside the canal or in the inguino scrotal region. This suggests that the retention within the canal is due to those organs being too large to pass through the outer ring.

[Mr. Langton proceeded to discuss the crural and perineal forms of displaced testis and he showed that in both varieties the right side of the body is much more frequently affected than the left; either of these displaced testes may be associated with a hernia He then proceeded:]

In hermaphrodites, or in those whose sex is doubtful, who are, however, mostly males, we occasionally come across cases of inguinal hernia on one or both sides associated with bodies usually irreducible in the situation of the external ring. The nature of these bodies although inferred cannot be considered proven unless examined microscopically.

It must not be assumed that all misplaced testes are associated with hernia, though this is usually so, but the hernia may be first noticed many years subsequently to the first discovery of the arrested organ. It is impossible to determine the first occurrence of the hernia, and I have therefore limited my statistics to definite data so as not to place too implicit a reliance on the inexact statements of patients.

CONGENITAL HERNIÆ.

Most patients with misplaced testes become at one time or another the subjects of hernia, but there are many whose testes are fully developed in the scrotum in whom the complete occlusion of the processus vaginalis has altogether failed or failed in part. Under these circumstances an extension may occur into this abnormal vaginal process, so that the hernia becomes associated with the testes which may be completely or incompletely developed.

Herniæ may have their origin at birth and they may occur at any age of life for the first time. It is therefore more accurate to classify these varieties of hernia according to their anatomical relations with the vaginal process of the peritoneum These should all be classified under the general heading of congenital hernia but made up of the following varieties: 1. Herniæ into the cavity of the tunica vaginalis testis which strictly includes the majority of so-called interstitial herniæ. 2. Herniæ into the funicular process which descend into the enclosed funicular process of the vaginal peritoneum. 3. Herniæ into a post tunica vaginal sac, commonly known as infantile herniæ, in which the protrusion is situated behind a dilated tunica vaginalis extending as high as the internal abdominal ring. In this class are included also the encysted herniæ which push before them an invaginated membranous septum into the cavity of an unclosed tunica vaginalis testis. These herniæ are all associated with some anomaly in the closure of the vaginal process.

Hernia into the cavity of the tunica vaginalis testis is one of the most common varieties of congenital hernia and may occur for the first time at any period of life, from birth to extreme old age. In infants under the age of 12 months the position of the hernia can only be conjectured, for an exact diagnosis can only be made on dissection or operation. Protrusions in children usually consist of intestine, since the omentum is so ill-developed that it is rarely able to descend into the sac. Personally, however, I have little doubt that in nearly all cases of hernia in children under six months of age the hernia is into the cavity of the tunica vaginalis testis. At a later period of life, when the protrusion descends into the scrotum, it surrounds the testis as completely as does the fluid of an ordinary vaginal hydrocele. Under these circumstances the hernia forms a globular swelling within which the testis lies imbedded, so that it cannot be detected until the intestine or omentum has been reduced, the testis often being small and ill-developed. The scrotal tumour in these cases is so characteristic that the diagnosis is made without difficulty. The reduction of the hernia is often difficult and attended with a sickening pain and some faintness, partly due to reduction through a narrow fibrous neck and in part to the pain caused by the manipulation of a sensitive ill-developed testis.

The following table has been drawn up recording the percentages of hernia into the cavity of the tunica vaginalis at the time of the patient's first application for relief, arranged in quinquennial periods of life on the right and left sides respectively In this table no hernia has been included unless it fulfils all the clinical features of this variety of congenital hernia There is little doubt that the percentage of congenital hernia in early infancy would be largely increased if the table represented the ages at which the hernia was first discovered. No such table, however, would be accurate, inasmuch as it would be a record of patients' statements of the first appearance of the hernia.

TABLE V.—*Giving the Percentages of Cases of Hernia into the Tunica Vaginalis Testis, as they occur on each side in the various Quinquennial Periods of Life.*

Ages.	Right.	Left.	Ages	Right.	Left.
0—1	2·3	2·4	31—35	1·3	1·0
1—5	3·6	4·4	36—40	0·67	0·81
6—10	8·3	10·0	41—45	0·33	0·42
11—15	9·4	8·5	46—50	0·20	0·25
16—20	17·2	16·0	51—55	0·47	0·40
21—25	4·08	3·05	56—60	0·53	0·17
26—30	1·1	1·2			

Reference to these tables shows that this variety of congenital hernia takes place at every age, although, as might be expected, it gradually decreases as age advances. It is observed that the percentage rapidly increases from birth till the lustrum of 16 to 20 years, after which it rapidly declines, so that at 60 years of age the percentage is as low as 0·75 of the total number. It is not improbable that the numbers of the later periods of life are recrudescences of this disease in early life, and it is probable that the occurrences of this disease in later life are only reappearances of an earlier lesion. Hernia into the cavity of the tunica vaginalis testis is nearly equal on the two sides throughout life, the proportion being 49·58 per cent. on the right side and 48·60 per cent. on the left side. Out of a total number of 8342 cases of right inguinal hernia 227 were examples of the first form of congenital hernia, and of 5263 patients the subjects of left inguinal hernia 125 were instances of congenital hernia, or in the proportion of nine cases on the right side to eight on the left The importance of the recognition of this variety of hernia is not inconsiderable as the probability of the obliteration of the vaginal process is not hopeful, and especially so in the unclosed canal of Nuck. Often the hernia appears to be cured, especially when the patient is under puberty, but the cure is only apparent and due to the narrowing of the serous canal to such an extent as to prevent the descent of any hernia but not to real obliteration.

In operating on these cases in later life I have often observed this stenosis of the canal with the existence of hernia or of fluid—indeed, the communication is so narrow as barely to admit the passing of a probe, but it may become so enlarged as to allow the descent of a considerable amount of intestine or omentum. I believe that in many instances no real obliteration ensues from the wearing of trusses and that patency exists throughout life without hernia. A case bearing this out occurred in the practice of Mr. Stanley in 1859 at St. Bartholomew's Hospital on the removal of a malignant testis from a young man. During the operation the vaginal process was ascertained to be patent, so as easily to allow the passage of the forefinger into the general peritoneal cavity. Prior to the operation the patient had never been the subject of hernia, nor was he even after his discharge from the hospital. This case demonstrates that other factors of hernia exist above a patent canal and an unduly large abdominal ring. One potent factor is the elongated mesentery. It is not an unusual history that hernia takes place suddenly for the first time and of considerable size when patients are in ill-health or recovering from a long illness. The herniæ under these circumstances are large, inasmuch as the sac is of congenital origin and capable of receiving a considerable amount of intestine.

Hernia in this variety of congenital patency easily becomes strangulated and often consists solely of intestine. The prognosis is serious, as the constriction is severe at the inner ring, and often there is no omentum to act as a buffer at the seat of strangulation. Hospital records show conclusively that strangulated congenital hernia entails much greater risks than are entailed in ordinary acquired hernia.

In early infant life, before any curative operation is admissible, the only course to adopt for the treatment consists in the application of some retentive support, and it may be stated that in the large majority of cases the prognosis is good. Whether the canal is permanently closed and becomes converted into a fibrous cord we have no means of knowing, but we often see in later life that the tube is still patent. The presence of fluid in the sac, passing to and fro from the peritoneal cavity, renders the outlook much less satisfactory than if the protrusion is only intestine or omentum. Should this condition exist an operation for the cure should be strongly recommended as soon as practicable and the results of such operations are eminently satisfactory. Two of the reasons strongly urged for the radical cure are the pain and the inconvenience inflicted on these little patients from wearing trusses.

In this and in the funicular form of congenital hernia I have usually observed that the constituents of the chord are more intimately adherent to the sac than in ordinary acquired hernia and the danger to the vas deferens is thus correspondingly increased. The walls of the sac are usually very thin and diaphanous.

In ectopion vesicæ it is very common to find in association with the exstrophy of the bladder both testes retained in the inguinal canal with herniæ into their unclosed sacs. I have seen six cases of this anomaly and all were the subjects of congenital hernia. These were all subjected to operation for the relief of the exstrophy, and on presenting themselves some time afterwards I ascertained that in four of them the testes had descended into the scrotum. In two the hernia still existed, while in the other two the hernia was cured.

Herniæ into the funicular process are often met with but their diagnosis presents greater difficulties than do those of the preceding variety as there are no anatomical conditions on which we can rely. A well-marked example is usually very characteristic; for its elongated sausage shape, its uniform calibre throughout in a line with the axis of the chord, passing down to the upper border of the testis, from which, however, it is separated by a longer or shorter constriction—all proclaim the congenital nature of the extrusion. All, however, do not possess these definite characters.

Birkett has accurately demonstrated the nature of funicular hernia and is of opinion that most of the extrusions occurring in infancy and early life are of this variety. This opinion can only be conjectured, as dissection alone can demonstrate its accuracy; but I have a strong opinion that funicular hernia is more common than is usually believed. The proportion of hernia into the cavity of the tunica vaginalis testis and into the funicular process is represented by one in every 29 cases, or 3½ per cent. of all cases of inguinal hernia.

Though funicular herniæ are not so liable to strangulation and are reduced with greater ease than are those into the cavity of the tunica vaginalis, they are retained by instrumental support with greater uncertainty. The difficulty of retaining funicular hernia by means of trusses is a cogent reason for recommending the operation for the radical cure, and, as in the operation for the first variety of congenital hernia, the results are most satisfactory. The nature of funicular hernia was recognised by Camper, Hunter, and others.[11]

The third variety of congenital hernia is the infantile hernia, which is not so rare as is commonly supposed, for MacEwen, Wright, and other writers have described instances, the first named not fewer than five. I have only operated in a single instance, and the nature of the protrusion was not recognised before operation and this appears to be the experience of others. Attention has already been drawn to this variety in my anatomical description, describing three forms: the first in which the hernia lies behind the chord and the testis; the second in which the hernia bulges the posterior wall of the vaginal cavity forwards; and the third which invaginates from above a sac into the enclosed tunica vaginalis testis. This variety is denied by some authors, but the plate in Astley Cooper's work by Forster appears as an example of this rare form. In the earlier part of my lecture I described at some length and showed the specimen of a young man with an encysted hernia and there are to my mind examples of encysted hernia in other London museums. The appearance of these invaginated sacs bears no likeness to the first and second varieties of infantile hernia, for the walls are thin and fibrous, with no evidence of the plica vascularis, and there is an epithelial lining making the interior of the sac smooth and secerning.

There is yet another example of congenital hernia which strictly should be included in the first variety as the hernia lies in the cavity of the tunica vaginalis testis. As it has, however, characters distinct from this variety it may well be placed in a class of its own, as it is associated with a misplaced, ill-developed testis. This hernia is called "interstitial hernia," and is one of the rarer yet most interesting of the congenital protrusions. It has received many names, as "interstitial," "inter-muscular," "ascending," "intra-parietal," "inter-parietal," "pro-peritoneal," and "hernia en-bissac" by French authors. Many of these appellations are unfortunate, as they fail to convey an accurate description of the relations of the hernia to the abdominal walls, but the least satisfactory is that of "pro-peritoneal," for it gives no clue to the position of the hernia to the abdominal walls. I have therefore retained the term "interstitial" as if not affording much information it is not incorrect as to the structural relations.

Interstitial hernia is primarily situated within the abdominal muscular walls, usually in the patent vaginal process, within which is placed an ill-developed testis. In only two instances were the testes normally developed in the scrotum. I have appended the notes of 42 cases of interstitial hernia in males 35 being on the right side, five on the left, and two on both sides. The positions of the testes vary within large limits, but by far the larger number were retained within the inguinal canal.

TABLE VI.—*Showing the Position of the Testes in Interstitial Hernia.*

Testes.	Right.	Left.	Double.	Total.
In the scrotum	2	—	—	2
High up in the scrotum ...	2	—	—	2
Outside the external abdominal ring	1	2	1	4
In the inguinal canal	26	3	1	30
In Scarpa's triangle ...	1	—	—	1
Not stated	3	—	—	3
	35	5	2	42

This number of interstitial herniæ was recorded out of a total number of nearly 50,000 cases, making the proportion of one case to 1100 cases. This table shows that the testes in two instances were situated high up in the scrotum; in four these organs were placed immediately outside the external ring; in 30 the testes were retained within the canal; one was in the centre of Scarpa's triangle, while in three cases the position of the testes was not recorded. In nearly all the corresponding half of the scrotum was not developed or absent for in 34 cases the scrotum on that side was absent moderately developed in three instances, and fully developed in two patients When the testis lies immediately outside the ring it has been extruded by an advancing hernia and certainly so in the solitary instance in which the testis and hernia were found in Scarpa s triangle The arrest of the testis when outside the external ring is caused by the dense fibrous tissue which prevents any further descent.

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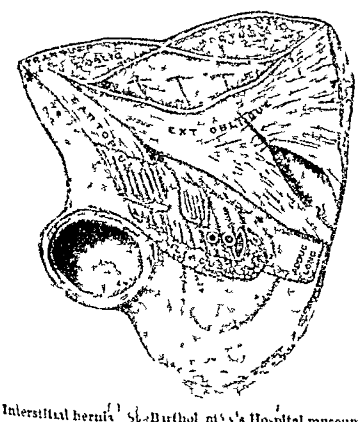
[11] Camper: Icones Herniarum, Tab. x., Fig. 3. Works of Hunter, by Palmer, Plates xxv. and xxvi. W. Lawrence: Treatise on Ruptures, fifth edition, 1838, p. 534. Scarpa: Wishart's translation, Memoir 11, Section 10.

In interstitial hernia there is not infrequently extruded one or more pouches of peritoneal sac through the outer ring If there is only a single pouch the testis lies within the canal and the pouch is occupied by fluid or intestine, but if there are more, then the testis lies in one of them In 75 per cent the testis remains in its original position in the canal, where it usually attains a higher degree of development than when extruded through the outer ring. Its retention in this original position is most likely due to its large size, which prevents its extrusion If the testis is situated high up in the canal and in the posterior part of the sac it remains in this position, but when it is placed lower down it is often pushed through the ring If retained within the canal the testis is less tender than if placed outside the canal

Herniæ of the interstitial form are usually confined to the dilated inguinal canal, but if they do pass beyond it it is only for a short distance, and some cases have been described in which the hernial sac has passed into the scrotum, leaving the testis still in the canal Occasionally the external ring is split up for an inch or more, in which case both testis and hernia are extruded through the gap in the external oblique aponeurosis The corresponding half of the scrotum is mostly ill developed or absent The protrusion as it enlarges cannot emerge through the outer ring in consequence of the denseness of the fascia, and thus it expands the canal in the direction of least resistance, so that the sac may present two or more dilatations

Interstitial herniæ are classified according to the direction which the protrusion takes after its passage through the inner ring 1 The hernia may ascend and separate the aponeurosis of the external oblique from the muscular internal oblique This is the most common variety and is called the "interparietal" or "intermuscular form 2 The hernia may split the aponeurosis of the external oblique from the outer ring to a variable distance or it may pass through the external ring and take various directions The hernia thus lies in front of the aponeurosis of the external oblique, between it and the deep fascia This is the preparietal or pre aponeurotic variety 3 The hernia may pass between the abdominal peritoneum and the fascia transversalis lying in the subperitoneal fascia, whence it may extend in different directions This is the post parietal or post muscular variety

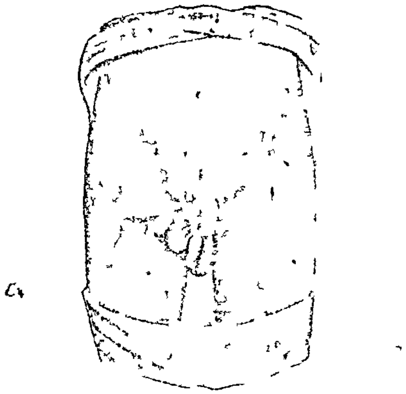
FIG 6



Interstitial hernia St Bartholomew's Hospital museum Specimen 2157a

The directions into which this form of hernia may extend are (*a*) downwards and backwards towards the iliac fossa, where it rests on the iliac fascia—hernia inguinalis supra iliaca; (*b*) downwards and inwards towards the horizontal ramus of the os pubis, where it lies in front of the bladder—hernia inguinalis ante vesicalis, and (*c*) virtually upwards for some distance towards the umbilicus—hernia inguinalis ascendens 4 The hernia may protrude to a limited extent beyond the outer ring with or without the testis and then pass into the scrotal, inguino-scrotal, or crural regions To these varieties the names "scrotal," "inguino scrotal," and "crural" interstitial hernia have been given

FIG 7



Interstitial hernia two accessory pouches, the upper pouch containing intestine the lower containing the testis

Interstitial hernia may be discovered for the first time at any age although the conditions necessary for its existence must have been congenital There can be little doubt that this protrusion has occurred years prior to its discovery, so that the statements by the patients are not to be relied upon Of the 42 cases of interstitial hernia I find that in nearly 45 per cent the age at the first discovery of the hernia was under one year, 16 per cent between one year and 20 years, 29 per cent occurred between 21 and 40 years of age, 5 per cent between 41 and 60 years, and 5 per cent between the ages of 61 and 80 years

TABLE VII —*Showing the Age at the First Discovery of Interstitial Hernia*

Age period	Cases
Under 1 year of age	19
Between 1 year and 20 years	7
Between 21 and 40 years	12
Between 41 and 60 years	2
Between 61 and 80 years	2
Total	42

The frequency of the occurrence of interstitial hernia in the earlier periods of life affords proof of some congenital defect in the position of the testes and probably also in the later years of life, as in nearly all the cases the testes were ill developed in the inguinal canal Interstitial hernia cannot be considered common in comparison with the total number of ruptured males seeing that out of 49 390 patients from January, 1889 to November, 1900 only 42 were the subjects of interstitial hernia, or one in 1175 cases

Incidentally I may draw attention to the comparative frequency of interstitial or quasi interstitial hernia in women, for these herniæ present many differences from those prevailing in men Our records show that 18 cases occurred out of 13 583 female patients so that the proportion is one in 760 patients, or nearly twice as frequent as in males These herniæ in women are often of great size, and in one patient, 47 years of age, the protrusion—preparietal—extended as high as the right costal margin above to the linea alba on its inner side, and overhung the thigh for a considerable distance. It measured 11 inches in its transverse and seven inches in its vertical diameter and was irreducible. In one patient an oval, hard body was felt in the upper part of the sac after reduction of the enterocele, of the size and shape of an ovary. Of the 18 cases, two only were noticed at birth, eight between the ages of 21 and 40 years, four between 41 and 60 years of age, and three between 60 and 70 years of age, while in one patient the first occurrence of the hernia was doubtful.

The causes of interstitial hernia in women are probably due to distension of the abdominal muscles during pregnancy, for most of them were mothers of large families.

The treatment of interstitial hernia in males is neither scientific nor satisfactory, for the pressure of a truss is mainly directed to covering the hernia and in most instances is unable to effect complete retention. As a rule, the deviated testes accommodate themselves under the truss without much inconvenience to the patient if the truss is properly adjusted. The testis may safely be left to take care of itself. Operative measures for the reduction and cure of the hernia are often attended with difficulty, as the separation of such an extent of the abdominal muscles renders the complete approximation of the parietes almost impracticable. The size of the hernia is so great that the abdominal cavity *is unable to receive such a large accession of viscera,* so that the question of an enterectomy must be considered to allow of the complete reduction of the extruded mass.

THE CAUSATION, PREVENTION, AND TREATMENT OF POST-PARTUM HÆMORRHAGE.[1]

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THE subject of our discussion this evening must always be one of great interest to medical practitioners. The appalling suddenness of the accident and the great risk to life entailed upon the patient render it a matter for congratulation that cases of post-partum hæmorrhage are not met with more frequently and that its occurrence can usually be avoided by proper prophylactic treatment.

In the University College Hospital maternity department during the period from August 1st, 1893, to Dec. 1st, 1900, 15,130 women have been delivered. Of this number 139, or one in 108, have suffered from some degree of post-partum hæmorrhage. In 100 of these cases, or one in 151, the amount of blood lost was not very excessive and did not cause any marked symptoms; in 31 of the cases, or one in 488, the loss was considerable and was accompanied by marked symptoms; while in eight instances, or one in 1881, the *patient's life was endangered,* two of these cases ending fatally—a mortality of one death in 7565 deliveries. Amongst 20,378 confinements in the Charité Hospital in Berlin only two deaths occurred from post-partum hæmorrhage—a mortality of one in 10,189. Veit,[2] who has collected a large number of statistics in addition to these, found amongst 47,065 labours only five deaths from atonic post-partum hæmorrhage—a proportion of one in 9413 confinements. Although the *death-rate from* post partum hæmorrhage is therefore relatively small, yet the total number of fatal cases must be considerable. Dührssen[3] states that 300 women die annually in Prussia from this cause, while the frequency of cases causing severe symptoms—viz., one in every 488 confinements in the University College Hospital maternity department—renders this accident of labour one of much importance.

I propose to discuss post-partum hæmorrhage under the three headings of Causation, Prevention, and Treatment, and to confine my remarks to the variety due to atony of the uterus.

Before passing on to consider its causation I may just remind you of a few facts concerning the mechanism of the third stage of labour. The anatomical studies of Barbour,[4] Pinard, and Varnier[5] have demonstrated that at the end of the second stage of labour the placenta is still completely attached to the uterine wall. Separation of the placenta begins with the third stage of labour and is due to the contraction and retraction of the uterine muscle. It is this latter property of active retraction—or what may be termed the tonicity—of the muscle which prevents the occurrence of hæmorrhage when the utero-placental vessels are torn through during the separation of the placenta. The absence or inhibition of this power of retraction is the chief cause of post-partum hæmorrhage, giving rise as it does to atony of the uterus or inertia uteri. It is because the retraction of the uterine muscle is prevented by the presence of the fœtus in utero that premature separation of the placenta is so often accompanied by severe hæmorrhage.

CAUSATION.

The causes of post-partum hæmorrhage are, therefore, to be sought in the conditions giving rise to uterine inertia. These may, for convenience of discussion, be classified as follows:—

1. Feebleness, exhaustion, or malnutrition of the patient. This may be due to the condition of chronic starvation so common amongst the London poor, or to the occurrence of ante partum hæmorrhage, or it may be the result of some disease complicating the labour, such as grave heart disease.[6] The great danger of even a slight degree of post-partum hæmorrhage in cases of severe ante partum hæmorrhage is well known. Ord[7] has shown that labour complicated by myxœdema is very likely to be followed by hæmorrhage. Albuminuria is often asserted to favour the occurrence of post-partum hæmorrhage. This is not borne out by our experience, and its influence in causing this complication of labour is denied by Pinard.

2. Over-distension of the uterus and undue stretching of the uterine muscle such as occurs in cases of hydramnios or multiple pregnancies. Unstriped muscle if stimulated to contract passes into a condition of exhaustion more rapidly when stretched by means of a weight than when it is not so stretched.

3. Exhaustion of the uterine muscle from frequent child-bearing and prolonged labour. One of the commonest causes of post-partum hæmorrhage is the application of forceps and the delivery of the child when pains are absent and the uterus is exhausted and in a condition of secondary uterine inertia—the so called "temporary passiveness" of Braxton Hicks.[8]

4. Pathological conditions of the uterine wall. The presence of fibroid tumours is especially liable to cause post-partum bleeding if the placenta be attached over the site of the tumour. Marked fatty degeneration of the uterine muscle has been described by Bossi[9] in three cases of pregnancy, and he thinks that this may possibly be a cause of inertia in some instances. Fritsch[10] has called attention to cases of uterine atony due to septic infection occurring during labour, the paralysis of the uterine muscle being analogous to that of the intestinal muscle seen so commonly in cases of septicæmia.

5. Some mechanical hindrance to the contraction and retraction of the uterus, such as the retention of the placenta in utero or the presence of adhesions between the uterus and surrounding structures. Graily Hewitt[11] described a fatal case apparently due to this latter cause, and in 102 cases of labour following the operation of ventro-fixation of the uterus Negri[12] found five cases of severe post-partum hæmorrhage due to the adhesions present—a proportion of one in 20, much above the average.

6. Too rapid emptying of the uterus, either by the application of forceps or after version. If the child be rapidly extracted after version in cases of placenta prævia with a rigid cervix tears extending through the placental site in the lower uterine segment are very likely to occur and dangerous hæmorrhage to ensue.

7. Extreme nervous depression and shock such as may

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[1] A paper read at the opening of a discussion upon post-partum hæmorrhage at a meeting of the North London Medico-Chirurgical Society, Dec. 13th, 1900.

[2] Zeitschrift fur Geburtshulfe und Gynäkologie, 1894.

[3] Sammlung Klinischer Vorträge, Volkmann, 347 (Gynäkologie No 100).

[4] Atlas of the Anatomy of Labour.

[5] Études d'Anatomie Obstétricale, 1892.

[6] Vinay · Maladies de la Grossesse

[7] Allbutt's System of Medicine, vol. iv.

[8] Transactions of the Obstetrical Society of London, vol ix., p. 207.

[9] Annali di Ostetricia e Ginecologia, December, 1896.

[10] Handbuch der Geburtshulfe (Müller), Band iii.

[11] Transactions of the Obstetrical Society of London, vol. xi.

[12] Annali di Ostetricia e Ginecologia, August, 1896.

follow the birth of a dead child may account for uterine atony in some cases. That such a mental condition should cause hæmorrhage is not surprising when we remember how frequently irregular cardiac action and vaso-dilatation are produced by various emotions.

8. The administration of chloroform has often been regarded as a cause of uterine inertia. That chloroform gives rise to post-partum hæmorrhage is probably not true, but that its administration has some effect upon the pains is easy to determine clinically and is proved by the observations of Pinard[13] and Westermark.[14] The last-named observer finds that chloroform when given to the obstetrical degree lengthens the intervals between the pains, diminishes the frequency of the pains, and causes the individual contractions to begin more suddenly and pass off more rapidly. When given to the surgical degree it produces the same results but to a more marked extent. Pinard found that *chloroform prolonged the intervals between the pains*, while it diminished the severity and power of the pains, and he concluded that it affected the power of retraction of the uterine muscle rather than its power of contraction.

9. Another possible cause of excessive bleeding after delivery is deficient coagulability of the blood. Such a condition occurs in cases of septic infection and hæmophilia. The latter disease is possibly more often suspected than actually met with, but the cases recorded by Kehrer[15] show how dangerous a complication of pregnancy and labour it may be.

PREVENTION.

In discussing the preventive treatment of post-partum hæmorrhage it is necessary to consider the treatment of the patient during pregnancy and during labour. It is important that all patients should enter upon labour in as favourable a condition of health as possible. Attention must therefore be paid to the general health in all cases where this may be necessary. If the patient has lost excessively at her previous confinements small doses of ergot and strychnine combined with iron or hydrochloric acid may be given during the last month or so of pregnancy, as recommended by Dr. Lombe Atthill.[16] Women with a history of hæmophilia should be given[17] calcium chloride in 10 grain doses three or four times a day for the last two or three weeks preceding delivery. Although, as we have seen, it is very doubtful whether albuminuria *per se* is a cause of post-partum flooding, yet for obvious reasons it must be treated and the patient should be placed upon a strict milk diet. The great value and importance of preventive treatment is well exemplified by Spiegelberg's statement. He writes: "I certainly do not exaggerate when I say that severe post-partum hæmorrhage is almost without exception the fault of the attendant."[18]

In no less than 50 of the 139 cases occurring in the University College Hospital maternity department the child was born before any assistance arrived. In six out of the eight severe cases this happened, including the two cases in which the women died. It is, unfortunately, a common practice amongst the patients in this department to postpone sending for assistance until as late as possible so as to avoid the necessity of being examined. How dangerous a custom this is the facts I have mentioned show, and in all probability one of the two women who died lost her life as a result of this practice. The details of these two cases are shortly as follows.

CASE 1.—A woman sent up to the hospital for attendance at 9 P.M. on August 3rd, 1895. When she was seen slight pains were occurring every half hour. The membranes were unruptured and the internal os was of the size of a sixpenny piece. The pulse was normal. The patient was anæmic and feeble. At 10.30 P.M., as the conditions of the cervix had remained the same, she was left and instructions were given to send up again when the pains became more frequent. Between 4 and 5 A.M. on August 4th the husband came up to the hospital and said that the child was born. On the arrival of the student in attendance the patient was found to be dead. The bed was soaked with blood. The child was born and was alive; the placenta was retained partly in the uterus and partly in the vagina. The uterus was enormously distended and contained large quantities of blood and blood-clot. The pains had continued very feeble until just before the end, when with three or four very strong pains the child was born. The sister of the patient was the only person present at the time. All attempts at resuscitation completely failed.

CASE 2.—*A woman sent up to the hospital on August 28th*, 1897, two and a half hours after the birth of her child, for assistance on account of severe flooding. On the arrival of the medical attendant the patient was found to be cold, extremely blanched, pulseless, and speechless. The placenta, retained and only partially separated, was removed by the hand. There had been very severe post-partum hæmorrhage which had, however, ceased. The patient was given hypodermic injections of ether and three pints of water and two ounces of brandy were injected into the rectum. She rallied a little but died just after intravenous transfusion had been commenced.

The prevention of post-partum hæmorrhage is of even greater importance than its treatment, and it may with truth be said that the skill of an accoucheur can be estimated by the number of such cases that occur in his practice. During labour it is often good treatment to rupture the membranes, even before the cervix is fully dilated, in cases where we fear the occurrence of hæmorrhage after delivery. During the second stage of labour care must be taken not to allow the uterus to become exhausted and to recognise as early as possible conditions likely to cause obstructed labour. When the uterus is in a condition of secondary inertia the mistake of delivering with forceps must be avoided and the case treated by opium and rest, while in cases of obstructed labour the necessary measures must be at once adopted to overcome the obstruction. When towards the end of the second stage the pains are feeble and no progress is being made ergot in doses of from half a drachm to one drachm of the liquor ergotæ ammoniatus may be given, if it is perfectly certain that the labour is an absolutely normal one. The practice of giving ergot before the birth of the child *is undoubtedly in certain cases* a very valuable one and it is regarded at the present time with more disfavour than it deserves. This method is especially applicable in cases where deep anæsthesia is necessary in order to complete delivery.

It is, however, in the proper management of the third stage of labour that the secret of preventing post-partum hæmorrhage lies. Too often it occurs as a sequel of hasty and premature attempts to express the placenta, with the result that a portion of the placenta or membranes is left in utero. A sufficient amount of time must be allowed to elapse to permit of proper separation of the placenta, and under ordinary circumstances no attempt should be made to express it until *from 20 to 30 minutes after the completion of* the second stage of labour. From the time the child is born until the placenta is expelled one hand should be kept continuously upon the uterus. The dorsal position has many advantages during the third stage of labour, but in cases where bleeding occurs the necessary manipulations are most readily carried out with the patient on her side.

At the end of the second stage the fundus of the contracted uterus is usually at the level of the umbilicus. Towards the end of the third stage it will be found to have ascended until it lies from one and a half to two inches above the umbilicus.[19] This indicates that the placenta has been separated and expelled from the upper uterine segment into the lower uterine segment and that it is in a condition in which it can be easily expressed.

It is more particularly in cases where it is necessary to revive an asphyxiated child, or where the medical attendant's attention is directed away from the mother, that severe post-partum hæmorrhage is likely to occur. It is impossible for a uterus to relax completely unperceived if it be watched with the hand during the whole of the third stage of labour. In any case where hæmorrhage has occurred or where the uterus shows a tendency to again relax it must be carefully supervised until it is certain that contraction and retraction are complete and permanent.

TREATMENT.

When post-partum hæmorrhage does occur the medical man must have a plan of treatment ready and be able to carry it out rapidly and efficiently. Personally, I do not consider that I am doing justice to my patient or to myself unless I have ready at hand the few appliances necessary to enable me to deal with such a complication should it arise.

The best method of treating a case of severe hæmorrhage will depend upon whether the placenta is still in utero or not. The ordinary treatment may be outlined as follows. If the placenta be retained it must be at once expressed, or if this is found impossible removed by the hand. A hypodermic injection of ergotin if ready may be given and the uterus kneaded through the abdominal wall while the nurse is ordered to prepare a hot douche. If the hæmorrhage be profuse and the uterus does not respond to the kneading bimanual compression may be carried out until the douche is ready. In the small number of cases where the hot douche fails to excite any uterine contractions and the tone of the muscle is entirely lost recourse must be had to continued bimanual compression, to plugging the uterus with gauze, or to the application of some styptic, such as perchloride of iron, to produce clotting of the blood in the vessels.

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[13] De l'Action Comparée du Chloroform, &c., Paris Thesis, 1879.
[14] Archiv für Gynäkologie, Band lxi, 1, 1900.
[15] Ibid., Band x, 1876.
[16] Brit. Med. Jour., March 3rd, 1897.
[17] A. E. Wright, Brit. Med. Jour., July 29th, 1893.
[18] Text-book of Midwifery, vol. ii, p. 258.
[19] Varnier: La Pratique des Accouchements, p. 259.

We may now consider these various methods of treatment rather more in detail.

It is impossible for the uterus to contract and retract while the placenta is still in utero, and therefore its removal must be undertaken before any attempts are made to excite uterine contractions. Whenever possible this should be effected without the introduction of the hand into the uterus. No time, however, must be lost if expression fails, and when necessary the hand must be passed into the uterus and the placenta and all blood-clot removed. The introduction of the hand has the advantage that it is a powerful excitant of uterine action. Ergot takes too long a time to act to be of much value in the treatment of a case of severe bleeding. In all cases where it is ready a hypodermic injection of ergotin may be given so that the assistance of its action may be obtained in rendering permanent the uterine contraction and retraction procured by other more speedy methods of treatment. In the less severe cases kneading the uterus is often all that is required to excite contractions and to arrest the bleeding. In the more severe cases this is not sufficient and in these a hot douche must be given.

There are several important details to be observed in employing this form of treatment. The water must be used in large quantities and at a temperature of not less than from 117° to 120°F. The uterine tube should be carried into the uterus up to the fundus and the whole of the inner surface of the organ irrigated by the fluid. This is rendered more easy and at the same time the hæmorrhage may be to some extent checked if the uterus be drawn down to the vulva with a vulsellum. This method of drawing down the uterus is at times alone sufficient to arrest the bleeding no doubt by the kinking and compression of the uterine arteries which it causes.[20] Some antiseptic may be used in the water, such as creoline or iodine, but plain hot water will do perfectly well in an urgent case.

Bimanual compression of the uterus is the best method to employ when the hot douche is not immediately available or where it fails to excite uterine contractions. The uterus seized by the hand on the abdomen is compressed against the anterior abdominal wall, the posterior surface of the symphysis pubis, and the other hand placed in the anterior vaginal fornix. The pressure should be exerted as far as possible upon the placental site; no great force is required and it can be continued for a considerable length of time, although at the cost of a good deal of fatigue on the part of the attendant. The chief objection to this method is the difficulty sometimes experienced in grasping the completely relaxed uterus between the two hands. Whether the fist or the extended hand be introduced into the vagina is a matter of indifference so long as the anterior and posterior walls of the uterus are kept firmly in contact. All the 139 cases of hæmorrhage occurring in the University College Hospital maternity department were treated by the hot douche or bimanual compression. In no case near full term was the uterus plugged with gauze or injected with styptics.

As a routine means of treatment plugging the uterus is certainly inferior to bimanual compression. There are, however, two classes of cases in which the latter method is specially indicated—viz., where the uterus is prevented from contracting and retracting by the presence of adhesions or by the existence of fibroid tumours in its wall. Schauta[21] has suggested that in some severe cases of hæmorrhage the uterine vessels are atheromatous, and in any instance where this condition is suspected gauze-plugging would no doubt be the best treatment. Schmit[22] has recorded a case of this kind in which the patient died from uncontrollable hæmorrhage, although the uterus after plugging had failed was ultimately removed in an endeavour to arrest the bleeding. On microscopic examination well-marked hyaline degeneration of the vessels at the placental site was found. Plugging the uterus may be carried out in the following way. The uterus is drawn down to the vulva with a vulsellum—a manœuvre which has the advantage of assisting to arrest the hæmorrhage—or is pushed down by pressure through the abdomen. The left hand is introduced up to the fundus and all blood-clot removed. The strips of gauze or of any other available material wrung out of an antiseptic lotion are passed into the uterus under cover of the fingers of the left hand by means of a pair of uterine dressing-forceps or the intra-uterine douche tube, and the cavity firmly and completely packed from above down. Special care must be taken that no space in which blood could accumulate is left between the fundus and the gauze. In bad cases the vagina should also be plugged. A large pad of wool may then be placed over the vulva and a binder and T bandage applied with considerable pressure. The plug is taken out at the end of from 18 to 24 hours. If hæmorrhage continues the plug must be removed, the uterus washed out, and then replugged.

Since 1893 there has not been any case of post-partum hæmorrhage alone in the maternity department of University College Hospital in which plugging the uterus has been required. This method has, however, been frequently employed for hæmorrhage after abortions and other conditions and is of great value in the treatment of some cases of rupture of the uterus.[23]

The last mode of treatment I have to mention is the application of powerful styptics to the interior of the uterus, a method which at the present day is almost superseded by gauze-plugging. The drug most commonly used is the liquor ferri perchloridi fortior of the strength of one part to three parts of water.[24] It may be injected into the uterus by means of a tube, or the interior of the organ may be washed out with a sponge or wool dipped in the solution. It is undoubtedly a most efficient means of producing thrombosis, but its dangers outweigh its advantages. It is extremely likely to produce sloughing, septic thrombosis, and general septic infection. Turpentine and vinegar may also be employed in the same way.

In cases where the hæmorrhage has been successfully arrested but where the loss has been excessive the condition of the patient is usually very grave, and energetic after-treatment is required if her life is to be saved. The greatest reliance is to be placed in the treatment of such cases on the hypodermic injection of strychnine, ether, and digitalin. Ether may be injected in doses of 10 minims every 10 or 15 minutes until five or six doses have been given. Where cardiac failure is very marked hot water or normal saline solution should be injected. The former may be given by the rectum, the latter may be injected under the skin or into a vein. In severe hæmorrhage the most valuable of these methods is venous transfusion. Infusion of hot water or saline fluid has been carried out in 10 of our cases—five times by the rectum, four times into a vein, and once into the sub mammary connective tissue. The amount of fluid employed varied from one to five and a half pints. One patient was transfused twice, three pints being introduced into one arm and two and a half pints into the other.

Rectal injections of hot water with or without brandy are of great value in cases where the circulation is not too feeble. They act as a powerful stimulant and in such cases the fluid is no doubt absorbed. In cases of severe hæmorrhage accompanied by a very feeble action of the heart it is quite certain that no absorption occurs either from the stomach or bowel. In such cases venous transfusion must be carried out and gives exceedingly good results. My experience of subcutaneous transfusion in cases of septic infection and other conditions leads me to regard it as too slow a method to use in cases of hæmorrhage. Common salt can be obtained in any household, but it is best to carry it as chemically pure sodium chloride or as a concentrated solution in a sealed glass tube. The solution employed should contain one drachm of salt to the pint, and must have a temperature of from 101° to 102° F. It will cool down to blood heat while passing through the transfusion apparatus. Care should be taken to see that the temperature is maintained during the operation, and this can most easily be done if the solution be prepared in small quantities at a time. It should in all cases be filtered through muslin before use. If it be necessary to repeat the transfusion another vein must be opened. When the patient has been revived and the immediate danger of death from syncope is staved off the extreme restlessness and headache that so frequently follow may be treated by large doses of opium or morphia. Any further tendency to syncope is best treated by raising the foot of the bed and the administration of liquid food and stimulants in small quantities at frequent intervals. The great risk of subsequent sepsis must not be forgotten and the convalescence of such patients is of necessity a slow process

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[20] Arendt: Therapeutische Monatshefte, January, 1893.

[21] Medical Press and Circular, May, 1895.

[22] Centralblatt für Gynäkologie, 1899, No. 35.

[23] Spencer: Transactions of the Obstetrical Society of London, January, 1900.

[24] Barnes: Transactions of the Obstetrical Society of London, vol. xi., p. 219.

Wimpole street, W.

CALCIUM IODATE AS AN IODOFORM SUBSTITUTE AND GASTRO-INTESTINAL ANTISEPTIC.

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MANY years ago Sonstadt came to the conclusion that the minute quantity of iodine contained in sea-water is present in the form of calcium iodate.[1] To this substance, existing, as he calculated, in the proportion of one part in about 250,000[2] parts of sea-water, he attributed "not only the salubrity of the sea, but, through the medium of the atmosphere, of the land also." At a somewhat later date the same chemist made "experiments on the properties of iodate of calcium as an antiseptic and disinfecting agent"[3] Some of these experiments I have repeated, with this difference—that where Sonstadt mostly used the dry powder I have used a saturated solution of the salt, but the results obtained by me have in every instance been in complete accord with those obtained by him.

About 15 months ago I began tentatively to use calcium iodate in surgical practice as an antiseptic dressing in place of iodoform. For about the same time I have been using it, though to a less extent, in medical practice also. The results in both cases have led me to conclude that calcium iodate is a substance likely to prove of very considerable value both for external and internal use. Up to the present, however, my observations have been more particularly directed to its surgical applications. For the last six months or more I have used it without hesitation in all kinds of surgical work where iodoform is usually indicated and, I may say, to the almost total exclusion of the latter substance, and my belief in its efficacy has only increased with its continued use.

The theory of the action of calcium iodate as an antiseptic is not far to seek. It is an iodine compound containing 51 per cent. of iodine and in addition 16 per cent. of available oxygen. On contact with putrescible organic matter, whether in acid or in alkaline medium, like other iodates it slowly liberates iodine. In alkaline solution, while the organic matter is being oxidised by the oxygen set free from the decomposing iodate, the iodine by a reaction well known to occur in alkaline media slowly re-forms iodate through the decomposition of water. The iodate so re-formed in contact with another portion of putrescible matter yields further proportions of free oxygen and iodine to act as before, and so on. The process, therefore, is, so to speak, a continuous one As most pathological discharges are alkaline we have present in such cases the necessary conditions of the continuous action of an iodate. In an acid medium, also, in the presence of reducing substances such as easily oxidisable organic matter, iodine is liberated and by the decomposition of water it sets free oxygen which is used up in oxidising any unstable organic compound that may be present. The iodine in this case passes into hydriodic acid or an iodide and so eventually ceases to act. If, however, the acid present in a medium be hydrochloric—as, for example, in the gastric juice—chlorine, though not the only substance liberated, is certainly the one liberated in greatest abundance. Chemical equation shows that calcium iodate in contact with hydrochloric acid liberates as nearly as may be four-sevenths of its weight of chlorine On this fact theoretically depends its use as a gastro-intestinal antiseptic. As regards antiseptic action something no doubt depends on the chemical instability of iodates generally and of this iodate in particular, on the nascent action of the liberated products, and in this case on the fact that the base forms insoluble compounds such as carbonate and phosphate in contact with alkaline discharges, thus probably facilitating the free operation of the acid radicle of the salt, on which of course its particular virtue really depends

From this view of its action it is to be inferred that calcium iodate acts more as a destroyer of the products of bacterial life than as a bactericide of any very decided degree of potency. Of its inhibitory power on bacterial growth there cannot however, I think, be any doubt. It would thus closely conform to iodoform in its action. Further, the function of the salt as a deodorant, of which I have time and again had ample proof, can be easily understood as the result of its chemical action. Iodates decompose sulphuretted hydrogen, precipitating it in part as sulphur, in part oxidising it into sulphuric acid. As the fœtor of foul discharges is no doubt in many cases due to volatile sulphur compounds, if not actually to sulphuretted hydrogen itself, we naturally expect a similar action in their case.

To pass to the practical side, the substance itself is most easily prepared—in fact, it can be prepared by any dispensing chemist as follows: Prepare an aqueous solution of iodine[4] in potassium iodide. Dilute the same till it just transmits light through a depth of three inches. Stir up some bleaching powder with water and filter into iodine solution, with occasional stirring After a time a crystalline precipitate makes its appearance If it is not perfectly white, but some shade of brown or slate-grey, add more iodide of potassium and stir. Run in the bleaching solution to complete decolourisation of the iodine solution. Before collecting the precipitate add a small quantity of very dilute hydrochloric acid to dissolve any carbonate of lime that may have formed during the process Collect on filter, wash once or twice with cold water, and dry on blotting paper or in an oven at a temperature not much exceeding 100° C The product is $Ca(IO_3)_2 + 6\,H_2O$. The particular point to be attended to is to keep the iodide of potassium in excess during the precipitation. Part of the iodide is itself oxidised to an iodate and by double decomposition with the chloride of calcium present in the bleaching solution falls as iodate of calcium. By this particular action on an iodide in alkaline solution the quantity of iodide of potassium is gradually reduced and may thus in time become insufficient to keep all the iodine in solution. From this secondary reaction the yield of calcium iodate is always in excess of what might be expected from the simple oxidation of the quantity of iodine taken.

Iodate of calcium is without taste or smell, though a slight iodine odour may be detected on opening a bottle in which it has been kept for some time. At 11 5° C. I found its solubility to be about one in 380 parts of water. In solutions of even this dilution, however, it shows a wonderful degree of potency in inhibiting decomposition, in preserving food substances, and in checking fœtor, as the following examples will show (Examples 1 and 3 are practically repetitions of experiments by Sonstadt).

1. On March 21st, 1899, about two drachms of freshly passed urine were placed in an unsterilised test-tube and an equal quantity of a saturated solution of calcium iodate added to it. The mixture would thus contain about one part of iodate in 800 parts of the solution. A control was made in a similar test-tube by adding to the same quantity of urine its own bulk of distilled water. Both tubes were freely exposed to the air. At the end of a week the control stank abominably, while the tube containing the iodate was perfectly fresh and exhaled a somewhat aromatic odour which could not in any way be associated with urine. It continued to exhale the same pleasant odour and appeared perfectly sweet and clear up to June 26th when the experiment was brought to an end by an accident to the tube. A similar experiment by Sonstadt, where, however, the dry salt had been added to the urine, would indicate the possibility of its potency extending over a much longer interval. Another experiment

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[1] Chemical News, 1872, vol xxv, p. 167.
[2] Ibid, p. 242
[3] Ibid, vol. xxviii, p 297.

[4] The iodine is not necessary. A solution of potassium iodide may be used alone, the iodine being set free by the bleaching solution and dissolving in the excess of iodide.

went to show that even in the proportion of about 1 in 7000 parts the decomposition of urine was markedly delayed by calcium iodate.

2. One and a half ounces of milk taken directly from the house supply had one and a half grains of iodate added to it. It was then allowed to stand freely exposed to the air for five days. At the end of this time it was found to be perfectly sweet and palatable and was drunk with impunity.

3. A piece of meat was suspended in a saturated solution of the salt and was found perfectly fresh at the end of a fortnight.

4 Half an ounce of exceedingly fœtid pus from an empyema which had burst through the diaphragm and was burrowing between the anterior abdominal wall and its peritoneal lining was shaken up with a few grains of the dry salt. In ten minutes the foul odour was all but discharged though only a small portion of the salt had evidently dissolved. An hour later the pus to which the iodate had been added was filtered in the open laboratory without its presence being indicated by any objectionable exhalation.

The result of these experiments certainly gave promise of the substance being of use in surgical work and actual trial has in my hands amply confirmed the anticipation. The following cases, which are necessarily somewhat briefly described, are to be looked on as types of the several classes of cases in which calcium iodate has been used with success rather than as isolated individual cases where it was tentatively employed. A summary embodying the general results in the several classes is appended in each case.

CASE 1.—A man, aged 45 years, was admitted into hospital with old cavities of his right apex, a systolic apical murmur, rheumatic pains in his joints, and slight continuous fever. On the day after his admission his breath was observed to be very fœtid. A saturated solution of calcium iodate was ordered as a mouth wash. Next day, after a couple of washings, his breath was found to be quite sweet and it remained so with only occasional use of the solution during the two months that he was in the hospital. In many other cases of fœtid breath, no matter what the cause, the solution has been used with a like result In alveolar abscess, in carious teeth, in suppurative or follicular tonsillitis, and even in diphtheria, it has been found to inhibit the accompanying fœtor. In more than one case of follicular tonsillitis I have seen it exert a beneficial effect on the primary disease, while in all septic conditions of the mouth cavity I have found its use invaluable. Its absolute tastelessness is a recommendation when so used. The dry powder mixed with a due proportion of prepared chalk or other suitable diluent is suggested as a convenient antiseptic dentifrice.

CASE 2.—A woman, aged 28 years, was admitted into the hospital with a poisoned wound of the leg resulting from a kick over the tuberosity of the tibia. The leg was red, swollen, and œdematous from the ankle to some distance above the wound. The wound was washed out with the saturated solution, and ointment of vaseline (five grains to the ounce) applied on lint was used as a dressing. Next day the redness round the wound had contracted to an areola of the size of half-a-crown, and healing thereafter took place as in a simple wound. The same patient had sores, evidently specific in character, about the size of a florin, on one wrist and on the side of her neck. To these the same dressing was applied with the result that they were quite healed when she left hospital on the ninth day. Many cases of poisoned wound have been similarly treated, with this difference, that latterly I have freely powdered the wound with the dry salt after washing with the saturated solution. In every case this treatment has been perfectly successful.

CASE 3.—This patient was a woman, aged 45 years, who exhibited caries in the lower third of the femur with numerous healed sinuses, as well as discharging sinuses, some of the latter reaching to near the ankle. A huge one opened just to the inside of the patella and looked very foul and angry. The leg generally was very much swollen, red, and tender in parts from the seat of the disease downward. As no operation for the erasion of the carious focus was allowed the sinuses were syringed out daily with saturated solution and their openings were dressed with ointment containing 10 grains to the ounce applied on lint. By the fifth day the discharge of pus from the sinuses had practically ceased and all signs of inflammation had vanished. The patient left the hospital on the eighteenth day temporarily, at least, much improved. In several cases after erasion of carious bone, particularly where it was necessary to leave some extent of surface to heal by granulation, I have found the dry powder an excellent dressing. No hyper-granulation is observed after its prolonged use The astringent character of the carbonate and phosphate of lime resulting from the decomposition of calcium iodate on the wound surface is probably largely responsible for this result. In this respect a striking difference obtains between it and iodoform.

CASE 4.—A man, aged 60 years, was admitted with deep ulcers on the front of each leg. In the case of the right leg the ulcer was of about the size of a crown piece. On the morning of admission a vein from which he had lost a considerable quantity of blood had burst at the edge of this ulcer and led to his being sent into hospital. Nearly a square inch of the periosteum of the tibia was visible at the bottom of this ulcer. On the left leg the ulcer was somewhat larger in superficial extent but not quite so deep. Both were surrounded by unhealthy dark eczematous skin, much of it evidently the scar tissue of previous ulcers from which he said he had suffered off and on for 20 years. The ulcerated surfaces were washed daily with saturated solution and dressed with ointment on lint (five grains to the ounce). After a few days of this treatment healthy granulations had sprung up over both ulcers and the discharge from their surfaces was almost *nil* The patient left the hospital four weeks to the day from the date of his admission with both ulcers practically healed. When seen as an out-patient a week later the skin was continuous over both. No skin-grafting of any kind was done to assist the healing process. A considerable number of ulcers of the leg have been similarly treated, the ointment being mostly, however, 10 grains to the ounce; indeed, the very first case in which calcium iodate was used was a large serpiginous ulcer of the leg in a private patient To this ulcer *lotio nigra* had been applied from time to time with somewhat indifferent success, but after the application of the iodate (10 grains to the ounce) it healed perfectly in three weeks. Another female patient who had suffered from time to time with large and somewhat intractable ulcers of the leg was so pleased with the result in her own case that she had boxes of the ointment made up by a local chemist and presented to some of her friends who were similarly affected.

CASE 5.—In a case of otorrhœa of two years' standing in a child, aged four years, the ear was syringed out with a warm saturated solution and was afterwards insufflated with a powder composed of iodate of calcium and carbonate of bismuth in proportion of one to nine The discharge, which was very fœtid, ceased on the fifth day of treatment, but recurred some time after the cessation of the treatment. In an adult case the fœtor of the discharge was inhibited and the quantity was very much diminished by similar treatment for a fortnight. Latterly, in such cases, I have insufflated the pure powder with correspondingly more successful results.

CASE 6.—A young woman, aged 21 years, presented herself as an out-patient with a sinus on the side of the neck. A tuberculous gland had been excised in a hospital at Edinburgh and she simply came to us for dressing. After ten days' treatment on the lines indicated without improvement she was admitted into the hospital and under chloroform the upper part of the sinus was laid open and curetted. It was found to extend deeply in an upward direction from the opening for one and a half inches and downward and inward behind the sterno-mastoid for two and a half inches. Only the upper one and a half inches were curetted. The raw surface was dusted freely with calcium iodate and allowed to granulate. This it did slowly but effectively and at the end of two months it had entirely healed, a narrow linear scar not distinguishable from that left by a simple incision marking the site of operation. This case is interesting as the first in which pure iodate was applied directly to an operation wound. The first application to a raw surface—as seen at the first dressing—leaves a very fine white adhesive scum, probably consisting largely of carbonate and phosphate of lime, over the incised surfaces. This disappears in a day or two and healthy granulations take its place. It is also interesting to note that in none of the tuberculous cases so treated have any of the livid granulations so characteristic of such cases been at any time seen.

In a few cases it has seemed to me that the saturated solution shows a particular tendency to check pus formation.

CASE 7.—A woman, aged 35 years, had intercurrently with a medical ailment a deep abscess of the axilla. On opening it continued to discharge for some days very offensive pus. After two washings out with iodate solution the fœtor was completely discharged. The formation of pus ceased and healing took place with unexpected rapidity. Again, in two cases of amputation of the thigh—one (Case 8) for tumor albus in a woman, aged 62 years, the other (Case 9) in a youth, aged 17 years, after a severe compound comminuted fracture of the femur, where abscesses had formed in the stumps during the second week after operation—it was also used with marked advantage. In the former case the suturing broke down rather extensively, partly owing to pus formation and partly owing to sheer deficiency of reparative power. A large granulating surface resulted which was daily syringed with the solution and afterwards dusted with the powder with total inhibition in a few days of all pus formation. The case eventually did well, healing proceeding slowly by granulation. In the other case a small suppurating sinus was closed in a few days by treatment on similar lines.

One of the preliminary experiments suggested the possibility of its being of use for washing out the septic bladder, and accordingly it has been so used in a few cases, with advantage in all and perfect cure in at least one. At the present moment it is being used from time to time in a case which has been demonstrated by the finding of tubercle bacilli in the urine to be one of tuberculous disease of the bladder. The symptoms have certainly improved under its use, but a reasonable doubt may be entertained of its being of any permanent benefit in such cases.[5] The solution has also been used as a vaginal douche and inhibited pus formation in a case of purulent vaginitis of some months' standing. It has also been ordered in chronic urethritis as an injection with satisfactory results. In some cases of eczema, probably those of specific type, it has done well when applied in ointment. In two cases in private practice, however, it proved slightly irritative. These have been the only cases observed in which its use has been in any way disadvantageous. In a large number of cases of injuries of the hands, such as lacerated, incised, or poisoned wounds, in whitlows of all degrees of severity short of actual bone necrosis, and in compound fractures of the phalanges, it has been used with complete success in the dry powder.

Speaking generally, I may say that calcium iodate has been used in almost all cases where iodoform is commonly used. I have not, however, applied it to the cut surfaces of amputation flaps though I have in several cases freely powdered the sutured edges after minor operations for diseased conditions. In all operations where surfaces are left to granulate, such as after curetting, I have used it in powder dusted straight on to the cut surface. In no case when so used has there been the slightest evidence of any irritative or toxic effect. Even children do not complain of any smarting after its use. Adults when questioned reply that it smarts a little after the first one or two applications of it to a raw surface, but after the formation of granulations its application is perfectly painless. Its advantages as compared with iodoform may be summarised as the absence of smell in the substance itself, the checking of fœtor, the prevention of hyper-granulation, and the inhibition of undue formation of pus. Further, it can be used where iodoform is inadmissible—for example, in aqueous solution for such purposes as a gargle or mouth-wash, for washing out the bladder, vagina, or uterus, &c.

Regarding its internal uses I have up to the present had less chance of testing its properties, but personally I can testify to its efficacy in checking fermentative changes in the stomach. I have frequently taken two grains and sometimes repeated the dose a second and even a third time during the same day without inconvenience and always with marked relief of the symptoms. It leaves a slight metallic taste in the mouth after the first few exhibitions, but this is not observed after a time. On the day after a dose of two grains there is a feeling of essential well-being accompanied by increased appetite. For this reason I am inclined to think that apart from its antiseptic action the salt really possesses some tonic properties. Sonstadt, I may say, took as much as 15 grains at one time with only "a slight headache next day, an increased appetite, and generally such effects as might follow an ordinary dose of quinine." He also alleges that he saved himself from an attack of typhoid fever by the timely administration of about a decigramme (one and a half grains) of the salt. This, coming from a layman and nearly 30 years ago, may be taken for what it is worth, but in typhoid fever we have just the conditions under which we might expect its successful use. The fact that the substance liberates chlorine when in contact with hydrochloric acid favours the idea, but I regret that up to the present I have had no opportunity of testing it in this direction, cases of typhoid fever being of notoriously rare occurrence in this neighbourhood.

When ordered for internal administration I should recommend the exhibition of the drug in solution. I have myself experienced—and others have spoken to the same effect—a feeling of heat at the epigastrium after swallowing the dry salt. Sonstadt's maximum dose of 15 grains may be set down as a long way in excess of any possible requirement, and three or four grains may be stated as a fair average dose for an adult.

In conclusion, I may say that during the experimental stage the substance was known by the provisional name of "Calcinol" and that the total supply was prepared by myself or latterly made for me by the local chemists according to the directions already given.

Elgin.

[5] All symptoms have been in abeyance, the urine continuing acid since August 5th, when the bladder was last washed out.

CIRCUMCISION AS A PREVENTIVE OF SYPHILIS AND OTHER DISORDERS.

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> "*The prepuce is an appendix to the genital organs the object of which I could never divine; instead of being of use it leads to a great deal of inconvenience, and the Jews have acted kindly in circumcising their children, as it renders them free from one at least of the ills to which flesh is heir.*"—RICORD.[1]

I HAVE no new fact to disclose or theory to propound. The burden of my theme is this: that if it were possible to secure the efficient circumcision of every male in infancy not only would many of the disorders incidental to the genito-urinary organs in childhood, adolescence, and adult life be prevented, but also—a fact of far greater importance—that the incidence of that scourge of humanity, syphilis, which in its ever-varying phases permeates all classes of society at every period of life, would be materially diminished. When, however, one becomes the advocate for the universal practice of an operation which has for its object the wholesale removal of a certain healthy structure as a preventive measure, the results of which, far reaching though they be, can only be looked for in the more or less dim and distant future, one will naturally be expected to adduce good evidence not only that the results justify the operation, but also that the operation is justifiable. In other words, it is necessary to show: (1) that the operation is free from risk; (2) that the deprivation of the structure which it is proposed to remove will not inflict any physical disability on the individual; and (3) that the benefits which are likely to accrue are substantial and commensurate with the sacrifice. The questions which arise out of these propositions I shall endeavour to answer *seriatim*, but as briefly as possible.

1. *Is the operation safe?*—Most of those who are competent to judge, I take it, will agree with the statement that, given a healthy child in the hands of a competent surgeon who adopts every precaution which modern surgery demands, the operation of circumcision is attended with such infinitesimal risk that for all practical purposes it may be considered to be safe.

2. *Does the operation interfere with the physical well-being of the individual?*—From a sanitary point of view it can hardly be gainsaid that the removal of the prepuce is a decided advantage, the permanent exposure of the glans rendering that organ more cleanly and more readily cleansed. But it has been urged as an argument against the universal adoption of circumcision that the removal of the protective covering of the glans tends to dull the sensibility of that exquisitely sensitive structure and thereby diminishes sexual appetite and the pleasurable effects of coitus. Granted that this be true, my answer is that, whatever may have been the case in days gone by, sensuality in our time needs neither whip nor spur, but would be all the better for a little more judicious use of curb and bearing-rein. That circumcision is

[1] Quoted by Watson, Edinburgh Medical Journal, vol. xviii., p. 752.

no bar to procreation is well exemplified by the fact that the Jewish race, who have practised universal circumcision from time immemorial, still survive and show no sign of ceasing to increase and multiply. The Mahomedans,[2] again, among whom the practice is as common as among the Jews, certainly do not seem to suffer from any lack of virility. On general grounds, then, it is safe to conclude that circumcision not only does not interfere with the physical welfare of the individual but that from several points of view it is a positive advantage.

3. *Does the end justify the means?*—It would be sheer waste of time for me to dilate here at any length on the evils which arise from a long, adherent, or constricted prepuce. The effects of these conditions—including as they do dysuria, enuresis, urinary retention, balanitis, constriction of the glans, hernia, rectal prolapse, difficulty in sexual intercourse, aggravation of gonorrhœa, a liability to contract evil habits, together with a whole host of nervous symptoms, more or less severe, which follow in their train—are, or should be, well recognised. Every surgeon knows how readily these conditions can be relieved—and if relieved then prevented—by circumcision.

But if these were the only troubles which it was sought to obviate by the practice which I am advocating, I fear that it would find but few adherents, as, no doubt, these ailments can be effectually dealt with as they arise. Unfortunately, however, the matter does not end here, and the prevention of these ailments, although a matter of no small importance, sinks into insignificance in comparison with the great result which it is sought to attain—namely, the prevention of syphilis This is the point to which I wish to direct special attention, and the remainder of this paper will be devoted to adducing what evidence I can to prove that the universal practice of circumcision would have the effect of reducing the case-incidence of syphilis in a substantial degree.

Before going into details I should like to refer very briefly to the general effects produced by the changed anatomical relations of the parts which exist after circumcision. Under normal conditions the prepuce covers the glans like a hood and consists essentially of a reduplicated fold of skin, the outer surface of which is continuous with the general tegumentary covering of the penis, while the inner or inverted surface is continuous with the skin covering the glans, forming the retro-preputial fold behind and the frænum below. After circumcision the glans is exposed, the retro-preputial fold is everted and obliterated, and the frænum, if the operation is efficiently performed, ceases to exist. Thus the various pocket-like folds which formerly existed around the glans and favoured the retention of secretion are smoothed out, and thereby the risks of irritation and excoriation, as well as the implantation of disease germs, are reduced to a minimum. Again, the dry, somewhat thickened, condition of the epithelium of the glans which is observed after circumcision, due no doubt to the combined effects of exposure to the air and slight friction of the clothes, offers an additional barrier to any local infection. Indeed, anyone who has taken the trouble to compare the dry, pink-parchment-like, cleanly appearance of the glans of the circumcised with the sodden, swollen, uncleanly structure which is frequently presented to view when the prepuce of the uncircumcised is retracted cannot fail to have been struck by the contrast. In the latter case the space between the prepuce and the glans forms the very *beau ideal* of a place for the implantation and multiplication of bacteria of all kinds, the pent-up secretions furnishing them with an efficient nutrient medium in which to grow, the heat and moisture favouring their development, and the excoriations which are so liable to exist forming a ready means whereby their products may gain access to the general circulation. But my readers will expect me to bring forward more tangible proofs than vague general inferences.

Although it seems to be the prevalent opinion that syphilis is less common among the Jews actual statistics are few. Jonathan Hutchinson,[3] however, gives the following analysis of 330 cases of venereal disease among hospital patients, about one-third of whom were Jews.

—	Total venereal cases.	Gonorrhœa	Syphilis.
Not Jews	272	107	165
Jews	68	47	11

This table serves to show not only that the incidence of syphilis is far less frequent among the Jews but that the incidence of gonorrhœa is far more frequent, thus clearly proving that their comparative immunity from syphilis is not due to their excessive morality, but rather, in the absence of any other reason, to circumcision.

My own experience completely bears out the idea that syphilis is less prevalent among the circumcised, although unfortunately I have no figures to adduce. During the three years in which I served as surgeon to the Peninsular and Oriental Steam Navigation Company I never remember to have seen a primary syphilitic chancre among the Lascar crew, who being Mahomedans are circumcised to a man, while among the Sedi boys, who for the most part grow long foreskins, primary sores were not uncommon, nor were the European crew exempt. Other venereal diseases were prevalent among the Lascars, so that their immunity could not be ascribed to any greater morality on their part. I was much struck at the time by the apparent immunity of the Lascar to syphilis, and could only ascribe it to his having the good sense to follow the example of the Prophet and be circumcised.

Granted for a moment that universal circumcision is likely to cause a reduction in the case-incidence of syphilis, the next question to be considered is what amount of reduction is likely. For obvious reasons the vast majority of primary syphilitic lesions (according to Julien[4] about 94 per cent.) occur on the genitals, and all observers from the time of John Hunter[5] onwards are agreed that in the male the seat of election for the primary sore is the prepuce. As to the part of the prepuce which is most commonly affected there seems to be some divergence of opinion, some giving the inner surface of the prepuce and others the retro-preputial fold the precedence. According to Jonathan Hutchinson[6] "the most frequent position for chancres is the prepuce (reverted) just behind the corona ('the furrow')."

To show the relative frequency with which the primary lesion occurs on the prepuce, as compared with primary genital lesions in the male occurring elsewhere, I append the subjoined table which I have compiled from the statistics of three well-known observers.

Observer.	Number of initial lesions.	Number on the prepuce and furrow.	Percentage on the prepuce and furrow.
Fournier[7] ...	423	314	74·2
Clerc[8]	325	234	71·6
Berkeley Hill[9]	150	111	74·0
Total	898	659	73·3

Probably the veriest enthusiast would hardly claim that the whole of this 73·3 per cent. of genital chancres in men could be prevented by circumcision, however skilfully performed or however universal. Most, however, would be inclined to admit that it would be possible to prevent practically all chancres occurring on the prepuce proper and a variable number of those at the retro-preputial fold (furrow). Unfortunately, in the statistics of Fournier and Clerc quoted above these two classes are massed together and no conclusion can be drawn as to their relative frequency. Of Berkeley Hill's[10] 150 cases, 70, or 46·6 per cent, occurred on the prepuce proper, and Jonathan Hutchinson, jun.,[11] out of a series of 125 genital chancres found that 25 per cent. occurred on the prepuce. While the former estimate is probably considerably above the average the latter is possibly somewhat below. Taking, however, the lower percentage as correct, one may conclude, according to the above statistics, that the universal practice of circumcision should reduce the case-incidence of genital syphilis in the male by something between 25 per cent. and 73 per cent, or, taking a mean of these, by 49 per cent. But, striking as these figures undoubtedly are, they by no means represent the whole result.

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[2] Popular Encyclopædia. article, "Circumcision."

[3] Medical Times and Gazette, Dec 1st, 1855.

[4] Julien, who collected statistics from various authors of 19 syphilitic chancres, found that 126 were extra-genital, or over 6 per cent. Quoted by Bronson, "System of Genito-Urinary Diseases," edited by Morrow, 1894, p 83.

[5] A Treatise on Venereal Disease, edited by Everard Home, third edition, 1810, p. 231.

[6] Syphilis, 1889, p 96.

[7] Leçons sur le Chancre, p 364.

[8] Maladies Vénériennes, 1866, p. 97.

[9] Syphilis and Local Contagious Disorders, 1881, p 87.

[10] Ibid.

[11] THE LANCET, June 2nd, 1900, p. 1575.

Everyone who suffers from syphilis in its infectious stages becomes a potential focus of infection and a source of danger to others. Conversely, every case of syphilis prevented becomes a potential source of prevention and a safeguard to others. Thus circumcision may not only confer a benefit upon the circumcised but also on others with whom he may come in contact. Unfortunately, it is quite impossible to bring any direct numerical evidence to bear upon this point, but a hypothetical case, based on a very moderate computation, will serve to show how in a very short space of time one focus of infection may grow into several hundred. Take, for example, a man with a syphilitic chancre on the prepuce; in all probability he will sooner or later infect some woman, who, if he be single, is likely to be of the prostitute class Supposing this to occur, the woman, in all human probability, will in due course infect several other men, who, in their turn, will infect as many women, each of whom again is likely to infect several more men, and so on, the disease being spread and the numbers increasing with alarming rapidity. When one considers that the primary source of infection might have been prevented by circumcision, and that the whole series of cases which have been assumed to follow in its wake each in their turn become fresh sources of infection, capable under favourable circumstances of producing like results, it becomes impossible to estimate the number of cases which might be prevented by circumcision, if universally practised. All that can be said is that if the immediate effects are great the remote effects must be far greater

But, again, the matter does not end here. In syphilis it is not only the guilty who suffer, but the innocent suffer with the guilty and the sins of the fathers are in very truth visited upon the children. Deplorable as such a state of affairs may be, it is nevertheless far from uncommon for a married man to infect his innocent wife, and through her his offspring which is yet unborn. Is there any direct evidence to show that the practice which I am advocating will materially diminish this massacre of the innocents? Fortunately there is. Jonathan Hutchinson[12] found that out of 97 female hospital patients who came under his observation in one year for venereal disease 92 were Christians and five were Jews. Of the former 61 were married, and at least two-thirds of these had apparently contracted syphilis from their husbands. Again, the same observer[13] found, out of 252 children under five years of age who came under his care in the course of a year, 179 Christians, giving 27 cases of congenital syphilis, and 73 Jews, giving only three cases of congenital syphilis. These statistics clearly show an enormous reduction in the case-incidence of syphilis among the women and children of the circumcised Jews, and in view of what has already been said the only deduction which can reasonably be drawn from their study is that if the practice of circumcision were to become as general among Christians as it is among their Jewish brethren a proportionately great reduction of the case-incidence of syphilis would take place among their women and children In other words, a not inconsiderable number of innocent women and children would be spared the indignity of being doomed to suffer, through no fault of their own, from a loathsome and lifelong disease—a no mean result, whether considered from a sentimental or practical point of view, and one which, in the absence of any other reason, should amply prove that "the end justifies the means"

Before concluding, however, I should like to say a few words about the operation itself. Simple as the operation is, certain details must be observed in its performance if the result is to be successful for the special purpose which one has in view. It must ever be borne in mind that the special object to be attained by circumcision as a preventive of syphilis is not only the removal of the prepuce, but, as far as possible, the obliteration of all folds about the glans. The advice usually given to the novice is to be careful not to remove too much skin. Consequently too little, rather than too much, is often removed. The result is that the retro-preputial fold still persists, a matter of some moment from the present point of view. The incision should be made in such a way as to be oblique from above downwards and forwards, and slightly concave forwards so that when the skin retracts it may sit snugly behind the corona. In other words, the plane of the incision should be as nearly as possible parallel to the plane of the corona. The reflected layer of the prepuce—the so-called mucous layer—which has been left untouched by the first incision, should, after being slit up and reverted, be carefully trimmed around the corona glandis in such a way as to allow the cut edge to come neatly into contact with the cut edge of the part first removed. A wedge-shaped piece of the frænum should always be removed. By so doing the folds which exist on either side are obliterated and the œdematous nodule which is liable to form at this point is prevented All rough and unnecessary manipulation is to be avoided, as, the cellular tissue being very loose, œdema is easily produced, which not only retards healing but becomes a source of anxiety to the child's friends. Whether my premisses are correct and my deductions sound I must leave others to judge. If they be so, then it becomes the imperative duty of everyone who is cognisant of the facts to exert his influence for the benefit of humanity at large by securing, as far as possible, the efficient circumcision of every male child who comes under his notice. For my own part I am convinced that any community among which syphilis is rife and which imposes upon itself the obligation to circumcise every male child who appears in its midst will confer a great and lasting benefit upon its members, both present and yet to be, at an infinitesimal outlay

Beaumont-street, W.

ON A NEW METHOD IN THE DISCISSION OF SOFT CATARACTS.

BY PERCY DUNN, F.R.C.S. ENG.,

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THE present-day method of treating soft cataracts by discission is to use a very fine cataract needle, to make a small incision in the capsule of the lens, to employ care not to break up the lens substance too freely, particularly to avoid allowing any of the aqueous to escape during the procedure, and, in short, to aim at securing a gradual absorption of the soft lens matter from the anterior chamber. The effect of this gradual absorption is that some months generally have to elapse before the process is completed. Occasionally, moreover, it happens that the operation has to be repeated owing to the process of absorption having been arrested by the cicatrisation of the capsular wound. Thus further time is lost before the whole lens matter is absorbed and the object of the operation is attained. The disadvantage of this loss of time is obvious, but the procedure has another drawback. There is the possible risk of the swelling of the lens, caused by the imbibition of the aqueous, giving rise to increased intra-ocular tension, necessitating further and immediate interference.

Reflecting, therefore, as I have done for some time, upon these facts, it seemed to me that the operation of discission as practised in the present day by no means fulfilled the requirements of the surgeon and that it was capable of improvement. As a matter of fact, the point upon which the present method of discission wholly hinges is that of the fear of causing glaucomatous symptoms by a too free disturbance of the lens substance It is clearly for this reason that only a limited incision is made in the capsule and care is exercised to secure that only a small quantity of soft lens matter shall escape into the anterior chamber at a time.

The first consideration, then, which seemed to demand attention was how to deal with this risk of the occurrence of increased tension The solution of the problem quickly presented itself. All that was necessary in order to meet the difficulty appeared to be to allow the aqueous to drain away from the anterior chamber before withdrawing the needle. The conclusion is plain that with the aqueous removed any further rapid swelling of the lens would be impossible, and with the globe in a condition of minus tension owing to the loss of the aqueous the subsequent restoration of the anterior chamber would necessarily depend upon the degree of swelling of the lens which was present and upon the amount of soft lens matter which was free and ready for absorption. To put the same matter differently, it is reasonable to conclude that the condition of the lens after the needling would determine the degree of the restored tension.

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[12] Medical Times and Gazette, Dec. 1st, 1855.

[13] Ibid.

With a swollen lens the aqueous would probably only be re-secreted to the amount which was needful to restore the tension to the normal, and thus it might come to pass that part of the latter might be due to the swollen condition of the lens and the presence in the eye of broken-down soft lens matter, and part to re-secreted aqueous. For this reason, therefore, it is not possible to conceive that glaucomatous symptoms could arise under these circumstances—that is to say, after the aqueous had been allowed to escape at the time of the operation. This assumption is based upon the fact that the intra-ocular tension of a healthy eye is regulated by its requirements; in other words, the lower the tension the greater is the secretion of aqueous, the higher the tension the less the secretion. Thus, assuming these premisses to be correct, three advantages could be claimed for this new method of procedure: (1) the avoidance of the risk of causing increased tension; (2) the possibility of freely breaking up the lens; and (3) the rapid absorption of the soft lens matter.

But, again, a lowered tension must imply a more rapid circulation of fluid through the eye, and it is precisely that condition of affairs which is most to be desired in cases of discission, for the more rapid the circulation of the intra-ocular fluid the more rapid must be the absorption of the soft lens matter. Quite possibly the slowness of the absorption following the present-day method of discission is partly, if not greatly, due to the persistence of a slightly raised tension which causes the circulation of the intra-ocular fluid to be a leisurely process.

It was not long before the opportunity occurred to me of putting these conclusions to the test. The case was that of a child whose right lens I had needled some months previously for congenital cataract. Only one needling was necessary, but at least three months elapsed before the pupil was black. The operation upon the left lens was considerably delayed owing to the supervention of an attack of scarlet fever. When, however, the child had made a good recovery from this, I proceeded to operate upon the second eye as follows:—

Chloroform having been administered I took a broad, instead of a fine, cataract needle, and the pupil being well under atropine, I passed the former into the anterior chamber and the lens, making a vertical and horizontal incision in the capsule. I then freely broke up the lens and afterwards withdrew the needle until the point only remained in the anterior chamber. Next, I partly turned the needle *on its axis, by which I allowed all the aqueous to escape* slowly from the eye. The globe and conjunctival sac were thoroughly douched with chinosol (1 in 4000); some drops of atropine of the strength of two grains to the ounce of water were instilled, and a pad of chinosol gauze and a bandage were applied. The result of the operation was as follows. There was no reaction; in four days' time the pupil was quite black, and all that was left of the lens was a small quantity of soft lens matter lying at the bottom of the anterior chamber. After the lapse of 14 days there was merely a trace of this lental remnant to be seen.

The above facts speak for themselves. They show, I think, that the rapid absorption of soft lens matter from the anterior chamber is only possible when the intra-ocular tension has been reduced by the removal of the aqueous.

A word may now be said regarding the possibility of any untoward effects following the evacuation of the aqueous under these circumstances. The first and only complication which suggests itself is that of iritis, and it might be supposed that in the event of its supervention its origin would be due to mechanical irritation caused by the presence of the broken-up lens matter. But the doctrine that mechanical irritation *per se* can excite inflammation anywhere in the tissues is not one which, in the present day, receives support from scientific testimony. I cannot, therefore, conceive how iritis could occur in these cases unless there was a failure to secure strict antisepticism at the time of the operation.

Some confirmation of the expediency of allowing the aqueous to escape in the discission of soft cataracts occurs in many cases of extraction operations for senile cataract. In these cases no difficulty is experienced in obtaining the fairly rapid absorption of the lental débris which it has been found impossible to remove after the extraction of the lens—a result which, I believe, must be chiefly due to the lowered tension in the eye caused by the necessary steps of the operation.

Wimpole street, W.

A CASE OF HYDATIDS PRIMARILY AFFECTING THE LUNG.

By JULIUS CÆSAR, F.R.C.S. IREL., L.R.C.P., L.R.C.S. EDIN.

THAT hydatids primarily affecting the lung are exceedingly rare is evidenced by the very brief reference made to them in those works which discuss the matter, some writers stating that they are hardly ever met with and others ignoring the subject altogether. Mr. Norman Porritt in his work on "Intra-Thoracic Effusion" gives but one case.

That the following case was one of hydatids originating in the lung will, I think, be beyond dispute after a consideration of the following facts. 1. The liver was of normal size. 2. The hydatids could not have originated in the pleura, as had they done so, according to Dr. Clifford Allbutt, the costal and pulmonary pleuræ would have become fused, but I was able to sweep my hand round the inter-pleural space. 3. There was no discoverable communication between the abdominal and pleural cavities. 4. I found the growth springing from, or attached to, the base of the lung. There was nothing in the history of the patient to suggest the source of the infection beyond the fact that some six years ago she was laid up for about nine months with what her medical attendant stated to be blood-poisoning from drinking foul water. She never lived where dogs were kept (i.e., kennels) or out of England. She was said to have complained for some years of a pain in her right side, but this was not severe enough to induce her to seek advice for it.

The patient first came under my care in July, 1900, complaining of vomiting, diarrhœa, and severe pains shooting across her abdomen. By the end of a week these had completely subsided and she resumed her domestic duties and continued to perform them up to August 10th, when she was suddenly seized with a recurrence of these symptoms and in addition she complained of shortness of breath and of expectoration of a clear viscid fluid. Her respirations were 36, her pulse was 94, and her temperature was 98° F. Auscultation revealed nothing to account for the dyspnœa and percussion only doubtful dulness at the base of the right lung. Vocal fremitus and vocal resonance were normal. On the 11th the patient was in much the same *state except that the bowels were more relaxed; the expectoration* was, if anything, more viscid and was accompanied on two occasions by a distinct streak of blood which showed no inclination to spread. On the 12th she had a very bad attack of dyspnœa which lasted for a few hours and then subsided. The pain was decidedly more localised to the right side. The vomiting had ceased and the bowels were less relaxed. On the 13th her breathing was much easier but the expectoration continued and looked like the partially coagulated white of an egg. The dulness was more definable. The respirations were 30, the pulse was 80, and the temperature was 98°. On the 14th she was much the same; the bowels acted normally. For the next three days her state did not materially change except that she had to be propped up in bed to assist her breathing and the dulness had become more marked and the dyspnœa more frequent. She had no bad attack of dyspnœa on the 18th, but she could not lie down because of the cough and the expectoration. The latter had become very viscid and was always accompanied by the streak of blood. The dulness reached to within two fingers' breadth of the inferior angle of the scapula, below which point vocal fremitus and vocal resonance were abolished. The respirations were 40, the pulse was 86, and the temperature was 98°. She had a very bad day and night on the 19th, the dyspnœa, cough, and expectoration being incessant and quite prostrating her after each attack. The temperature rose to 99°, which was the highest point it had as yet attained. The symptoms having undergone no improvement since the 19th, on the 20th I tapped the thorax at the ninth interspace a little behind the axillary line, and withdrew about two and a half ounces of pale sherry-coloured gelatinous substance which the microscope showed to be broken-down hydatid cysts without hooklets. During the operation the patient's breathing became much embarrassed and she nearly fainted. On the 21st the tapping did not appear to have afforded her relief. Her temperature rose to 100° and fine râles were heard in front just below the right nipple.

As the surroundings of the patient were not conducive to her comfort or the success of an operation I advised her to go into the union infirmary, but she put it off from day to day until Sept 6th when she was admitted. In the meantime her condition had gone from bad to worse; her strength began to fail, the râles in her lung to get louder and coarser, and she expectorated yellow phlegm. The temperature was 100°, the respirations were 40, and the pulse was 90. On the 9th I was about to make an incision in her side in hopes of giving her at least temporary relief, but her breathing became so embarrassed that I was obliged to desist. Her temperature on this day reached its highest point (101°) and remained at that point until her death on the 11th.

Twenty-four hours after the patient's death I made a restricted post-mortem examination, as I could not get permission to do more. I opened the chest through an incision along the ribs and through the attached diaphragm I examined the seat of entrance of the trocar and found no trace of it on the inside; but about a pint and a half of a yellow gelatinous fluid, consisting partly of cysts varying in size from a threepenny piece to that of a five-shilling piece and looking like nothing so much as slightly yellow-tinged jellyfish, with a little pus towards the end, flowed out.

I think there are several points of interest in this case, apart from its rarity, as regards diagnosis: 1. The very low temperature, which was never above 100°, up to within a couple of days before death. 2. The character of the expectoration with the well-defined streak of blood. 3. The intermittent and severe dyspnœa. 4. The diarrhœa. 5. The fact of the patient having years before suffered from drinking foul water. Dr. Clifford Allbutt in his "System of Medicine" refers to all these points as being characteristic, and I think they go a very long way towards differentiating it from pleurisy with effusion or empyema, and its being confined to one side would, I think, be sufficient to exclude hydrothorax.

Minster, Sheerness.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF PUERPERAL FEVER SUCCESSFULLY TREATED WITH ANTISTREPTOCOCCIC SERUM.

By HERBERT E. WALLER, M.R.C.S. ENG., L.R.C.P LOND.,

AND

FRANCIS R. GIBBS, M.R.C.S. ENG., L R C.P. LOND.

THE patient, who was a primipara, 23 years of age, was confined on Nov. 25th, at 9 P.M. It was a difficult high forceps case, the presentation being occipito-posterior and the head not well flexed. The cervix uteri was torn in two places, but not to any considerable extent, and the perineum was ruptured. Two stitches were inserted and full antiseptic precautions were observed throughout. The patient suffered a good deal from shock, having been in labour fully 36 hours. A vaginal douche of solution of corrosive sublimate (1 in 2000) was given next morning. On the morning of Nov. 28th (the third day after delivery) the patient had a pulse of 120 per minute and a temperature of 102·8° F. She had had several rigors during the previous night; the uterus was tender, and the tongue was tremulous. An enema was given and was followed by a good action of the bowels. By night the temperature rose to 104° and the pulse was 180 and irregular, sometimes beating at the rate of 200 and only to be counted with certainty by using a stethoscope. The uterus was accordingly well irrigated with the same solution as before by means of a long channelled glass tube. The lochia were scanty and offensive. Tincture of digitalis in doses of five minims every four hours and brandy at the rate of six ounces in 24 hours were given. On the 29th the temperature was still 103·6° and the pulse was 150. She was taking her food well and appeared remarkably well throughout, a feature in itself by no means cheering. Another intra-uterine douche was given and the serum treatment was commenced, six or seven cubic centimetres of antistreptococcic serum being given in the morning as a first dose. 20 grains of sulphate of quinine were given in two doses during the day, some dizziness and slight deafness resulting. The bowels were loose during the day, being opened four times. In the evening the temperature was 103° and the pulse was 159. The skin was cool and moist. The uterus was again washed out and the perineal wound, which was sloughy, was painted with silver nitrate solution; 10 cubic centimetres of serum were injected and 15 minims of tincture of digitalis were given every four hours together with chalk mixture for the diarrhœa. Brandy was continued at the same rate as before. On the 30th the temperature was normal, but the pulse was still 120. 10 cubic centimetres of serum were injected, the uterus was washed out morning and evening, and the other treatment was continued as before, but with the omission of the quinine. In the evening the temperature was 99·4° and the pulse was 116. On Dec. 1st the morning temperature was normal and the pulse was 104, the evening temperature being 99·8° and the pulse 120. 10 cubic centimetres of serum were injected in the morning and a uterine douche was given morning and evening. The patient was drowsy throughout the day and it was decided to wait a day before giving a further injection of serum. There was no subsequent rise of temperature and recovery was uninterrupted. The injection of the antistreptococcic serum produced no local symptoms other than a slightly raised irritating erythema which occurred a few days afterwards and lasted only a few hours.

Previously we had tried the antistreptococcic serum on only two cases, both of which terminated fatally. One of these patients was a young woman suffering from puerperal fever who came under our care several days after delivery. She had been having uterine douches twice daily, but the antistreptococcic serum was not used till the third or fourth day after delivery, and did not seem to exert any influence. The patient preserved that characteristic absence of subjective symptoms which has been marked in every case that has come under our notice. A few days before her death, when her temperature was 106° F., she sat up in bed playing with the baby and professed herself "All right to-day, thank you" The other case was that of a man, aged 81 years, who had his superior maxilla, including the contents of the orbit, removed for sarcoma of the antrum. Hæmorrhage was very free and the actual cautery had to be used. The patient was a very hearty old man and stood the operation well, but, unfortunately, erysipelas set in in a few days afterwards. We tried the serum on the next day, injecting 20 cubic centimetres at first and 10 cubic centimetres daily afterwards, but no good seemed to result, and the injections gave rise to considerable pain locally, so the treatment was abandoned. The old man only survived a few days more.

The success in the treatment of the third patient (the case described above) was due, we believe, to the early injection of the serum, which was ordered by telegram from, and sent immediately by, Messrs. Burroughs and Wellcome. It will be observed that the first douche produced probably no effect, as the fall in temperature from 104° on the evening of Nov. 28th to 103·6° on the morning of the 29th was, perhaps, only natural. The first dose of serum, accompanied by a douche, produced a slight effect—namely, a fall in temperature from 103·6° in the morning to 103° at night. The second dose (and douche) produced a fall in temperature from 103° at night to normal in the morning, and under continuance of the treatment the temperature did not again reach 100°. No bacteriological examination of the blood was made, but the symptoms of the onset of the malady were as well marked as in any case which we have been unfortunate enough to witness.

Bourne End, Bucks.

INFECTIVE PAROTITIS AFTER ABDOMINAL SECTION AFFECTING TWO OTHER MEMBERS OF A FAMILY.

By BERTRAM ADDENBROOKE, M.D. DURH., M.R.C.S. ENG.

THE history of the following cases is, I venture to think, of the greatest interest.

On Nov. 5th, 1900, I performed the operation of abdominal section on a boy, aged 13 years, who suffered from suppurative peritonitis (non-tuberculous). Three days after the operation he complained of pain and stiffness in the region of the left parotid gland. This soon spread to the right side, and within 24 hours he was suffering from a severe attack of double parotitis, a somewhat rare though recognised complication after abdominal section; the parotitis gradually resolved and no outward traces of the attack remained after Nov. 13th. On Nov. 21st an aunt of the patient visited him and stayed with him for about an hour and a half, kissing him both on entering and leaving the room; she had walked about seven miles to see the boy and she walked the same distance home again. On reaching home she complained of feeling very tired. Previously to this visit she had not seen the boy since an hour before the operation. *On Nov. 24th* (three days after her visit) she complained of stiffness in the region of the parotid glands and developed double parotitis, which gradually resolved. On Nov. 27th the sister of the last patient, with whom she was living, also complained of stiffness in the region of the parotid gland and she developed likewise, in a few hours, a mild attack of parotitis which also in a few days subsided; this third patient had never been in contact with the original patient at any period of his illness. I inquired most carefully for any cases of parotitis epidemica (mumps) in the neighbourhood where these patients lived, but failed to elicit any history of such. I would suggest that the two attacks of parotitis, in the aunt and her sister respectively, were due to direct infection, and hence the rapidity of the onset of illness after being inoculated, the infection travelling down Stenson's duct to the mouth of the boy, thence to the aunt, and then by the same route *from the aunt to her sister.*

Metastasis is, I venture to think, not a very satisfactory explanation either of the parotitis that occurs after abdominal section or of the well-known orchitis that follows after mumps, although it is the best one we have. If, however, the operation was, by metastasis, the determining cause of the parotitis in the boy, there was a very striking point in connexion with these cases—namely, (1) three days after the operation (the determining cause) the boy developed parotitis; (2) three days after visiting the boy the aunt developed parotitis (having rendered herself by over-exertion and fatigue less resistant to infection); and (3) three days later the sister developed the same affection, evidently having caught it from the previous patient (the boy's aunt). In all of these there is the definite incubation period of three days. Had these cases of parotitis suppurated, cultures might have been made and some evidence as to the connecting links between the cases obtained, but fortunately for the patients themselves, suppuration did not occur. I have been unable to find any record of similar cases, and I hope that some of your readers may be able to throw some light on an interesting pathological condition.

Kidderminster.

MEASLES AT SWANSEA.—At the meeting of the Swansea Sanitary Committee held on Dec. 17th the medical officer of health, Mr. E. Davies, reported that 29 deaths from measles had occurred during the past nine weeks and that five of the elementary schools in the town had been closed owing to the epidemic. Mr. J. A. Rawlings remarked that measles ought to be included in the list of notifiable diseases, and it was eventually decided that notice to that effect should be given.

BRISTOL MEDICAL MISSION.—At the meeting of the Bristol Medical Missionary Society held on Dec. 18th it was stated that during the past 12 months 8310 patients had been treated against 7535 in 1899, and that of this number more than 2000 had been attended at their own homes. The expenditure for the year amounted to £726 and the income to £643. The adverse balance of the mission now amounts to about £300 and a special effort is to be made to raise that amount.

INFANTILE MORTALITY AND HEREDITARY SYPHILIS.—At the meeting of the Stonehouse (Plymouth) District Council held on Dec. 11th the medical officer of health (Mr. T. Leah) reported upon the infantile mortality, which is higher than the average throughout the county of Devon. Stonehouse is the most densely populated town in the area of the Devon County Council and Mr. Leah stated that the density of the population was one of the causes of this mortality, while he added that hereditary syphilis was decidedly on the increase since the Contagious Diseases Act was repealed.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ANCOATS HOSPITAL, MANCHESTER.

A CASE OF MELANOTIC SARCOMA OF THE LIVER; WITH REMARKS ON THE DIAGNOSIS OF MELANOTIC TUMOURS OF THE INTERNAL ORGANS.

(Under the care of Dr. R. T. WILLIAMSON.)

MELANOTIC sarcoma of the liver is nearly always secondary, though some very definite cases have been recorded in which it appeared to be primary.[1] The association of the affection of the liver with the same form of growth in the eye is frequent and only a short time intervenes between the primary eye affection and the appearance of the disease in the liver, as in the case recorded below, but in one case the interval between the removal of the eye and death from the growth in the liver was 10 years.[2] As in Dr. Williamson's case, it is not rare for secondary sarcomatous growths of the liver to give rise to a uniform enlargement in which no individual tumour masses can be felt.

A girl, aged 16 years, was admitted into the Ancoats Hospital on Sept. 13th, 1900, on account of enlargement of the abdomen. Three months before admission her sight had commenced to fail in the right eye and in a short time vision was lost in this eye. The eye was removed, on account of intra-ocular tumour, by Mr. E. Roberts, surgeon to the Manchester Royal Eye Hospital, five weeks before the patient's admission to the Ancoats Hospital. Four weeks after the operation she first noticed the swelling of the abdomen.

On admission the patient was fairly well nourished. There was no jaundice and no pigment spots or tumours were present in the skin. The temperature was normal. There was no œdema of the legs. Nothing abnormal could be detected in the heart and lungs. The liver was very much enlarged; its upper limit reached as high as the fourth rib; its lower edge extended down to the iliac crest on the right side and could be felt below the umbilicus in the middle line. The lower edge of the liver was sharp and even. The surface of the liver was quite smooth and firm. The hepatic enlargement was uniform. There was no hepatic pain or tenderness, and there was no ascites. The spleen was not enlarged. The patient vomited occasionally and suffered from diarrhœa. There was no hæmatemesis.

The urine was slightly darker than normal urine when freshly passed, but it had only a slight brownish tinge. When allowed to stand exposed to the air for several days, however, it became black in colour, but when kept in a corked bottle it had not changed its colour at the end of seven weeks. The specific gravity was 1015 and the reaction was acid; albumin and sugar were absent. The addition of nitric acid to the urine produced a deep black coloration with a slight brownish tinge. A solution of perchloride of iron produced a deep black coloration. Sulphuric acid and bichromate of potash also produced a deep black coloration. These are the reactions for melanin. There was no reaction of the urine for blood pigment with tincture of guaiacum and ozonic ether and no hæmin crystals could be obtained. A deep Prussian blue coloration was obtained on the addition of nitro-prusside of sodium, liquor potassæ, and acetic acid.

During the four weeks that the patient was in hospital she gradually lost flesh. At times she suffered from severe pain in the abdomen *chiefly in the region of the epigastrium.* At other times the pain was absent and on these occasions, even at the end of the illness, the liver was painless on palpation. Towards the end of the patient's illness the feet were slightly œdematous, but there was never any ascites. There was no jaundice until the last day of life when the conjunctivæ presented a slight yellow tinge. Death occurred on Oct. 15th.

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[1] Delepine: THE LANCET, Jan. 24th, 1891, p 196.
[2] Loc. cit.

Necropsy.—At the post-mortem examination none of the organs presented any pathological changes of importance except the liver. The liver was greatly enlarged, extending down to the iliac anterior superior spine. The enlargement was uniform; the lower margin was sharp and the surface was smooth. The weight was 13¼ pounds. On section the whole organ was infiltrated with tumour growths. In most parts the liver substance was studded with small, roundish patches of tumour growth varying from one eighth of an inch to half an inch in diameter; in some parts the liver substance was infiltrated with extensive, deep, black patches of tumour growth. At many points close to the pigmented patches and nodules were other nodules of tumour growth of a bright, white colour. The kidneys were normal with the exception of one small melanotic nodule of the size of a pea The spleen was not enlarged. The stomach and intestines were compressed greatly by the enlarged liver but otherwise appeared to be normal. The thoracic organs presented no changes of importance. The blood, both during life and post mortem, gave no reaction for melanin with nitric acid or perchloride of iron. Microscopically sections of the liver at the parts infiltrated with tumour growth presented the appearance of a melanotic sarcoma, composed chiefly of pigmented spindle cells. The white nodules of tumour-growth presented the appearance of a non pigmented spindled-celled sarcoma.

Remarks by Dr. WILLIAMSON.—The clinical diagnosis of melanotic sarcoma of the liver was practically certain, being based on the history of removal of one eye for tumour growth, the enlarged liver, and the presence of melanogen in the urine which gave the black coloration with nitric acid and perchloride of iron. In the *Medical Chronicle*, October, 1899, I recorded a similar case of melanotic sarcoma of the liver secondary to a primary growth in the eye, and also a case of multiple melanotic tumours of the brain secondary to a pigmented tumour of the skin: both of these cases were under the care of Dr. Graham Steell at the Manchester Royal Infirmary, where I had the opportunity of observing them when medical registrar.

With reference to the clinical diagnosis of melanotic tumours of the internal organs, it is interesting to note that they are usually secondary to primary disease of the eye or skin. Hence superficial inspection of the patient often furnishes the most important indication in diagnosis. The absence of one eye and the history of its removal for tumour, or the presence of a pigmented scar in the skin, and the history of the removal of a dark-coloured tumour of the skin often indicate the correct diagnosis. The presence of small pigmented patches or small pigmented tumours in the skin is another point of diagnostic value. These patches or small tumours are deep-black or bluish-black in colour. They were absent in the case recorded above, but were present in the two other cases which I published 12 months ago. The liver, when affected by secondary melanotic tumour, is often very greatly enlarged, especially when the primary growth is in the eye. In the case just recorded the liver weighed 13¼ lb.; in the other case previously published it weighed 16¼ lb. Ascites was absent in both of the cases I have seen. In one of the cases jaundice was entirely absent; in the other it was absent until the last day of life, when there was a slight yellow tinge of the conjunctivæ. In both cases pain was absent for a long period at first

In two of the three cases which I have examined the urine contained melanogen and gave the reactions for melanin—a deep black-brown coloration with nitric acid and a deep black coloration with perchloride of iron. With respect to the diagnostic value of melanuria, it may be here mentioned that the same marked reactions are said to be obtained occasionally, but very rarely, in the urine in wasting diseases, when no melanotic sarcoma is present. But since nitric acid is used so frequently in urine testing the occurrence of such a marked black-brown reaction must be extremely rare, or it would have been recorded more frequently. The blue reaction with nitro-prusside of sodium, liquor potassæ, and acetic acid is not due to melanin but to some other substance.

When the reactions for melanin are obtained in the urine with perchloride of iron and with nitric acid there is always a strong probability that melanotic tumours are present in the internal organs. This probability is increased and the diagnosis is almost certain if there is in addition (1) great enlargement of the liver, (2) if small pigmented patches or tumours are present in the skin, or (3) if there is a history of the removal of one eye for intra-ocular tumour, or of the removal of a pigmented tumour of the skin When the urine does not give the reactions for melanin the diagnosis of melanotic tumours is still indicated if, along with symptoms of tumour growths in the internal organs, there are scattered small black patches or nodules in the skin (as was the case in the melanotic tumour of the brain already referred to).

Medical Societies.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Dec. 7th at the West London Hospital, Dr. F. SCHACHT, the President, being in the chair.

The minutes of the last meeting were read and confirmed and several new members were elected.

The PRESIDENT said it was his sad duty to allude to the death of one of the society's vice-presidents, Dr. Symons Eccles. He had held every office in the society and the members were well aware of the energy and enthusiasm which he put into the work of the society and he was sure that they would all feel his loss. He, together with the two secretaries and the treasurer and editor of the journal, had attended Dr. Eccles's funeral as representatives, and he proposed that the meeting should pass the following motion:—

> That this meeting desires to record the loss sustained in the death of Dr. Symons Eccles, one of its vice-presidents, and wishes to convey to Mrs. Eccles its sincere sympathy.

This was carried in silence.

Dr. LEONARD DOBSON then showed a case of Raynaud's Disease. The patient was a man, aged 45 years; he had always been healthy until he had an attack of influenza seven years ago. He shortly afterwards lost all his money and lived a life of great anxiety and privation. He first noticed that his hands became cold and the fingers suppurated. The disease rapidly became worse and now the hands were always cold, were bluish in colour, and the finger-tips were ulcerated in the winter. The disease was symmetrical and the thumbs were not affected. One ear was becoming affected, but the feet were not attacked. The hands were worse after exposure to cold or after a meal; they then became first white and afterwards purplish black. The urine was normal; the discs were normal; there was no specific history. He was at present being treated with galvanism and strychnia and was improving.—Dr. DOBSON, in reply to questions from Dr. SEYMOUR TAYLOR and others, said that his patient had not suffered from oxaluria or hæmoglobinuria. He had not yet tried liquor trinitri as the patient was satisfied with his present treatment.

Dr. TAYLOR showed a case of Transposition of all the Viscera in a male. He thought that the cause of this was very obscure, but gave as a theory that the man was possibly a twin, the other twin being possibly a blighted ovum, and that if the twins were of the same sex that there might have been a longitudinal segmentation of the cells of the embryo.—Dr. ROSS SINCLAIR also showed a girl who was the subject of Transposed Viscera —Dr. TAYLOR said that he noticed in the girl's case that the position of the cæcum and sigmoid flexure was unaltered.—Dr. ROBINSON said that he had examined the sister of the male patient and found a complete absence of the vagina, the uterus, and the ovaries —Mr. G. PERNET could not accept Dr. Taylor's theory of the cause and noted that neither patient was left-handed —Dr. PORTER said that he had seen a large number of twins but had never noticed this condition.—Dr. A. H. CLEMOW remarked that the cavities of the heart in the girl's case were not transposed.—Dr. TAYLOR, in reply, said that the children had not been examined. He admitted that his was only a theory, but it was the only one which would explain these cases.

Mr. H. CARRÉ SMITH showed two cases of Spastic Paraplegia (sisters), one aged 16 years and the other six years. The elder girl developed the disease at the age of five years and now had the characteristic gait and rigidity. The knee-jerks were exaggerated and ankle clonus was marked. She had incontinence and was also mentally deficient. The younger child developed symptoms as soon as she commenced to walk. The father and mother were first cousins and healthy. Between these children the mother had had seven other children, all born at the seventh month and all of whom died. She had also had three miscarriages. Instruments were not used. Mr. Smith added that there were no signs of congenital syphilis in either patient, but thought that this must be the cause.—A discussion followed in which Dr. TAYLOR, Dr. CROOKSHANK, Dr. TINDAL ATKINSON, Mr. G. PERNET, and Mr. C. B. KEETLEY took part, and in reply Mr. SMITH said that no nystagmus had been observed. He was treating the cases with iodide of potassium.

Mr. KEETLEY showed a New Method of Treatment in Disease of the Hip-joint. The patient, a girl, had had the disease for a long time. Mr. Keetley operated and removed the head of the femur and surface of the acetabulum. The skin around became infected with tuberculous ulceration, leaving a huge wound. A second operation became necessary and when removing the tuberculous material from the skin he opened up the joint again by means of a longitudinal and transverse incision and scraped out the joint. He then laid a number of Thiersch's grafts on the wound and some of these he put right into the joint. The result was very good, the joint closed up at once, and within a month the surface was healed, the grafts in the joint being pushed to the surface.—Mr. PATON thought that Mr. Keetley's method was very gratifying and successful, as it did away with all tubes.

Dr. P. S. ABRAHAM showed a case of Lichen Planus in a man, aged 40 years. The eruption practically covered the body—the pruritus was very severe. He was previously healthy but had suffered from carbuncles. He was being treated with arsenic.—Dr. DOBSON thought that arsenic was useless in these cases and advocated morphia and nerve sedatives.—Dr. A. WHITFIELD agreed that internal nerve sedative treatment was much more important than arsenic.—Dr. ABRAHAM, in reply, said that he was not at all a believer in arsenic in these cases, but that sometimes it was very successful. He also used morphia and thyroid gland.

Dr. J. B. BALL showed a case of Warty Growth just within the ala nasi in a female. It had existed for 12 months and was slightly ulcerated. The cause was doubtful. Lupus and rodent ulcer had been suggested, but he should remove the growth and examine it.—Dr. WHITFIELD thought that the growth was epithelial in nature, as the mucous membrane was not attacked.—Mr. PERNET thought that the case was one of rodent ulcer.—Dr. ABRAHAM also agreed that it was probably rodent ulcer.

Mr. DUNSTAN BREWER showed a microscopical specimen of the Lung of a Mouse showing bacillus pestis *in situ*.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

THE third ordinary meeting of this society was held on Dec. 19th, Mr. A. G. MILLER, the President, being in the chair. The meeting was devoted to clinical demonstrations.

Dr. R. MCKENZIE JOHNSTON presented a patient in order to elicit a diagnosis. The patient, a man, aged 24 years, had a large Growth in the Left Tonsil extending up to the middle line. He was perfectly healthy otherwise. About two months previously he began to suffer from slight and occasional dysphagia, fluid then regurgitating through the nose. He had no pain, but four months ago it was noticed that he spoke somewhat thickly. The growth was perfectly smooth and had no tendency to ulceration, though it bled rather freely on touching. Owing to the rapidity of its growth Dr. Johnston thought that it was a lympho-sarcoma.

Dr. BYROM BRAMWELL exhibited the following:—1. A case of Aneurysm of the Thoracic Aorta successfully treated by Iodide of Potassium. The case was important because Dr. Bramwell had never yet seen any such case so thoroughly cured. The patient was an old soldier, aged 68 years, who was discharged from the army when he was aged 28 years because of disease of the left elbow-joint. The arm was amputated through the upper third of the humerus. He then worked as a labourer until 24 years ago when he developed well-marked symptoms of thoracic aneurysm—e.g., shortness of breath, dysphagia, and pain. Under the care of Dr. G. W. Balfour in the Old Royal Infirmary and treated with iodide of potassium these symptoms were completely relieved. He then began hawking goods, walking from 10 to 20 miles daily and carrying a pack weighing from 20 to 40 lb. He kept at this work constantly for 24 years. A few months ago he began to suffer from pain in the chest, apparently shooting down the left arm, and from cough and expectoration, together with some changes in the lung (no tubercle bacilli were present). There was only a slight prominence, but a well-marked pulsation in the second left interspace. The dulness on percussion was not absolute, but diminished outwards from this centre. The second aortic sound was accentuated and there was a difference in the carotid pulses. The diagnosis made 24 years before had proved to be correct and Dr. Bramwell had never seen a patient with this disease living so long while doing such arduous work. The dysphagia which was present when first treated was, in Dr. Bramwell's experience, usually a near precursor of the end. 2. Three patients in whom great improvement had resulted from the Treatment by Coördinated Exercises by Fraenkel's Method. Such a treatment had not been employed to any extent in this country and had been brought under Dr. Bramwell's notice by his son, Dr. Edwin Bramwell. The first two cases were those of women who a month ago exhibited marked symptoms of tabes, not being able to walk without assistance from another person, but now both could walk fairly well and turn without difficulty. The third case occurred in a man who had been under observation for several years and had suffered from the ordinary typical manifestations of tabes, including gastric crises. He also had been under treatment for a month with a notable improvement. In many cases of locomotor ataxy this method of treatment produced very decided improvement.

Mr. H. ALEXIS THOMSON exhibited a boy, aged 15 years, showing the Result of Resection of the Middle Two-thirds of the Tibia for Central Abscess. Eight years previously the boy had suffered from osteomyelitis affecting the lower end of the femur on the left side and also the right tibia. He recovered perfectly from this except that the tibia was thickened and arched forwards. Eight months ago he presented himself again with all the characteristic symptoms of Brodie's abscess of the right tibia. The middle two-thirds of the bone were removed subperiosteally and the tibia re-formed itself well within three months. Specimens were shown.

Mr. J. SHAW MCLAREN showed:—1. Two cases of Psoas Abscess after Treatment by the Injection of Iodoform Emulsion. His method of treatment was to evacuate the abscess by puncture and then to introduce a quantity of 10 per cent. iodoform emulsion. The operation was remarkably simple and almost any practitioner could perform it at the patient's home. One successful case shown was that of a girl, aged 17 years, who had suffered from curvature in the lower part of the spine for years with a psoas abscess extending down to Poupart's ligament. Within six weeks of this treatment she was entirely cured. The second case occurred in a woman and in her case the abscess was enormous, extending down to the middle of the thigh; now, however, it had entirely gone. 2. A patient with Tuberculosis of the Left Wrist treated by iodoform emulsion injection. The lad had previously been twice operated upon for disease of the joint, but the condition had manifestly improved under this treatment along with the application of the congestive bandage. 3. A patient after complete Removal of the Tongue and Glands for cancer two years ago.

Mr. HAROLD J. STILES exhibited:—1. A young woman, a servant, after operation for Perforated Gastric Ulcer. She had previously shown slight symptoms of indigestion, but suddenly one morning after breakfast she was seized with intense pain. The operation was performed three and a half hours after the accident and the rupture was found to have taken place high up on the posterior aspect and close to the œsophageal opening. The lesser sac of the peritoneum retained the escaped contents of the stomach and they had not at the time of operation escaped into the general peritoneal cavity. 2. A girl showing Regeneration of Skin, the result of skin-grafting, after entire avulsion of the scalp. Much difficulty had at first been experienced in getting the grafts to grow and the best plan which Mr. Stiles had found was to lay on a graft about two inches square (after scraping off the granulations and arresting the bleeding), covering this with a sheet of perforated protective and finally a piece of sterile gauze smeared over with vaseline. The entire scalp was now restored with the exception of two or three tiny areas. 3. An infant three months after

Removal of a Large Occipital Meningocele 16½ inches in circumference. The tumour was larger than the child's head and sprang from a narrow opening in the bone just below the occipital protuberance. The pedicle measured five and a half inches in circumference. Mr. Stiles said that in order to prevent escape of cerebro-spinal fluid the cicatrix should be made very firmly and this he accomplished by making the skin flaps so large that they could be flatly approximated together and a double layer of sutures could then be passed through them. The specimen of meningocele was shown. 4. An infant, aged four months, after operation for Acute Intussusception. The tumour was very large and was operated on 23 hours subsequent to its formation Mr Stiles said that almost all such cases should be treated by operation as the method of attempted reduction by inflation was extremely unsatisfactory. The lower two-thirds of an intussusception were as a rule easily reduced by pushing the bowel from below upwards (after laparotomy), but the upper part was very difficult to reduce and could hardly be done by inflation alone. 5 A boy with Paralysis of the Gluteus Maximus Muscle which was the result, apparently, of acute anterior poliomyelitis.

Dr. Alexander Bruce and Professor Thomas Annandale showed a man suffering from Paralysis relieved by removal of the twelfth dorsal lamina. It was a complex case of alcoholic neuritis and injury to the spine in the region of the twelfth dorsal vertebra from a fall down a stair. At the operation a bony projection was found attached to the left lamina of the twelfth dorsal vertebra compressing the cord. This was removed and now his condition was improving, though as the injury happened more than a year ago a good deal of neuritis must have been set up. He had quite recovered from the alcoholic neuritis.

Dr. Norman Walker exhibited two patients.

Dr. Allan Jamieson demonstrated under the microscope the Structure of the Cervical Skin Tumours shown at the November meeting.

Mr. McLaren showed: (1) Recent Pott's Fracture; (2) Radiographs of Fractured Internal Condyle; and (3) Fracture of Astragalus with subgaloid luxation of the foot forwards.

Mr. Stiles showed: (1) A Portion (three and a half inches long) of a Hatpin removed from a Male Bladder by suprapubic cystotomy; (2) Brain with Abscesses secondary to Head Injury; and (3) Congenital Fatty Tumour from the Axilla of an Infant.

Dr. H. Harvey Littlejohn showed: (1) Brain from the patient in a case of Apoplexy in which there was partial recovery but suicide by throat-cutting six weeks later; (2) the Cut Throat from the above case; (3) Complete Rupture of the Small Intestine due to a simple fall; (4) Double Uterus; and (5) Acute Inflammation of the Stomach.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Indentations in the Skulls of the New-born.—Eclampsia.

A meeting of this society was held on Dec 12th, Dr. R. Milne Murray, the President, being in the chair.

Dr. N. T. Brewis showed (1) a Fibro-Cystic Tumour of the Broad Ligament; (2) a Uterus removed for Cancer of the Body; (3) a Uterus and Appendages with Ovarian Abscess and Pyosalpinx, resulting from a recent miscarriage; and (4) a Fibromyoma removed by Sub-peritoneal Hysterectomy.

Dr. F. W. N. Haultain exhibited (1) a Fibroid Uterus removed by Pan-hysterectomy; (2) a Superinvoluted Uterus affected with cancer of the cervix and removed by the vaginal route from a patient, aged 29 years; (3) an Extra-Uterine Gestation; and (4) an Omphalopagus Twin Monster, born dead at full time, and weighing 15 lb

Professor A. R. Simpson showed a Ruptured Ovarian Cystoma

Dr. G. Scott MacGregor showed a Uterus removed by Vaginal Hysterectomy from a patient, aged 26 years, for early cancer of the cervix.

Dr. G. F. Barbour Simpson showed a Ring Pessary which had been retained for 25 years in the vagina.

The President exhibited (1) a Dermoid Ovarian Tumour with other Ovary showing a recent Corpus Luteum; and (2) a Myoma of Rapid Growth removed by Hysterectomy.

Dr. Munro Kerr (Glasgow) read a paper on Spoon-shaped Indentations in the Skulls of the New-born, with illustrative cases, and a New Method of Treatment for the Immediate Relief of the Deformity. This subject had received very little attention in this country; in Germany it was little better; in France, however, it was very different. Ambrose Paré first referred to the deformity and numerous treatises had since appeared on the subject. Indentations of the fœtal skull might either be spoon- or furrow-shaped. The two varieties occurred with about equal frequency. They had, however, not the same significance, for although the conditions producing them were in the main the same the furrow-shaped variety was much less serious and seldom gave rise to much immediate trouble. Dr. Kerr, therefore, considered exclusively the spoon-shaped depressions. The injury, which was usually situated on one or other of the parietal or frontal bones in the neighbourhood of the anterior fontanelle, was by no means uncommon, especially in the city of Glasgow, where rickets was so prevalent among the lower classes and parturition was in consequence so frequently laborious. The accident occurred, with few exceptions, when there was a deformity of the maternal pelvis and generally in women with flat rachitic pelves. The extent of the deformity need not be extreme; most commonly it was just sufficient to cause a moderate degree of obstruction to the passage of the head. In the great majority of the reported cases delivery was completed by traction, either on the child's head by forceps or on the trunk in breech cases, or after turning Still, in a small proportion of cases labour ended spontaneously. Rosenski in 43 collected cases found spontaneous birth in only two cases. When deformity existed the indentation was usually caused by the head being pressed against the projecting sacral promontory. Occasionally the anterior pelvic wall, an undue prominence of the ilio-pectineal eminence, and still more rarely an osseous tumour of the bony canal might be the cause. Some had mentioned lateral deviation of the uterus, ankylosis of the coccyx, and tumours of the soft parts as causes. Defective ossification of the fœtal skull predisposed to the accident. Dr. Kerr in experiment found that he could produce depressions with the greatest ease and with very little pressure in some cases, but in others no indentation could be made even with considerable force. A prolapsed upper limb by narrowing the pelvis might produce a depression. In the majority of forceps cases the indentation was produced by pressure of the head on the promontory of the sacrum and not directly by injury from the blades of the forceps Occasionally two depressions might be found on the same skull, and the accident had occurred in even five successive births. The prognosis was not unfavourable; in most cases the indentations disappeared in a week or two and gave rise to no immediate symptoms or later ill effects. In a certain number the depressions resulted in a permanent deformity, and might produce no disturbance or they might give rise to minor nervous storms. Some cases terminated fatally, and in these the symptoms varied. There might be twitchings, convulsions, and paralysis, and quite evidently due to the indentations In other cases these symptoms might only appear at the end, but the children showed fretfulness, were disinclined to take the breast, and did not thrive. In another group the child was born asphyxiated, and unless the depression was speedily removed the child died despite all other attempts at resuscitation. Schroeder, out of 65 cases, found that 34 per cent. of the infants were stillborn, 15 per cent. subsequently died from the injury, and the rest remained alive, as far as he could find out. In treating the condition exhaust-pumps and cupping-glasses had been advocated or the application of an adhesive plaster and traction exerted on it. Trephining had been successfully performed for this condition. In a case recorded by Boissard there was a large depression on the left frontal bone with protrusion of the left eye. The case seemed hopeless as the heart's action was very feeble Boissard incised the scalp over the coronal suture, made a small opening through the suture, and passed a sound under the bone between it and the dura mater and pressed up the depression. The child immediately began to breathe and rapidly recovered. Panzani reported a similar case. Surgical interference could not always be immediately practised from lack of instruments, &c. Dr. Kerr had used the following treatment in three cases successfully. The fœtal bones were very resilient, and by experiment on stillborn infants he found that artificially produced depressions could be raised by firm antero-posterior compression of the head. On the living child the indentation came out with a jerk and with a sound as when a dent in a felt hat was removed. In one case the seriously impaired respiration was immediately relieved after the indentation was removed by this method.—Professor Simpson, Dr. D. Berry Hart, Dr. H. M. Church, Dr. James Ritchie, Dr. W. Fordyce, and the President made remarks on the paper.

Dr. Michael Dewar read a paper on a case of Eclampsia at the sixth month with successful labour at full time. The patient was a married primipara, aged 28 years, strong, well-developed, and with no neurotic personal or family history. During her pregnancy she suffered very little from morning sickness and passed the ordinary amount of urine daily; the bowels were constipated. She was very well until suddenly, without any warning, she was seized by a fit and had a succession of eight fits in an hour. In one attack, it was noticed, her face was drawn to the right side; then a long tonic convulsion occurred, succeeded by a series of strong, rapid clonic contractions involving the whole body; the attack lasted three minutes. The urine was drawn of by catheter and found to be free from albumin. Consciousness soon returned after the tenth fit, but she remained somewhat dazed. Next day her urine was plentiful and also non-albuminous. Bromide of potassium and chloral were administered continuously. Four days after the first attack she had a second series of convulsions, seven in number. This time the urine showed a trace of albumin. Three days later she had a third series of fits, three in number; the urine on the following day was found to be free from albumin. She gradually improved after this, though remaining confused in mind. Labour came on at full time and was quite normal and the child was quite healthy. The mother was now very well with the exception of a slightly defective memory; the urine was normal and non-albuminous. In his remarks on the case Dr. Dewar considered the question of the fits, whether they were really eclamptic, as some observers asserted that unless albuminuria was present the case was not one of eclampsia. Convulsions, with or without albuminuria, seemed to be equally dangerous to the mother and child. There were many cases of albuminuria in pregnancy in which no convulsions occurred. There was evidently some subtle condition, as yet unknown, ready under peripheral or other influence to determine whether eclampsia would occur or not. As regards treatment, morphia was contra-indicated as it interfered with the kidney function. Veratrum viride in this case caused intermittency of the pulse and had to be stopped. Saline injection must at first increase the heart tension, which was high enough in these cases. He believed in a little more of the expectant treatment, attending to the bowels and the bladder, with the administration of a bromide and chloral.—Professor Simpson, Dr. Haultain, Dr. S. Macvie, and the President took part in the discussion.

Society of Anæsthetists.—A meeting of this society was held on Dec. 7th, Dr. F. W. Silk, the President, being in the chair.—The secretary read a communication from Mr. Wilfred Sars giving particulars of a Recent Fatality under Nitrous Oxide Gas which occurred at the Great Northern Central Hospital and which had been fully reported in the medical journals.—Dr. H. Low and Dr. Dudley Buxton thought that nitrous oxide was always contra-indicated in cases in which there was any impediment of a progressive character involving the upper air-passages, for which cases Dr. Dudley Buxton recommended pure chloroform in preference to ether or any mixture.—Dr. Probyn-Williams related particulars of a somewhat similar case that had occurred at the London Hospital.—Dr. A. H. Cook remarked that in cases of obstructed respiration such as in adenoid growths he preferred the A.C.E. mixture and thought that the cases alluded to pointed to the desirability of promptly performing laryngotomy when the patient's life was found to be in jeopardy from œdema of the glottis.—The President thought that some additional cause of death than mere mechanical obstruction was to be sought in such cases and referred to the comparative frequency with which patients suffering from tonsillitis became faint during or after the administration of nitrous oxide.—Dr. Probyn-Williams then gave particulars of two fatal cases during the administration of an anæsthetic (one ether and one chloroform) in both of which it was shown at the post-mortem examination that the death was really due to a distinct ante-mortem blood-clot becoming detached from the veins and impacted in the right side of the heart.—Dr. Clapham, of the North-Eastern Hospital for Children, read notes of a very similar case occurring in a boy, ten years of age. It was noticeable that all three cases were more or less septic.—Dr. Dudley Buxton welcomed the reporting of these cases to the society and thought that they were important additions to their knowledge. He was of opinion that under certain circumstances the mere disturbance of the circulation which the inhalation of an anæsthetic always entailed, even apart from struggling, &c., would suffice to loosen an already formed clot, and he had seen a small aneurysm quite cured in this way.—Dr. Low also spoke and Dr. Probyn-Williams replied.—The President thanked Dr. Clapham for bringing the case before the society.

Glasgow Southern Medical Society.—A meeting of this society was held on Dec. 20th, Dr. William Watson, the President, being in the chair.—The adjourned discussion on the recent decision of the General Medical Council respecting the sale of drugs and poisons by unqualified drug assistants was continued. An interesting debate took place. In addition to other points brought under review it was shown that by an ordinary interpretation of the word "drugs" which occurs in the indictment any medical man would be held in the same way guilty should his unqualified drug assistant sell such simple articles as Epsom salts or cream of tartar. It was also pointed out that if any breach of the law had been committed the Pharmaceutical Society had power to enforce it in a different court under the Pharmacy Acts, and that the General Medical Council should not have acted as prosecutors. The discussion having been brought to a conclusion the following motions were proposed and adopted:—

1. That this society appoint a committee to draw up a representation to the General Medical Council on the points brought out in the discussion of the case of Dr. Thomson of Airdlie.

2. That the secretary of this society be instructed to call a meeting of the general medical practitioners of Glasgow and the West of Scotland at an early date for the consideration of the action of the General Medical Council in their recent decision regarding the sale of drugs and poisons by unqualified assistants.

3. That the Glasgow Southern Medical Society, believing the direct representation of the general medical practitioners of the United Kingdom on the General Medical Council to be inadequate, humbly petition the Medical Council to represent such inadequacy to Her Majesty's Privy Council in order that the medical practitioners of Glasgow and the West of Scotland may elect an additional representative.

Pathological Society of Manchester.—A meeting of this society was held on Dec. 12th, Dr. A. T. Wilkinson, the President, being in the chair.—Dr. R. W. Marsden read a paper reviewing the subject of Gall-bladder Infection in Typhoid Fever and exhibited the gall-bladder from a case of typhoid fever. The specimen showed irregular inflammatory thickening of the walls with numerous small ulcerations in the mucous membrane, some of the ulcers being covered with small brownish necrotic patches. At the fundus there were two or three ulcers of larger size, whilst the largest occupied the tip of the fundus, and in the centre of it a perforation was present. Microscopical specimens from the same case were also exhibited. In the section of the wall of the gall-bladder localised newly-formed or inflammatory masses were seen in the connective tissue stroma and not having any apparent relation to the ulcerations. In the section of the liver were areas in which the liver cells had not received the staining fluid used and in which an accumulation of leucocytes had taken place, constituting patches of focal necrosis.—Dr. A. Donald showed: (1) A Bicornute Uterus which had been removed by abdominal hysterectomy immediately after labour on account of a double rupture; and (2) two specimens of Pregnancy Complicated by Fibroid Tumour. In both cases abdominal hysterectomy had been performed.—Dr. F. Villy showed Preparations of the Cardiac Muscle from patients dying from Diphtheria and briefly referred to the significance of the degeneration present.

Wigan Medical Society.—A meeting of this society was held on Dec. 13th, Dr. M. Benson presiding over a good attendance of members and visitors.—After the routine business a paper was read by Dr. T. Arthur Helme on Some Obstetric Topics under Present Discussion.—The paper was a very interesting one and led to a prolonged discussion, the following members taking part therein: Dr. Benson, Dr. R. P. White, Mr. M. McElligott, Dr. F. Rees, Mr. C. M. Brady, Mr. E. H. Monks, Mr. T. M. Angior, Mr. R. Tarbuck, Dr. W. S. Sinclair, and the honorary secretary.—A cordial vote of thanks was accorded to Dr. Helme, which he acknowledged.

FOLKESTONE MEDICAL SOCIETY.—A meeting of this society was held on Dec. 7th, Dr. W. J. Tyson, the President, being in the chair.—A deputation of four members was selected to meet the sanitary committee of the Town Council and to discuss a few questions about which the society is concerned.

Reviews and Notices of Books.

An American Text-book of Physiology by Several Authors Edited by WM. H. HOWELL, Ph.D., M.D., Professor of Physiology in the Johns Hopkins University, Baltimore, Maryland. Vol. I. Second edition, revised. Philadelphia: W. B. Saunders and Co. 1900. Pp. 598. Price 26s.

THE number and variety of the text-books of physiology that have been published during the last few years constitute in themselves an indication of the rapid advances that are constantly being made in this branch of knowledge, each author thinking that his predecessors have left something untold or dealt with various points in a manner on which he could improve. The volume before us seems to be one of the best of such text-books. It is written on the plan of collaboration, different subjects having been committed by the editor into the hands of experts. The editor states in the preface that the collaboration of several teachers in the preparation of an elementary text-book of physiology is unusual, the almost invariable rule heretofore having been for a single author to write the entire book. Of this there is no doubt, and Dr. Howell deserves the credit of being one of the first to select several accomplished physiologists to unite in producing a work that is thoroughly up to date and to resist the temptation of writing chapters that he was himself fully qualified to undertake The several chapters in the present volume with their authors are the General Introduction, Blood, Lymph, Secretion, Chemistry of Digestion, and Movements of the Alimentary and Urinary Systems, by Dr. Howell; Circulation, by Dr John G Curtis; the Innervation of the Heart, by Dr. W T. *Porter*; *Respiration and Animal Heat, by* Dr Edward T. Reichert; and the Chemistry of the Animal Body, by Dr. Graham Lusk.

In making a study of this work we must say at the outset that we approve of the mode in which the several subjects are presented to the reader. The exposition is clear, the arrangement is good, and the language is lucid and yet concise The subjects of the blood and circulation are very satisfactorily dealt with, the text including the most recent information and giving some points that are not often mentioned. Thus there is a paragraph on the globulicidal action of the serum in which it is stated that different kinds of serum show different degrees of globulicidal activity and that white as well as red corpuscles may be destroyed. *Dogs'* serum or human serum is strongly globulicidal to the blood of rabbits This is not due apparently to variations in the amounts of inorganic salts in solution, since the mere heating of the serum to 55° or 60° C. for a few minutes destroys the globulicidal action, though the other constituents of the serum, as the proteids, do not appear to undergo any alteration. Foreign serum injected into the veins of a living animal may exert a marked toxic effect that can hardly be explained by its globulicidal action, for the injection of no more than from 7 to 14 cubic centimetres of fresh dogs' serum will suffice to kill a rabbit; and then, again, serum is known to exert a similar destructive effect on bacteria, which is termed its *bactericidal* action. "These three effects of serum—globulicidal, toxic, and bactericidal—seem all to be destroyed at a temperature of from 55° to 60° C., and it is possible that they are all traceable to the existence in the blood of some proteid substance, an alexine which is present in small quantity and is different for each species of animal." Dr. Howell *considers that it has been satisfactorily* shown that in the adult the organ for the reproduction of the red corpuscles is the red marrow of bones. Here the erythroblasts are formed which multiply by karyokinesis, the daughter cells producing hæmoglobin in their cytoplasm, thus forming nucleated red corpuscles. The nuclei are subsequently lost either by disintegration or more probably by extrusion, and the newly formed non-nucleated red corpuscles are forced into the blood-stream.

Dr. Howell speaks guardedly on the cause or causes of the sounds of the heart, but he seems inclined to admit both a valvular and a muscular element. He mentions, but passes by without comment, the late Sir R. Quain's theory. *Dr. Howell seems* to doubt whether the dicrotic wave is a reflected wave from the periphery or whether it proceeds from the semilunar valves. We thought that it was very satisfactorily determined to be of central origin and to proceed centrifugally. Amidst all the details of the action of the heart and the characters of the circulation in the several orders of vessels that are here given we fail to find one point of applied physiology that is interesting to every practitioner—the circumstances that prevent a man from bleeding to death if he have the misfortune to inflict upon himself a superficial flesh wound. Dr. Howell deals sensibly with doubtful and disputed questions. Thus in regard to the formation of lymph he points out that two divergent views are held in regard to it. According to some all the facts known respecting the composition of lymph may be satisfactorily explained if we suppose that this liquid is formed from blood plasma by the combined action of the physical processes of filtration, diffusion, and osmosis. According to others it is believed that in addition to these actions it is necessary to assume an active secretory process on the part of the endothelial cells composing the capillary walls. Dr. Howell then gives an excellent summary of the numerous and important experiments of Heidenhain and Starling, and concludes by adopting, provisionally at least, the mechanical theory.

If we turn to such a subject as that of the spleen and read what Dr. Howell has to say upon the *functions of that* organ, for all details of its structure are rigorously excluded, we shall find that the theories of its purpose in the economy which are in Dr Howell's opinion most worthy of being considered, though all are unsatisfactory, are that it is a seat of origin for the red corpuscles of the blood; that it is an organ in which the destruction of the red corpuscles takes place; that it is a place where uric acid is generated; and, lastly, that an enzyme is here formed which, carried by the blood to the pancreas, converts the trypsogen contained in the pancreatic cells into trypsin Of this last theory, propounded by Schiff and supported by Hensen, he only remarks that the experimental evidence adduced by these two observers has not been *confirmed by others* We are disposed to think that the conclusions of Schiff and Hensen from their experiments rest on a sounder basis than do those of their opponents.

If we had to find any fault with the work, it would be that such a subject as the kidney and its secretion are considered under several separate heads For instance, under the head of the urinary organs the terminal capsules of the kidney tubules with their blood-supply are first described, a paragraph on the composition of the urine succeeds, which is followed by an account of the secretion of urine, the elimination of urea and related bodies, the secretion of the water and the salts, and the blood flow through the kidneys; but the student who wishes to know the composition of the urinary constituents must look for it under the account of the Chemistry of the Animal Body, where full and accurate details will be found, and micturition under yet another heading—the Movements of the Alimentary Canal, Bladder, and Urethra. The same remarks apply to the account of the salivary secretion, which leads to some unnecessary repetition. Illustrations are sparingly introduced. The work is one on which full reliance can be placed as representing the present state of physiological knowledge.

LIBRARY TABLE.

The Physiological Feeding of Infants. By ERIC PRITCHARD, M.A., M.D. Oxon. London: The Scientific Press, Limited 1900. Pp. 39. Price 1*s*.—Physicians in charge of the out-patient children's department are aware that a large proportion of the little patients are brought under their notice owing to defective feeding, generally due to the ignorance of those under whose care they happen to be. The mothers or guardians are frequently quite unaware that the method of feeding is at fault, and some of them resent the "advice" given to them, having come to the hospital for "a bottle of medicine," which they believe will cure all disorders. The majority, no doubt, thankfully listen to the directions given to them and carry them out to the best of their ability. The physician, nevertheless, is at a disadvantage in giving such instructions. The physiological feeding of infants is by no means an easy matter (supposing that circumstances prevent them from being breast-fed), and in cases of disordered stomachs innumerable difficulties arise. In the pamphlet now before us Dr. Pritchard has made an attempt to lay down certain directions whereby cow's milk can be so modified as to be applicable to the various disordered infantile digestions which are so frequently met with in private and hospital practice. We can congratulate the author on the success of his endeavours. Suggestions are made in many medical text-books, especially in those by American authors, as to the method of altering the percentage of fat, proteid, and sugar which should be given in infants' food; but as a rule the prescriptions are so complicated as to be most difficult to follow. Dr. Pritchard, however, has devised tables giving recipes for preparing milk mixtures of various percentage composition; the quantities, however, are given in ounces and drachms, so that there would be no difficulty in preparing the food. This is an admirable plan and one that will be generally appreciated. A "Physiological Nursery Chart" is also issued, containing a table for registering the weight of the child for many months, a table for preparing modified milk for a healthy infant of average weight during the successive stages of its life from one day to one year, and numerous "directions" and "aphorisms" which cannot fail to be of the greatest value to nurses and mothers. The actual chart is printed on a large card and the specimen before us gives a view of the progress of a child up to the age of two years. The abscissæ of the chart answering to the dates in an ordinary temperature chart are at the top weeks, at the bottom months, so that when the chart has been kept in weeks, beginning from the left hand bottom corner proceeding towards the right, it can be continued by months, starting from the right hand bottom corner proceeding towards the left. The ordinates answering to degrees of the thermometer in a temperature chart show degrees of weight increasing by quarter pounds.

Golden Rules of Skin Practice. By DAVID WALSH, M.D. Edin., Honorary Physician to the Western Skin Hospital. Golden Rules Series No. VIII. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent and Co., Limited. 16mo. 1900. Pp. 102. Price 1*s*.—This little book is one of a series, and therefore has been written to correspond with the other members of that series. It contains many useful hints for treatment and many general "aphorisms" relating to dermatology. The symptomatology and diagnosis are less fully described. The teaching is sound on the whole. We would, however, demur to the following statements: "Incise both boils and carbuncles early. The old-fashioned heroic crucial incisions are nowadays abandoned." It is true that a mere crucial incision is not now used for a carbuncle, but the best treatment is now even more "heroic," for the whole carbuncle is scraped away with a sharp spoon and the denuded surface is swabbed with a strong antiseptic. In the treatment of lupus nothing is said of the value of light, although the use of the Roentgen rays is mentioned.

Minor Surgery and Bandaging. By HENRY R. WHARTON, M.D., Demonstrator of Surgery in the University of Pennsylvania, Surgeon to the Presbyterian Hospital, &c. Fourth edition, thoroughly revised and enlarged. With 50 illustrations. London: Rebman, Limited. 1899. Pp. 594. Price 14*s*. net.—The title of this work does not accurately denote the subjects dealt with, for in addition to those usually comprehended in the title "Minor Surgery and Bandaging," we find included a fairly full account of nearly all the operations performed on the body, even gastro-enterostomy being described. These descriptions, however, are accurate but brief. The chapter on Bandaging is very good, and rather more forms are described than are usually met with in most English text-books. The chapter on Minor Surgery is complete and deals with antisepsis and asepsis, dressings, anæsthetics, trusses, catheters, methods of intestinal anastomosis, treatment of hæmorrhage, and so on. Chapters on fractures, dislocations, and operations are given, and are followed by chapters on amputations, excisions, and special operations. The book is carefully written and should prove very useful to a student of surgery or a house surgeon, and would often be found of value to those in practice. A few slips occur here and there which might be corrected in a subsequent edition.

A Manual of Jail Hygiene for the Use of Medical Subordinates. By Major W. J. BUCHANAN, B.A., M.B., B.Ch., D.S.M., Indian Medical Service, Superintendent, Central Jail, Bhagalpur. Second edition. Calcutta: Bengal Secretarial Press. 1900. Pp. 135. Price Indian Rs. 3; English, 4*s*.—We called attention to the first edition of this very useful little book designed for the information of medical subordinates in an annotation in THE LANCET of June 11th, 1898 (p. 1631), and in welcoming it we said that the subordinate should by its aid not only be able to carry out the orders of the medical officer but to know why those orders were given. We are glad to find that our estimate of this handy little volume has since been ratified by its success and the appearance of a second edition. It has, we understand, been officially adopted in the prisons of Bengal, Bombay, Punjab, Burma, Assam, and the Central Provinces of India. The object and intention which the author had in view in writing the book were excellent and calculated to meet a recognised want, and he has carried them out in a practical and useful way. The progress which has taken place, even in the short interval which has elapsed since its first appearance in January, 1898, has made it necessary to revise some chapters and to alter, and add to, others. The mosquito-malaria theory is simply and intelligently expounded, together with the new methods proposed for an attempted extermination of the mosquito—which probably have a better chance of being carried out in jails than outside them. Additions have also been made to the chapters on ventilation, scurvy, and dysentery, and an appendix on "How to Give Chloroform," by Lieutenant-Colonel E. Lawrie, I.M.S., has been added. The book, taken as a whole, supplies in a small compass a great deal of practical information set forth in a simple, intelligible style.

Wounds in the Rain. By STEPHEN CRANE. London: Methuen and Co. 1900. Pp. 347. Price 6*s.*—This collection of stories by the late Mr. Stephen Crane is concerned with the Spanish-American War of 1898. The stories are written with all the startling and grim realism which the "Red Badge of Courage" taught us to expect from the writer. Anybody who wants to understand the sort of thing our men have been enduring in South Africa will get a clear idea from reading this book, more especially the chapter entitled "Marines Signalling under Fire at Guantanamo." Take this passage: "The noise; the impenetrable darkness; the knowledge from the sound of the bullets that the enemy was on three sides of the camp; the infrequent bloody stumbling and death of some man with whom, perhaps, one had messed two hours previous; the weariness of the body, and the still more terrible weariness of the mind at the endlessness of the thing, made it wonderful that at least some of the men did not come out of it with their nerves hopelessly in shreds." If this is not the real thing, it should be.

JOURNALS.

The *Practitioner* in its December number provides rather a smaller amount of useful reading than is usually to be found in this periodical. The most important communication, in point of length at any rate, and probably also from other considerations, is a valuable article from the pen of Dr. William Hunter on Oral Sepsis as a Cause of "Septic Gastritis," "Toxic Neuritis," and Other Septic Conditions. There can be no doubt that, as Dr. Hunter insists, the condition of the mouth generally receives too little attention from the medical man. Beyond an inspection of the tongue and fauces the general practitioner is not wont to bestow much care upon oral examination—at any rate, if the nature of the case does not at once point to the mouth as a seat of the original disease. The gums and the sockets of the teeth, however, are quite a sufficiently spacious field for serious septic influences, and it is in this way, as Dr. Hunter shows, as well as by the purely mechanical effects causing inefficient masticatory power, that the diseases of the teeth or of the tissues in their neighbourhood may play a very important and entirely unsuspected part in the production of serious disorder. Dr. Hunter's writings on this matter render valuable service by provoking more detailed routine examination of patients' mouths, although some of the remote effects which he traces to oral sepsis must, we think, be more fully proved to own this specific origin before their connexion with oral sepsis as a cause can be admitted with perfect freedom. A clinical lecture on Supra-pubic Cystotomy by Mr. Alfred Willett and a clinical demonstration on the Anatomy of the Spinal Cord by Dr. Howard Tooth are the other original articles of the number. Mr. Willett details some instructive cases. He is sceptical as to the value in diagnosis of the cystoscope, and we believe that most surgeons will agree with him that increasing familiarity with the use of this instrument does not afford the advantages that were looked for. In the Roentgen rays, too, Mr. Willett fears that surgery of the bladder will find no aids to diagnosis and we are not aware of cases that controvert his opinion. The "Medico-literary Causerie" deals with "Poisoners, Old and New," and is entertaining if somewhat lurid reading. A novelist of sensation hard put to it for a good story might very profitably consult the pages of this department of the *Practitioner*. We are comforted in reading it to reflect that the methods of analytical chemistry are nowadays so much more effective and far-reaching than they were when the poisoners of the seventeenth century flourished. Under the heading Public Health there is a very instructive account of clinical experiments carried out by M. Grancher in the Hôpital de la Rue de Sèvres at Paris to prevent the introduction and spread of infectious diseases among children in hospital. The methods employed are based upon the theory that infection is conveyed from patient to patient by direct contact or by indirect contact by means of the attendants—viz., nurses, students, and physicians. The infant patient is isolated in a sort of box and removed from the ward, and a strict *régime* of antisepsis and clothing is adopted by attendants who are brought into contact. The measures appear to be highly successful, and we recommend the detailed account of them to the perusal of our readers. The "Review of Medical Sciences" deals with bacterial and electrical therapeutics, with midwifery, and with dental surgery, the article upon the last subject touching on ground more thoroughly worked out in the writings of Dr. William Hunter to which we have already referred.

ASYLUM REPORTS.

Roxburgh, Berwick, and Selkirk District Asylum (Report for the Year ending May 15th, 1900).—The average number of patients resident in the asylum was 292 and comprised 134 males and 158 females. During the year 60 patients were admitted, of whom 33 were males and 27 were females. Of these, 15—viz., five males and 10 females—were not first admissions. Dr. J. Carlyle Johnstone, the medical superintendent, states in his report that owing to want of accommodation all private patients are now refused admission, except such cases as cannot possibly be provided for elsewhere. Among the cases admitted hereditary predisposition to mental disorder was ascertained to exist in 40 per cent., while suicidal tendencies were present in 37 per cent. Indeed, half of the patients with suicidal tendencies had made serious attempts to terminate their lives before admission to the asylum. 50 per cent. of the admissions suffered from some form or other of serious bodily disease. 11 patients were the subject of heart disease, five had phthisis, five had epilepsy, while eight patients were over 70 years of age on admission. "In only a small percentage of the admissions was there any prospect of recovery." During the year 18 patients were discharged as recovered, or 6 1 per cent. of the average number resident. The deaths during the year amounted to 25, or 8 5 per cent. as calculated on the same basis. Of the deaths one was due to rupture of the aorta, four to cardiac disease, five to influenza, five to phthisis, one to suicide by hanging, and one to suicide by taking carbolic acid. A severe epidemic of influenza visited the asylum in January and February, 1900; 30 per cent. of the patients and 40 per cent. of the staff were attacked, the latter making good recoveries. The necessity of increasing the accommodation for male patients is becoming every year more apparent, the present condition of things—viz., the absence of such accommodation—being "productive of much anxiety and unpleasantness." The asylum committee state in their report that the expenditure for the past year upon the asylum buildings, furniture, and the like amounted to £3983 5*s.* The statement of garden receipts and expenditure shows a net profit on the year of £115 12*s.* The Commissioner in Lunacy states in his report that "a larger and better equipped hospital section for male patients is much required, as the present male sick-room accommodation is both inadequate and unsuitable." The number of attendants and servants who have been engaged during the year is 13, the number who resigned is seven, and the number dismissed is five. The patients bear evidence of being well cared for, and the books and registers were examined and found to be regularly and accurately kept.

MUNICIPAL CONTEST IN GATESHEAD.—The election for the seat on the Gateshead Council rendered vacant by the death of the ex-Mayor took place before Christmas. There were four candidates and the seat was gained by Dr Alfred Cox, Cotfield House, Bensham.

THE LANCET.

LONDON: SATURDAY, DECEMBER 29, 1900.

THE ANNUS MEDICUS 1900.

MEDICINE AND THERAPEUTICS.

AMONGST the many diseases which have been particularly studied during the past year two stand out more prominently than the others owing to the number of observers who have been at work in investigating their origin, mode of spread, and possible prophylaxis—these two maladies are malaria and plague.

Malaria.

Nearly six years ago Dr. PATRICK MANSON brought forward the theory that a certain species of mosquito is the carrier of the malarial parasite. This suggestion has passed the stage of surmise and it may now be considered as a fact. The investigations of Dr. PATRICK MANSON, Professor CELLI, Professor GRASSI, Professor KOCH, Professor BASTIANELLI, Professor BIGNAMI, Major R ROSS, I M S., and others have proved beyond doubt that malaria is conveyed and spread by means of certain species of mosquito, and that the essential link in the life-cycle of the parasite—the means by which its existence is assured from year to year, in Italy at least—is malarial man. The period of the year at which malaria is most prevalent corresponds to the times at which the mosquitoes are most numerous. Older observers had noted that malaria was most likely to be contracted about sunset and at night. The anopheles lies hidden by day and pursues its search for food at night. Again, the old observers were aware that the "miasm" was often very limited and did not extend to any great elevation. Naturalists know that the mosquito does not fly far from its birthplace or mount high in the air. The various forms of the malaria parasite have been demonstrated in the bodies of the anopheles. An experimental proof of this theory was established by Mr. P. THURBURN MANSON, who submitted himself to be bitten by some mosquitoes of this species which had been forwarded to England, with the result that he became infected with an attack of tertian fever. Experiments equally important were carried out by Dr. L. SAMBON and Dr. G. C. LOW, Signor TERZI, and two Italian servants in the Roman Campagna at a spot known to be intensely malarial. By taking every precaution against the bite of the mosquitoes they remained entirely free from infection, in marked contrast to their neighbours, who were either ill with fever or had suffered malarial attacks. Most of the investigations hitherto carried out have been confined to the malarious districts of Italy. Whether the same results will be obtained in other parts of the world remains to be seen. In many regions in which malaria is prevalent it is probable that equally satisfactory results will be arrived at. It has been shown that if due precautions are taken a great degree of protection can be obtained. The importance of such knowledge can scarcely be over-rated. It is possible, however, that in some districts we have to do with a different disease to the "malaria" that is found in Italy, and that we must seek some other means of its spread than in the anopheles. Interesting experiences have also been related by Professor ANGELO CELLI as the results of experiments carried out in Latium.

Plague.

Plague has appeared in many parts of the world during the year, and thus additional importance was attached to the report of the Indian Plague Commission, especially with that part which deals with the value of Mr. HAFFKINE'S system of preventive inoculation. The conclusions at which the Commissioners arrived are briefly that inoculation sensibly diminishes the incidence of attacks and the case-mortality in those persons who have been inoculated. The inoculation, however, does not appear to confer any great degree of protection within the first few days after the operation has been performed, though it ultimately confers protection which lasts for a number of weeks—possibly for months. The varying strength of the vaccine employed apparently had no great effects upon the results hitherto obtained, and the true value of Mr. HAFFKINE'S method will probably not be thoroughly tested until after an accurate method of standardisation has been devised. In the report of the Commissioners the method of preparing the vaccine was fully discussed, but it is obvious that much yet remains to be done before the practice of inoculation with a fluid of this nature will fulfil all the conditions which sound scientific reasoning rightly demands of it. For the present—and this in itself is no small achievement—the method may justly claim to be a practical success and very nearly, if not quite, to attain to the high ideal of a certain and safe prophylaxis against one of the most deadly of all diseases. Time will doubtless remedy existing defects, and it is regrettable that the members of the Commission contented themselves with merely pointing out the imperfections and the necessity for overcoming them, and did not, with some minor exceptions, make any definite suggestions or recommendations as to the manner in which they should be overcome.

On August 27th and 28th general currency was given to a disquieting report that cases of suspected plague had occurred in Glasgow. The confirmation of the clinical diagnosis was soon forthcoming, and the country was then made aware of the unwelcome fact that after an absence of more than 200 years plague had once more obtained a certain amount of foothold in Great Britain. The original cases of imported plague could not be traced, but as soon as the diagnosis was established the whole forces of resistance at the disposal of the municipality of a great city, organised by one of the best public health departments which we possess, were at once brought into action. The procedure adopted—prompt hospital isolation, medical house-to-house visitation, formation of "cleansing areas," search (with the aid of bacteriology) for cases bearing suspicious similarity to plague, observation of "contacts," along with other administrative measures—soon had a marked effect, and the outbreak was speedily brought under control. A more extensive outbreak of the disease occurred in Sydney, Australia. The first case appeared on Jan. 27th, and up to July 28th there had been 302 cases and 102 deaths. During the whole of July, however, only six cases were reported, and for the week ending July 28th no fresh cases were notified although one of the patients in the hospital died.

The occurrence of the above outbreaks lent additional interest to the Harben Lectures delivered at the Royal Institute of Public Health by Professor A. CALMETTE, Director of the Pasteur Institute at Lille. In the course of these instructive lectures Professor CALMETTE remarked that it was now impossible to deny that the use of anti-plague serum as a preventive measure had been proved to be an excellent means of preventing propagation of plague in an affected centre, as by its means persons exposed to the contagion would be rendered absolutely and immediately immune. Unfortunately the immunity thus obtained was of short duration, and it was therefore necessary during an epidemic to repeat the injection every week The differences in the results thus obtained by Professor CALMETTE and those produced by Mr. HAFFKINE'S method are remarkable. Professor CALMETTE, indeed, alluded to the latter, but remarked that "this method was, however, open to some objection."

Anti-typhoid Inoculations.

The success of anti-typhoid inoculations is unfortunately by no means insured, and we must await the official returns from South Africa before arriving at any conclusion on the subject In the early part of the year Professor A. E WRIGHT, of the Army Medical School, Netley, published a paper on the Results which have been obtained by the Anti-typhoid Inoculations His statistics, however, did not include a large number of cases, and although the results might be characterised as encouraging, yet a far larger number of cases will have to be analysed before any decision is arrived at. The experience of our troops in South Africa has been the severest possible test of the value of the inoculations, and the opinions of the medical officers who have had only too many opportunities of observing how far the inoculations protect men from attacks of typhoid fever are universally awaited with the greatest interest and anxiety.

Epidemic Diarrhœa.

The subject of epidemic diarrhœa has been brought prominently before the medical profession during the past year. Dr. F. J. WALDO chose it for his Milroy Lectures. Epidemic diarrhœa—to choose one of its many synonyms—is one of the chief causes of the vast infantile mortality which has hitherto eluded the control of the public health reformer. Its etiology has not been definitely established. Dr. WALDO, from the analysis of a vast array of statistics, arrived at the conclusion that diarrhœal diseases are first and foremost the result of strictly local conditions; another suggestive feature in the history of the malady is the fact of its vastly greater incidence upon hand fed as compared with *breast-fed* infants Dr. WALDO suggests that epidemic diarrhœa is probably due in no small measure to the pollution of street-dust by horse dung. This theory would account for the disease being more prevalent in towns and amongst hand-fed children, since milk, which forms the staple article of infantile diet, is freely exposed to invasion by town dust, both in the shop of the retailer and in the larder or cupboard of the consumer. In connexion with this same subject the Home Counties Branch of the Incorporated Society of Medical Officers of Health made a sound request when they asked the Royal College of Physicians of London to appoint a committee to deal with the question of nomenclature in connexion with the certification and classification of "diarrhœa deaths." This request was acceded to and there is now an official name for the disease.[1]

The Open-air Treatment of Tuberculosis.

Many observers have reported on the treatment of pulmonary tuberculosis by the "open-air" method. This therapeutical measure seems to meet with increasing favour, and numerous sanatoria for the reception of phthisical patients are being built in different parts of the country that offer satisfactory sites in reference to exposure and soil.

Yellow Fever.

An interesting report on yellow fever was issued by Dr. WASDIN and Dr. H. D. GIDDINGS, of the Marine Hospital Service, Washington. They were deputed to study the etiology of yellow fever with special reference to Professor SANARELLI'S claim to the discovery of the specific bacillus of that disease. They came to the conclusion that there can be no doubt that the bacillus icteroides is the causal agent of yellow fever and they also are of opinion that infection takes place by the respiratory tract and not, as has generally been held, by the alimentary canal Other experiments of the Commission proved that the bacillus icteroides is very susceptible to the action of bactericidal agents.

The Purity of Glycerinated Vaccine Lymphs.

During the year we published a report of a Special Commission which we appointed to investigate the purity of various glycerinated calf vaccine lymphs at present in use. The general result of the inquiry, which was based on the application of the bacteriological test employed on several occasions and to different samples of the various commercial "lymphs," was the gratifying one that as regards their purity—i.e., freedom from harmful bacteria—very many of these samples were good. About half the samples were above the standard of the lymph supplied by the Local Government Board.

Rabies.

Professor J. ROSE BRADFORD in delivering two lectures on rabies brought forward many valuable facts in relation to that disease, referring more especially to its nature, symptoms, and diagnosis. His remarks on incubation, though brief, were full of interest He observed that most authorities are agreed that in man the incubation period lies between 20 days as a minimum and 60 days as a maximum, and that it is rare after three months and very rare, if not unknown, after six months. In cases which have been recorded after as long a period as 18 months the time has probably been reckoned on an erroneous basis

"The Fourth Disease."

In publishing a paper under the title of "On the Confusion of Two Different Diseases under the name of Rubella (Rose-rash)" Dr. CLEMENT DUKES has done good service to the profession, and indirectly to the public. To the mind of many observers Dr. DUKES has shown conclusively that there exists a disease which so nearly resembles scarlet fever as to have been frequently mistaken for it even when the opportunity has occurred of observing a multiplicity of cases. Whether this affection is specifically distinct, and not a form of German measles as is currently believed, is a point concerning which for the present judgment must be suspended. It is sufficient to say that Dr. DUKES made out a strong case for his theory. Future observations should determine the truth.

The Bacteriology of Scarlet Fever.

Further investigations have been made as to the bacteriology of scarlet fever by Dr. CLASS; and although it cannot be said to be proved absolutely that the diplococcus discovered by that observer is the specific germ of scarlet fever much evidence points in this direction. The streptococcus recently described by Professor ADOLF BAGINSKY and Professor PAUL SOMMERFELD as constantly present in the throat secretions and blood of patients suffering from scarlet fever may possibly be the same microbe as that discovered by Dr. CLASS, but the last named has pushed his investigations much further than have the German observers.

Scurvy.

Contributions on scurvy expressing rather conflicting views have been published by Mr. F. G. JACKSON and Dr. VAUGHAN HARLEY, Staff Surgeon W. E HOME, R N., and Professor WRIGHT of Netley, the latter maintaining that scurvy is a condition of acid intoxication very similar to the acid intoxication which can be experimentally produced in herbivora by the injection of a surplus of mineral acids.

Diabetes.

Useful and interesting work has been accomplished by Dr. F. W. PAVY and Dr. R. SAUNDBY on diabetes. Dr. PAVY dealt more particularly with the disease in its varied manifestations under the heading "Differentiation in Diabetes," in a paper read at the Thirteenth International Medical Congress held in Paris on Fundamental Points connected with the Pathology of Diabetes Mellitus. Dr. SAUNDBY, in a paper read before the Gloucestershire Branch of the British Medical Association at Cheltenham, referred more especially to the treatment of the disease, laying stress on the necessity of frequent examination of the urine in order to obtain information as to the quantity of carbohydrate food that the patient might advantageously take.

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[1] See Annus Medicus, Royal College of Physicians of London, p 1906.

Lectures at the Colleges and Societies.

The various official lectures delivered during the year have been of the greatest interest. Dr. P. HORTON-SMITH delivered the Goulstonian Lectures before the Royal College of Physicians of London, taking as his subject the Typhoid Bacillus and Typhoid Fever. He discussed the various forms of microbes which might be mistaken for the pathogenic micro-organism and the different tests which have been prepared to distinguish them, and also showed a desire to reform our present classification of the disease.

The Lumleian Lecturer at the same College was Dr. W. B. CHEADLE who selected as his theme Some Cirrhoses of the Liver. His remarks on prognosis and treatment were particularly noteworthy.

The Croonian Lectures were delivered by Dr. F. W. MOTT, the subject being the Degeneration of the Neuron. The amount of matter condensed into these lectures was immense and well illustrated the extent of the change in our conceptions involved in the new doctrine of the neuron and also indicated that at the present time research is only laying the foundations on which the superstructure of knowledge must be built.

The Bradshaw Lecturer at the Royal College of Physicians of London was Dr. ARCHIBALD E. GARROD. His investigations on the Urinary Pigments in their Pathological Aspects have been deep and thorough and he proved that in certain cases the examination of the colouring matters of the urine may afford information of real diagnostic value which is not readily obtained in other ways.

Dr. NORMAN MOORE'S Hunterian Lecture, delivered before the Hunterian Society, on the Clinical Study of Heart Disease, contained numerous practical points of great value in clinical work, whilst Dr. R. MAGUIRE in the Harveian Lectures delivered before the Harveian Society, dealt with the principal points in the prognosis and treatment of Pulmonary Tuberculosis, the experiments which he had made upon animals and upon himself as to the effects of remedies administered intravenously being especially noteworthy.

The Hygienic Treatment of Tuberculous Diseases.

In reviewing treatment during the year 1900 attention may justly be directed first to the development of those means which claimed our chief attention in the preceding year. The hygienic treatment of tuberculous disease in its various forms has passed from the phase of controversy and ardent partisanship to that of definite trial on our own soil, and important conclusions have already been arrived at, both as to the best means of carrying out the method and as to the particular types of case which may be expected to respond satisfactorily or otherwise. Whatever may be finally settled by a comparison of results in regard to the relative value of different climatic conditions it has been pretty well established that the essentials of open-air treatment are at hand in most districts of Great Britain and Ireland. The physical conditions which offer the greatest difficulties to the practical therapeutist and are the most prejudicial in recent experience to the patients are heat and wind, and these are not more prevalent here than in most parts of the continent. Among the types of case regarded as unfavourable for a somewhat rigorous course of treatment, in which exposure and over-eating constitute the most prominent factors, are chronic forms and those complicated with catarrh of the bronchial or gastric mucous membrane. Besides these, acute cases and such as are attended with complications do better by postponing the course of hygienic treatment till the more active manifestations have subsided. It has been found that many forms of tuberculous disease other than phthisis, particularly those affecting the skin, bones, joints, and serous membranes, may be beneficially influenced by open-air treatment, and the same may be said of many general diseases such as anæmia, cachexia of various kinds, and even the acute fevers and functional nervous disorders; the feeling of well-being, increased appetite, and improved sleep resulting from systematic exposure reacting favourably on all these conditions. There is no doubt that a well-organised institution under a firm and judicious chief affords many of the advantages of foreign travel and residence without the vicissitudes, defective dietary, fatigue, absence of good continuous medical advice and supervision, and separation from friends which detract so much from this manner of treating invalids. The apprehension of the sick lest they should be ill, or perhaps die, far from home which has deterred many from trying the effect of a sea-voyage or foreign residence is removed by the institution of sanatoria at home.

The Use of Gelatin Solution to Increase the Coagulability of the Blood.

Gelatin solution injected into the subcutaneous tissue or administered by the mouth or rectum has been recommended as increasing the coagulability of the blood. The preparation employed consists of 1·5 per cent. gelatin in 0 7 per cent. solution of sodium chloride, of which as much as 250 grammes may be employed at one time, the injection being repeated at intervals of a week in cases of aneurysm for from 12 to 18 weeks. PINSUTI of Rome prefers a 30 per cent. solution with 2 or 3 per cent. of carbolic acid injected deeply in three-gramme doses, as being less painful. LANCEREAUX and PAULESCO report favourably of the method in some cases of aneurysm, but owing to the difficulty of determining whether these are sacculated or diffuse before applying the remedy great difference of opinion has been expressed as to its value. In some instances it has proved ineffectual, or actually injurious by extension or displacement of the clot. This objection has not been raised against its use in cases of spontaneous hæmorrhage such as occur in various blood diseases, nor in those instances in which it has been employed for internal hæmorrhage from ruptured vessels out of the reach of surgical interference. As a topical remedy also in cases of epistaxis, gastric ulcer, and uterine hæmorrhage gelatin solution, has been employed with greater efficacy and less risk. The solution, of course, needs to be carefully sterilised and judiciously applied, but there is a wide field in which such an agent might prove of great value and even the only available resource, besides rendering possible by its preliminary adoption operations which could not otherwise be undertaken, as in cases of hæmophilia.

Operative Measures in Medical Cases.

In the development of operative interference in medical cases the value of laparotomy in tuberculous peritonitis has been established. Recoveries have been recorded both in instances of doubtful diagnosis and after exploratory incisions, where the tuberculous nodules have been recognised and the patients have subsequently recovered, not merely from the operation, but from the constitutional disease. Following upon these a number of cases have been intentionally explored with advantage statistically as compared with those treated on simple medical lines. The ascitic form is that which derives the greatest benefit, but the dry adhesive and the ulcerative suppurating forms also do well. The dry ulcerative and the miliary forms of tuberculous peritonitis do not lend themselves to treatment by laparotomy, and absolute contra-indications to the operation are found in advanced pulmonary tuberculosis, intestinal tuberculosis, and pronounced cachexia. On the other hand, absolute indications in favour of operation are intestinal obstruction or perforation and suppuration. As a less severe measure in the same direction M. BAYLAC at the International Congress of Medicine proposed lavage of the peritoneal cavity with sterilised water at 45°C. Eight cases so treated resulted in five recoveries, while in three others there was only temporary improvement, these having been previously operated upon. In acquired hydrocephalus following meningitis Dr. GROSZ[2] punctured the lateral ventricles through the anterior fontanelle, removing 40 cubic centimetres of fluid from the right and 70 cubic centimetres from the left with recovery of the patient and subsidence of the symptoms.

Drugs.

Among old drugs which have been applied in new directions or in modified forms may be mentioned Dr. BOURGEON'S employment of calomel in daily amounts of from three to six grains as a diuretic in heart disease irrespectively of the presence of dropsy and when there is no albuminuria or diarrhœa. Croton oil in doses of from one-eighth to one-sixth of a minim in a pill with liquorice makes an effective purgative, rarely rejected even in irritable conditions of the stomach, and promoting both peristalsis and secretion, thereby softening and loosening masses which in the pouches of the colon may be retained for weeks undisturbed by the ordinary hydragogue purgatives. This remedy acts efficiently in dilatation and atony of the stomach where other remedies are not absorbed, and proves of great service in stercoræmia, which is at the root of many obstinate functional conditions, such as asthma, migraine, epilepsy, dyspepsia, and the effects of high arterial tension.

Atropine in doses of from one-seventieth to one-fourteenth of a grain have been employed successfully by Dr. BATSCH of Grossenhain in cases of intestinal obstruction where the symptoms were subacute or where there was necessity to temporise. In some cases a single injection sufficed to produce an evacuation, followed by recovery. In others, the injection resulted only in the escape of flatus and a small quantity of fæces, definite relief only following a second injection on the next day.

Aspirin, the salicylate of acetyl, has been used successfully as a substitute for salicylate of soda. The new compound decomposes in the presence of an alkali so that under ordinary circumstances the stomach is unaffected and it is claimed in consequence that the disagreeable by-effects such as nausea and tinnitus are avoided in similar doses, while the anodyne and anti-rheumatic effects are the same.

Quinic acid, found by WEISS to possess the power of restraining the formation of uric acid in the system, has been combined with piperazine which exerts a solvent action. Experiments with quinate of piperazine showed that the diminution in uric acid when from five to eight grammes were administered daily, amounted to from 40 to 50 per cent., its place being taken by hippuric acid. The new drug exerts a great influence over gout and the uric acid diathesis. It is readily soluble and is given in five-gramme doses in two parts daily (30 to 40 grains twice a day).

Among the new derivatives of opium alkaloids heroin and dionin have both proved of value as sedatives, especially in cough. Of the former one-twenty-fifth-grain tabloids are effective, while the latter is given in doses of one-quarter of a grain. The products of coal-tar have furnished kryofin, possessing similar properties to phenacetine. The dose required is from one-half to three grammes (7–45 gr.) daily in divided doses, and its influence is chiefly in reducing temperature and as an anodyne. Pyramidon, dimethyl-amido-antipyrin, like antipyrin, reduces temperature but is thrice as active. The dose is from two to ten grains. It also relieves headache. The use of suprarenal gland has been extended with benefit to rickets and also to exophthalmic goitre. Vicarious action has been proved as regards metabolism between the ovary and thymus, which is further confirmed by the improvement obtained in chlorosis, exophthalmic goitre, and congenital debility by the administration of thymus gland in daily doses of from 15 to 30 grains.

SURGERY.

Surgery of the Alimentary Canal.

The surgery of the alimentary canal has probably attracted more attention during the present year than any other branch of the subject, and this is to be attributed chiefly to the fact that this portion of the body calls more frequently for surgical aid than does any other part or organ. In March Professor MAYO ROBSON delivered at the Royal College of Surgeons of England three lectures on the surgery of the stomach and a very good account was given of the present state of our knowledge on this subject. One of the most important questions raised by the progress of surgery in this organ is, Should any surgical treatment be applied to ulcers of the stomach when no perforation has occurred? At present the answer seems to be that an ulcer of the stomach does not need surgical interference until medical treatment has been thoroughly tried, but that if it should prove not amenable to medical treatment then surgical treatment is desirable. There are, however, two complications of ulcer of the stomach that require the intervention of the surgeon at an earlier stage. These are perforation and hæmorrhage. The operation for a perforated gastric ulcer has undergone no material change lately, but it is becoming distinctly rarer for the peritoneal cavity to be washed out by a large quantity of water, as was formerly the rule, and it is now more usual for the surgeon to content himself with wiping out so much of the effused material as can be reached. The results are certainly more satisfactory. The treatment of hæmorrhage from an ulcer of the stomach is as yet in a more unsettled state. Though laparotomy has been performed in many instances for acute hæmorrhage from an ulcer of the stomach, yet it is very doubtful if the results of this procedure are at the very least more favourable than those attainable by medical means. When, however, the hæmorrhage is chronic and persistent in spite of the regular employment of suitable medical treatment, then an operation is perfectly justifiable. What operation should be performed it is not so easy to say, but on the whole gastro-enterostomy seems to be the most likely to be of service. The cases of total extirpation of the stomach continue slowly to increase in number. Dr. VIEIRA DE CARVALHO has described in our columns one such case. It is difficult to believe that the necessity for such an operation can frequently arise, and it is not probable that the operation will ever become anything but very rare. The most satisfactory operation for obstructive dilatation of the stomach is not yet fully determined. Pyloroplasty, or the Heineke-Mickulicz operation, does not occupy quite so high a position in the opinion of surgeons as formerly, and its place has been taken in great part by one or other form of gastro-enterostomy. Mr. L. A. BIDWELL described 16 of these cases, for six of which gastro-enterostomy was performed, in three a pyloroplasty, and in three a pylorectomy. Only one patient died, and that death occurred two months after the operation.

Appendicitis still receives much attention and has been the subject of numerous papers during the year. Mr. C. B. KEETLEY has described a method which he is in the habit of employing for operating in appendicitis. He makes an incision through the anterior abdominal wall above the anterior superior iliac spine and above and parallel to the outer part of Poupart's ligament, dividing everything except the peritoneum, which is carefully raised from the iliac fascia so that the surgeon approaches the deep surfaces of the appendix. Mr. KEETLEY claims that this method may be employed at any stage of an attack. Dr. A. A. WARDEN advocates the method of removal of the appendix which was introduced by Dr. DOYEN. It consists in crushing the base of the appendix, then ligaturing it at the line where it has been crushed, removing the appendix with the thermo-cautery, and then inclosing the end of the stump by means of a double purse stitch.

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[2] Archiv für Kinderheilkunde, Band xxvii., Nos. 3 and 4.

We have published notes of several cases in which a persistent Meckel's diverticulum has given rise to obstruction of the bowels. This form of obstruction is by no means rare and is commonly met with in patients under 40 years of age. The majority of the patients recover if laparotomy be performed sufficiently early.

Both observation and experiment have demonstrated that removal of a large portion of the intestine is incompatible with life, but it is difficult to lay down any very hard-and-fast line as to how much may be removed with safety. Professor CARL SCHLATTER of Zürich in 1898 removed about six feet of small intestine from a young man and the patient has survived the operation two years, and an elaborate series of observations have been made as to the digestive powers of the patient. It was found that if care were exercised in the choice of food digestion was carried on without trouble and nutrition was well maintained, but that if the diet were unsuitable then digestion was very imperfect and the general nutrition failed.

There have been several successful cases of laparotomy for perforation of the intestine in the course of typhoid fever, and it is now generally agreed that the surgical treatment of this complication offers by far the best chance of a successful issue. In 21 cases in which it was done during the years 1895–1900 three recovered completely, and one other patient recovered from the operation but subsequently died from intestinal hæmorrhage.

Surgery of the Liver.

Although ptosis of the liver was described by CANTANI so long ago as 1865, yet it has not been fully recognised until comparatively recently, and surgical treatment was not employed until 1891, when hepatopexy was first performed. The operation in one form or another is now a well-recognised procedure and the present aspect of the subject is well set forth in a clinical lecture by Mr. FREDERICK TREVES which appeared in the columns of THE LANCET.

The danger from an extensive rupture of the liver is exceedingly great, for its tissue is very vascular and the hæmorrhage is always severe. Slight lacerations which end in spontaneous recovery and cases in which an encysted effusion may form are not rare, but there have been very few cases in which a successful attempt has been made to treat surgically a laceration of the liver. Mr. THOMAS CARWARDINE has reported such a case and he has been able to find only three others in which the patient has recovered.

Fractures and Dislocations.

The best treatment of fractures of bones is still a *quæstio vexata*, especially with some surgeons. A large number of surgeons, perhaps the majority, are quite satisfied with what may be called the ordinary method of treatment of simple fractures. But there are others who claim that with the methods in ordinary use the affected limb is incapable of being used naturally in nearly every case for a long period, while in many others the disability is permanent. There is much to be said on both sides and the subject was discussed at the annual meeting of the British Medical Association. It appears to be certain that the fixation treatment of fractures is sometimes carried to excess and that an earlier recourse to movement and to massage would be followed by a diminution in the stiffness which is so liable to follow the prolonged incarceration of a limb between rigid splints. Mr. W. H. BENNETT contributed a valuable paper on the subject. There are, however, others who claim that in a large proportion of the cases of fracture of the long bones it is quite impossible by manipulation to replace the fragments in their original positions, and that this should be done by laying open the fracture by an incision, and after replacing the fragments wiring or screwing the broken bone so as to keep the fragments in position. The chief advocate of this practice is Mr. ARBUTHNOT LANE. It is true that it is frequently impossible by manipulation to replace exactly the displaced fragments of the bone, but it is also true that in most cases the amount of the deformity is very slight, so slight as generally not to interfere in any way with the efficient use of the limb. There are, however, certain cases in which it is quite impossible to put the fragments into a satisfactory position, and in such cases the surgeon is fully justified in wiring. At the present time if the surgeon has any doubt as to the position of the fragments after putting up the limb he should obtain skiagrams of the limb from two points of view and this may be done without disturbing the splints. Dislocation of the shoulder-joint from muscular action is a somewhat rare accident. A case recorded by Dr. J. GRIMMOND SMITH occurred in a man, 46 years of age, who was a congenital imbecile. The fracture of the os calcis by the sudden contraction of the calf muscles is also very unusual. Dr. R. THOMSON has described a case of this accident, and the fracture resulted from a sudden and forcible flexion of the left ankle, and a portion of the os calcis of the size of a walnut was pulled away by the tendo Achillis, and a space of about five inches separated the two fragments. Under an anæsthetic it was easy to bring the two fragments into apposition and they were wired, and the patient recovered.

Dr. J. D. RICE had a case of fracture of the femur in a new-born child which he treated by flexing the injured limb on the abdomen so that the foot was over the shoulder of the same side. The bone united well without shortening.

Two rare cases of separation of epiphysis were recorded; in one a skiagram showed that the epiphysis of a metacarpal bone had separated, and in the other the epiphyseal head of the femur had separated in a girl, 15 years old.

The Lengthening of Tendons.

The operation for lengthening a tendon is still by no means a common one, though it is now many years since it was first performed. Dr. R. A. HIBBS has described an ingenious method of obtaining more increase of length than was possible by the usual method, and he has employed it successfully in five cases of talipes equino-varus the result of infantile paralysis. A case of great interest was described by Mr. HERBERT W. PAGE who had under his care a little boy suffering from Volkmann's ischæmic paralysis, the result of the application of splints for a fracture of the lower end of the humerus, or separation of the lower epiphysis on the humerus. The range of movement was so slight that Mr. PAGE decided to lengthen all the flexor tendons. This was done and a very marked improvement in the power of movement resulted.

Tetanus.

Tetanus as a complication of a surgical operation is now very rare, at least in this country, and therefore a case recorded in which it followed nephropexy for floating kidney is of much interest. As great care seems to have been taken in guarding against sepsis it is just possible that it was not due to the operation but was the result of an accidental inoculation.

Bullet Wounds.

It was only natural that the subject of bullet wounds should have received a large share of attention during the past year since a war has been in progress. The character of the wounds inflicted by the Mauser bullet excited no small measure of surprise amongst those surgeons who, like Sir WILLIAM MAC CORMAC, remembered the effects of the needle gun and the Chassepot. The Mauser bullet wounds were characterised by a rapid recovery in those cases in which no bone or important vessel had been struck. Often when a bone has been hit the bullet has drilled a clean hole through it without splintering. In other cases a bullet has traversed the abdomen and has apparently perforated the stomach or intestine, and yet no symptoms have appeared. It is true that in some cases the bone that has been struck by the bullet has been much comminuted, but even then complete consolidation may follow in spite of the compound nature of the fracture.

GYNÆCOLOGY AND OBSTETRICS.

During the past year there has been no diminution in the output of gynæcological and obstetrical literature. A great deal of good work has been done, and many accepted views have undergone criticism, rejection, or confirmation.

In a paper upon the Anatomy of the Uterus in Infancy and Childhood V. MANDACH reports that amongst 80 cases the Wolffian duct was present in 32 and remains of the duct in 14. The cervical mucous membrane is well developed at an early age, but in the body of the uterus very few glands are present before puberty. The limit between the squamous and the cylindrical epithelium is sometimes very definite, at other times the one gradually passes into the other. He found polypi at the internal os in no less than 35 cases.

Amongst gynæcologists fibroid tumours have as usual excited a great deal of discussion. Their natural history has been considered by Dr. F. H. CHAMPNEYS and Mr. ALBAN DORAN. The former, in a paper[1] read before the North London Medico-Chirurgical Society which was based upon the statistics of St. Bartholomew's Hospital, contends that the frequency of fibroid tumours is 0 01 per cent. in a population of 959,217 and that the mortality apart from operations is 0·000138 per cent. The views of Dr. CHAMPNEYS met with a good deal of criticism, and although, no doubt, the mortality from fibroid tumours is very low, yet his method of determining the percentage mortality by dividing the number of fatal cases seen in the post-mortem room into the number of female out-patients during a given period appears liable to fallacy. Mr. DORAN opened an interesting discussion upon fibroids at the meeting of the British Medical Association at Ipswich and showed how little we really know of the laws governing the development and growth of these tumours. Papers have appeared in THE LANCET by Dr. WILLIAM DUNCAN and Dr. W. J. GOW which illustrate how low the mortality from operations for fibroids may be at the present day. The former has operated upon 68 consecutive cases with four deaths and the latter upon 47 cases with only one death. With regard to the technique of such operations Professor HOWARD KELLY has published an important paper illustrating his method of dealing with very difficult cases, such as large adherent tumours or intra-ligamentary fibroids. He describes three ways of treating such cases: (1) median sagittal bisection of the tumour; (2) coronal bisection of the uterus; and (3) bisection of the tumour alone.

The treatment of cancer of the uterus was the subject of discussion in the Gynæcological Section at the International Medical Congress at Paris. Dr. RICHELOT in his report advocated vaginal hysterectomy very strongly. His mortality was only 6 per cent, and he could point to 18 patients who had benefited by the operation. He regarded the scope of abdominal hysterectomy as being very limited, and did not believe in the practice of "removing everything." The comparison with the removal of the breast and clearing out the axilla was entirely misleading. Professor DMITRI DE OTT also reported on the surgical side of the question. He thought surgical treatment the sole means of combating cancer of the uterus. It was possible to effect a complete cure by operation. He had observed a radical cure—viz., freedom from recurrence for six years—in 10 per cent. of his cases. Dr. CULLEN in his report described WERDER'S method of performing abdominal hysterectomy. In this operation the uterus is freed on all sides, the vagina is dissected free from the bladder and rectum, and the uterus is removed from the vagina after the pelvic and abdominal cavities have been closed. There is therefore no danger of the operator coming in contact with the carcinomatous cervix. Dr. A. H. N. LEWERS read a paper before the Royal Medical and Chirurgical Society upon the After-results in 40 Consecutive Vaginal Hysterectomies for Cancer of the Uterus. In 12 cases there had been no recurrence, in 18 there had been recurrence, while four patients had died. 11 patients had remained well for from two to seven years. The condition of patients who have an inoperable cancer of the uterus is so distressing that any method which holds out a prospect of improving the means of dealing with such cases is to be welcomed. GRUSDEW thinks that the use of carbide of calcium, first introduced by GUINARD in 1896, is a method of practical value. It depends for its action on the decomposition of the calcium carbide into acetylene gas and unslaked lime. It can be used in the out-patient department. The ulcerated surface is cleansed with wool and one or two pieces of calcium carbide are applied and kept *in situ* with a tampon. They are removed in a day or two with the dead tissue and are re-applied if necessary.

Last year CATHERINE VON TUSSENBROEK described a case of Internal Ovarian Pregnancy occurring in one of the Graafian follicles. From her observations she concluded that the occurrence of ovarian pregnancy could no longer be contested and that the case showed a normal development of syncytium which she regarded as a new proof that the syncytium is developed from the fœtal ectoblast. The validity of this case has been criticised a good deal during the past year and, as Mr. BLAND SUTTON has pointed out, there is no evidence of the presence of chorionic villi in the description or drawings and he is therefore disinclined to accept it as a proved instance of ovarian pregnancy.

A very interesting case of prolonged gestation was reported in THE LANCET of Jan. 13th (p. 94) by Dr. JOHN PHILLIPS, in which delivery occurred 311 days after a single intercourse. This same question came up in a case before the courts and was noticed by us at the time. In this instance the jury evidently took the view that the pregnancy had not lasted 311 days as it was sought to prove, but no doubt they were influenced by other extraneous evidence upon this point. Dr. PHILLIPS'S case is of course also open to question, since it is always difficult to prove coitus on one single occasion.

Evidence is accumulating as to the safety and dangers of medullary narcosis. MARX reports six cases of labour treated in this way. Ten minims of cocaine containing one-sixth of a grain were injected into the spinal canal between the third and fourth lumbar vertebræ. In four of the cases the child was born without the patient knowing it. In one of the cases the cervix was dilated painlessly, while another case was a failure owing to the inertness of e cocaine solution. All the patients complained of tingng in the legs and headache. The record is a very nteresting one, but this method of treatment is hardly likely o come into general adoption.

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[1] THE LANCET, Jan 20th, 1900, p. 147.

An important paper was contributed by Professor WHITRIDGE WILLIAMS to the June number of the *American Journal of Obstetrics* upon Placental Infarcts. He agrees with EDEN and other observers that this condition is usually the result of endarteritis of the vessels of the chorionic villi. Moderate degrees of infarct formation have no pathological significance, but when the infarcts are numerous and large they are often associated with death and mal-development of the child. They occur frequently in association with albuminuria, but the relationship of the conditions is unknown.

In his address in Obstetrics at Ipswich Dr. W. J. SMYLY[2] gave a review of the question of maternal mortality in childbirth during the present century. From the statistics of the Rotunda Hospital he found that during the period (1870–1876) 8092 women were delivered in the hospital, of whom 169 died, or one in 45·5; during a second period (from 1890–1896) 9085 were delivered, with 50 deaths, or one in 181·7, a saving of about 200 maternal lives in 10,000 deliveries. It was certain that, in hospital practice at any rate, a marked improvement had taken place during the last quarter of the century amongst all the three classes of fatal cases met with in childbirth—viz., puerperal fever, accidents of labour, and other causes. In view of the fact that where there was no "handling" there was no septic infection he advocated very strongly indeed the avoidance as far as possible of vaginal examination and the practice of abdominal palpation. The important question of the notification of puerperal fever was discussed in the Obstetrical and Gynæcological Section at the same meeting. In spite of the difficulties that lay in the way of carrying out complete notification most of the speakers were in favour of its being done. Dr. BERRY HART, who opened the discussion, was strongly in favour of notification. He thought, however, that more than this was necessary, and that municipalities must provide skilled nursing where necessary, removal to a properly equipped hospital when desired, supervision of nurses and midwives when solely associated with the management of a case, and supervision of their proper disinfection before they took up fresh work. It was of great importance that the matter should not begin and end in mere registration. Dr. R. BOXALL drew attention to the fact that while during the 10 years 1881–1891 the death-rate from puerperal fever in London was 21·5 and in the provinces 25·6 per 10,000 confinements, during the last seven years, 1892–1898, it was 19·2 and 24·1 respectively—figures which showed that there had been practically very little change in the rate of mortality from this disease. After considerable discussion, in which it was stated by several speakers that compulsory notification would be very prejudicial to medical men, the following motion was adopted:—

That in the opinion of this meeting it was desirable that notification of puerperal fever (septicæmia) should be adopted generally.

The second obstetrical subject for consideration before the meeting was the treatment of post-partum hæmorrhages. The discussion was opened by Professor BYERS, who declared himself in favour of gauze-plugging of the uterus rather than bimanual compression of the uterus in severe cases where the hot douche and other means had failed to excite uterine contractions.

Two important papers were read before the Obstetrical Society of London upon Incarceration of the Retroverted Gravid Uterus by Dr. J. SINCLAIR and Dr. MUNRO KERR. The latter reported amongst others the case of incarceration of the retroverted gravid uterus with hæmorrhage into the after catheterisation operated upon by Mr. MURDOCH CAMERON. He performed abdominal section, opened and emptied the bladder, and replaced the uterus. Dr. SINCLAIR in his paper protested against the performance of unnecessary operations in these cases. He recommended the introduction of a hard ring pessary, a method which usually resulted in speedy replacement of the uterus. In cases where sloughing of the bladder wall was imminent he would open the bladder by vaginal cystotomy, and he thought the same plan of treatment would answer quite well if hæmorrhage occurred into the bladder. In the discussion upon these papers most of the speakers said that reposition with or without an anæsthetic was all that was required in the great majority of instances.

An interesting paper was read before the same Society by Dr. THOMAS WILSON on Organic Affections of the Heart occurring in connexion with Fibro-myomata of the Uterus. The important question of the best mode of treating cases of rupture of the uterus was considered by Dr. HERBERT SPENCER. He concluded that abdominal section was rarely required and almost solely in cases where the fœtus had passed completely or in part into the peritoneal cavity. It was best done under local anæsthesia. Abdominal hysterectomy was hardly ever necessary, vaginal hysterectomy where the broad ligaments were very much damaged being a preferable operation. All incomplete tears implicating the broad ligament and most complete tears should be treated by packing the rupture per vaginam with iodoform gauze after removing clots and fluid blood. Dr. AMAND ROUTH made a very valuable contribution upon Porro-Cæsarean Hysterectomy. He considered it to be a poin worthy of discussion whether supra-vaginal amputation of th uterus (Porro's operation), with retro-peritoneal treatment the stump, was not safer for the patient in skilled hands tha a Sänger Cæsarean section with sterilisation, in all cases permanent obstruction to labour requiring abdominal secti except, perhaps, those due to cancer of the supra-vagi portion of the cervix.

In the section of obstetrics at the International Med Congress at Paris a discussion was held on the Etio and Nature of Puerperal Fever. Reports were presente MM. DOLÉRIS, MENGE, and KRÖNIG and PESTALOZZA. bacteriological aspect of the question was the one was mainly considered and in view of the special ledge of the authors their conclusions are of great The interesting question of the possibility of the occu of autogenetic injection was fully considered. M. D said that from the clinical point of view they were b admit the reviviscence *in situ* of pathogenic germs p ing in the cervix uteri and Fallopian tubes, and the po of such an infection becoming generalised after con without any fresh importation of pathogenic micr without. By autogenetic puerperal injection Dr. M Dr. KRÖNIG understood an infection produced by bacteria that have lived in the condition of sa before labour on the integuments of the externa or in the genital canal of the woman, and which, confinement or immediately after it, had in organism through the puerperal wound and set Taking clinical facts as a guide, the authors rare and favourable the autogenetic puerperal i duced by such saprophytic organisms. An infection produced by bacteria that had liv phytes in the cervical canal or in the cavity or in the tubes, could be absolutely reject organs never contained bacteria in the saprophytes. The primary infective foc commonly situated in the endometrium, mor cervix, and most rarely in the vagina or PESTALOZZA reported the results of his st channels by which the different pathogenic agents could penetrate into the tissues of a genital canal of a lying-in woman. The results of his researches had led him to the following conclusions. The aseptic course of events following delivery depended upon the rigorous disinfection of the external genitalia and of the hands and instruments of the obstetrician. Disinfection of the vagina and the use of douches before and after labour were useless and dangerous. If infectious symptoms arose it was of the greatest importance to determine the point of entry of the infection. He had only found the staphylococcus in the case of multiple abscesses in the wall of the uterus, and the bacillus coli communis in the case of fever arising from decomposition of the liquor amnii. The other obstetrical subject discussed was asphyxia neonatorum. Reports were presented by Dr. RIBEMONT-DESSAIGNES, Dr. CHAMPNEYS, and Professor SCHULTZE.

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[2] THE LANCET, August 11th, p. 385.

The disinfection of the hands in view of the large number of cases of puerperal infection in which the contagion is caused by them is a matter of much importance. The best means of accomplishing this has been considered by a large number of observers during the past 12 months. It seems certain that absolute sterilisation of the hands is not possible. VARNIER says: "Brushing of the hands in hot soap-and-water for five minutes does not secure asepsis, consecutive immersions in alcohol and in a 1 in 1000 solution of perchloride of mercury or a 1 in 2000 solution of biniodide of mercury does not sterilise the hands, but practice has shown that although a few microbes can still be found after such treatment, yet the sterilisation is sufficient from the point of view of prophylaxis. The germs may not be destroyed but their activity is impaired." The use of thin rubber gloves which can be sterilised is a precaution of great value to the surgeon or gynæcologist who is compelled to handle infected material.

Publications.

Amongst the more important books that have been published are Varnier's "Obstétrique Journalière," the completion of the German Encyclopædia of Midwifery and Gynecology, edited by SÄNGER and VON HERFF, and a very interesting book on Cancer of the Uterus by Dr. CULLEN of Baltimore.

OPHTHALMOLOGY.

Lacrymal Obstruction.

Amongst the more interesting events that have taken place during the past year in Ophthalmology are the discussion on the treatment of lacrymal obstruction at the Ipswich meeting of the British Medical Association, which was opened by Mr. GEORGE BERRY, from whose conclusion that as a rule there is a tendency to do too much few of those who have seen many cases will be inclined to dissent. In the course of the discussion which followed the reading of the paper it appeared that there was not any very general consensus of opinion in regard to the treatment to be adopted even in the more simple forms of disease, and much less consequently in the more severe forms—some using small and others large probes; some slitting up the canaliculus and inserting straight silver or gold styles; others moulding flexible lead ones to the form of the duct and copying the form in gold. One speaker used a rose-headed drill or burr worked by the ordinary dental engine; another was content with syringing at first and slitting up the canaliculus if this plan were ineffective or even laying open the sac and either removing it or applying the actual cautery. It is curious that no one suggested that the teeth were sometimes at fault and that the extraction of the second bicuspid or first molar tooth is sometimes sufficient to effect a permanent cure. Mr. DONALD GUNN noted the frequency of lacrymal obstructions in infants and believes it to be associated with congenital obstruction at the lower end of the nasal duct.

At the same meeting Dr. W. A. BRAILEY in his introductory address dwelt on the various forms of ocular disturbances that may occasion headache and indicated the means of relief. He considered that muscular efforts either of the intrinsic or extrinsic muscles are by far the most common, especially those concerned in the effort to correct hypermetropia and astigmatism; and Mr. RICHARDSON CROSS of Clifton took for the text of his discourse the treatment of chronic glaucoma. He advocated the early performance of sclerotomy and adduced cases in which the field of vision had improved when the tension was relieved. Other speakers preferred the postponement of the operation to a late date, combating the symptoms with myotics.

An interesting case throwing some light on the trophic influence of the fifth pair of nerves on the cornea has been recorded by Dr. VEASEY of Philadelphia in which, after removal of the lacrymal gland for obstruction of the lacrymal duct, anæsthesia and subsequently inflammation of the cornea occurred notwithstanding that the eye was carefully protected. It would seem, therefore, that this case supports the views of those who maintain that the cause of such an affection is not of a mechanical nature and due to exposure of an insensitive cornea, but that it is the result of some disturbance of the trophic nerves. The case under judicious treatment made a complete recovery.

The Value of Enucleation.

The relative value of enucleation as compared with the various proceedings by which that operation can be replaced was well discussed at the International Medical Congress which met at Paris and also by Dr. DEMARIA of Buenos Ayres. As Professor PFLUGER of Berne remarked, enucleation has the advantage of being a simple operation capable of rapid execution, but it has the disadvantage of leaving a small stump which allows of but little movement in an artificial eye adapted to it. Various methods have been adopted to remedy this evil. Dr. MULES eviscerates the contents of the globe and inserts an aseptic glass or metallic ball, uniting the edges of the sclerotic and rendering the wound subcutaneous by drawing the conjunctiva over it; Mr. W. A. FROST and Mr. W. LANG propose to inclose the glass bulb in the capsule of Tenon; whilst Dr. SCHMIDT recommends attaching the recti muscles to the conjunctiva. Lethal meningitis has been observed in cases of enucleation of the eye affected with acute inflammation and suppuration, but it has also been observed in similar cases when no operation was performed. None of these proceedings is a complete safeguard against the occurrence of sympathetic ophthalmia, nor does neurectomy constitute a complete and permanent protection against it. Dr. DE SCHWEINITZ considers that enucleation is indicated in cases of recent and severe injury, whilst MULES'S operation should be performed in cases of staphyloma corneæ, of absolute glaucoma, and of non-traumatic iridocyclitis. Dr. H. R. SWANZY of Dublin practises MULES'S operation in all cases of enucleation, excepting those of malignant tumour or cases where sympathetic tumour is to be dreaded. M. DE LA PERSONNE prefers the actual cautery, as recommended by M. PANAS, in which a large thermo cautery at a white heat is applied to the interior of the globe. The débris of the membranes are removed and the wound is cleansed with cyanide or chloride of mercury. No bleeding occurs; no sutures are needed and pain is abolished.

Retraction Movements of the Eyeball.

Dr. JULIUS WOLFF of New York has described cases of retraction movements of the eyeball, a condition which has attracted but little attention. It appears to be associated with a congenital defect in the motility of the retracted eye and the retraction invariably takes place during attempted inward rotation, a forward movement of the globe occurring together with widening of the palpebral fissure on efforts to evert being made. He agrees with TUERK in attributing it to paralysis of the external rectus, which is converted into an unyielding strand of connective tissue.

Electric Light and Blindness.

That the employment of electricity is not quite free from danger to the eye is shown by a case under the care of Dr. UHTHOFF in which the rays proceeding from an arc light fell suddenly upon the left eye, the other being closed, with the result that a central scotoma was observed in the eye extending about 10° from the point of fixation. On ophthalmoscopic examination a number of yellowish-red points were found scattered about the macular region. Dr. DUNBAR ROY of Atalanta reports three cases where temporary blindness followed exposure to the flash of light due to the accidental crossing of two electric wires carrying a voltage of 500.

Colour-blindness.

Dr. W. THOMSON of Philadelphia has devised an instrument for diagnosing colour-blindness. It is composed of coloured glasses set in the periphery of a disc capable of revolving in front of a light. The glasses of this disc can be covered by a set of glasses set in a second disc of which one is white ground glass, one deep London smoke, one pink, one green, and one cobalt glass, and in addition one disc is perforated by holes of different size to moderate or to intensify the light. This instrument with Dr. THOMSON'S colour-stick constitutes the means of examination for the colour sense practised on the Pennsylvania Railway and on 150,000 miles of railroad in America. Dr. CHARLES WILLIAMS of Boston has also brought before the American Ophthalmological Society a lantern for testing colour perception. Dr. WARD HOLDEN and Mr. K. BOSSE of New York have made a series of experiments on children in regard to colour vision and find that under two years of age infants are chiefly attracted by reds. Then follow some years of comparative indifference to colour, but at the age of five or six blue is almost universally preferred.

The Mechanism of Accommodation.

The explanation of the act of accommodation advanced by VON HELMHOLTZ and given upon his authority in most textbooks was some years ago impugned by Dr. TSCHERNING, a Russian ophthalmologist of great ability. Briefly stated, the view of VON HELMHOLTZ is that in repose the lens is flattened by traction exerted by the zonule, whilst in accommodating for near objects the ciliary muscle contracts, and as its anterior margin is considered to be fixed it draws the choroid forwards, relaxes the zonule, and the lens becomes more convex anteriorly owing to its elasticity. Dr. TSCHERNING contended that the contraction of the ciliary muscle in accommodation rendered the zonule tense instead of relaxing it, and the pressure on traction exerted on the lens produced a kind of lenticonus or increased curvature anteriorly. Dr. W. N. SUTER of Washington, as the result of a series of experiments, pronounces in favour of VON HELMHOLTZ'S theory, maintaining that the increased prominence of the anterior surface of the lens in accommodation does, indeed, occur, but only in old animals—that is to say, precisely at a time when the accommodation faculty is failing or is lost and is then due to the bulging of the hard nucleus when the lens is flattened as a consequence of the relaxation of the zonule when the ciliary muscle contracts.

The Visual Area.

Dr. JOSEPH SHAW BOLTON has made an important contribution to Ophthalmology by his research on the exact histological localisation of the visual area of the human cerebral cortex, derived from a study of lesions causing blindness, and of the histological examination of the occipital cortex. The area chiefly occupies the body of the calcarine fissure, but extends to some adjoining parts. The portion of this area to which afferent visual impressions primarily pass is the region of the cortically situated line of Gennari, and it constitutes the cortical projection of the corresponding halves of both retinæ. The part above the calcarine fissure represents the upper corresponding quadrants and the part below the lower corresponding quadrants of both retinæ. It is sometimes of importance to see with the ophthalmoscope as far forwards as the tips of the ciliary processes. Dr. TRANTAS of Constantinople has suggested a means by which this may in most instances be accomplished—namely, by pressing with the finger on that region whilst the patient is under examination. As a rule, even when examined most obliquely the parts in front of a circle drawn at a distance of one-third of an inch from the sclero-junction are invisible. By pressure one-eighth, or even one-sixth, of an inch more may be brought into view. The anatomical seat of the lesions which are supposed with some show of reason to result from the toxic influence of alcohol and to lead to impairment of vision has been investigated by Dr. BASIL SIEGFRIST. It may be, seeing that complete recovery is often the result of appropriate treatment, that, as Mr. PRIESTLEY SMITH suggests, in many instances there are no lesions, but a certain pallor of the discs is of common occurrence, and if indulgence in alcohol is carried to excess atrophy of the optic nerve may ensue. By some this is attributed to interstitial inflammation of the connective tissue forming the trabeculæ, the proliferation and contraction of this material destroying the nervous tissue. Others hold that the nerve tissue is primarily attacked and its functions are impaired, the increase of the connective tissue being secondary. Dr. SIEGFRIST supports the former view.

The Treatment of Entropion.

The treatment of entropion was the subject of two papers and a discussion in the American Ophthalmological Society. The extreme irritation and discomfort of this condition as well as the danger of rendering the cornea opaque and causing loss of vision and the difficulty of effecting a cure have led to the adoption of many operative procedures, some of them of great antiquity. Where many operations have been proposed for a particular disease it may be taken for granted that no single one is always appropriate and successful. Some slight cases may be cured by the simple expedient of applying elastic collodion to the outside of the lid, others by the removal of a narrow horizontal strip of skin, others by horizontal incision of the conjunctiva and the insertion of a strip of skin taken from some other part of the body, as of the skin from behind the ear, others have applied electrolysis to the skin, and others have made an eschar with caustic potash. Dr. EWING of St. Louis makes a conjunctival flap, then a horizontal incision through the tarsus but not through the muscle, and everts the free edge over a small roll of lint by two or three sutures. The posterior flap of the divided conjunctiva is finally stitched into the angle of the wound. Dr. WEEKS of New York makes a cut along the whole length of the lid between the cilia and the Meibomian follicles and another one three millimetres below through the skin, he then removes a wedge-shaped strip of the tarsus and inserts a piece of mucous membrane into the wound.

Treatment of Magnetic Foreign Bodies.

Dr. COPPEZ of Brussels and ISODORE GUNZBURG have written an interesting article on the diagnosis and treatment of iron fragments that have penetrated the globe of the eye. Their observations, which are numerous, show that the chances of recovery with useful vision, though always doubtful, are far greater when the position of the fragment is in the anterior than in the posterior region of the globe. The means of diagnosis they employed was the magnetorium of **GÉRARD**, which they found to be simple, effective, and capable of easy manipulation. Dr. **LIPPINCOTT** of Pittsburg, Pa., employs for the purpose of diagnosing the presence of particles of iron in the eye a magnet weighing nine pounds and capable of lifting a weight of 50 pounds. Its application is facilitated by supporting it with a cord passing over a pulley and terminating in an equipoise.

Literature.

Dr. W. **NICOLAEW** and Professor J. **DOGIEL** describe in Pflüger's *Archiv* the mode in which they have obtained photographs of the inverted image of the fundus of the eye and give two photographs. The *Optician* issued weekly and intended primarily for the trade is a very well-conducted journal and contains much useful information on optical subjects. It has published during the past year **PEREIRA** on Refraction and Dr. **BREWSTER'S** Optics considerably enlarged and brought up to date. The fourth volume of Dr. W. F. **NORRIS** and Dr. C. A **OLIVER'S** valuable System of Diseases of the Eye by various authors has been published, containing an account of the motor apparatus of the eye, of the cornea and lens, and of the refraction of the eye. There is also a chapter on Medical Ophthalmology. Dr. **CHARLES MAY** of Columbia University, New York, has published a good manual of the Diseases of the Eye. The Refraction of the Eye, including a complete treatise on Ophthalmometry, has been written by Dr. A. **EDWARD DAVIS** and constitutes a very sound guide to the student and practitioner. Professor O. **HAAB** has published a third and enlarged edition of his useful Ophthalmoscopy which represents in chromo-lithography many of the diseases of the fundus.

Miscellaneous.

The careful observations of Dr. A. **PICHLER** during the year have demonstrated what previously was only believed to occur, that a partial decussation of the optic-nerve fibres takes place in the chiasma. The non-decussating portion occupies chiefly the lateral and dorso-lateral portions of the chiasma. In the optic tract they are situated in the dorsal two-thirds. The decussating fibres are situated mesially, and some of the fibres form short loops passing from one optic nerve to the other.

Cases continued during the year to be reported of high, or of rapidly increasing, myopia in which the lens has been removed with satisfactory results, Dr. **KOLLOCK** of Charleston, S C., for example, giving a case where after removal of the lens the vision with a low convex glass and astigmatic correction was such that the smallest print was easily read by the patient.

As iodoform is often freely dusted over the wound left after enucleation it is perhaps expedient to notice that various cases have been recorded in recent ophthalmological journals of impairment of vision due to the poisonous effects of iodoform. The symptoms observed have been attributed to the development of a toxin by micro-organisms in the eschar produced by the drug.

FORENSIC MEDICINE.

During the present year a large number of actions have been tried in the civil courts in which medical men have appeared as plaintiff or defendant and very generally with the result that the morale of the profession has been maintained and even enhanced.

Mr. J. L. A. **HOPE** sued the Chertsey Board of Guardians in the County Court for £7 7*s.*, his fees for examining seven persons for the purpose of certifying under the fifth subsection of the 24th section of the Lunacy Act of 1890. The Guardians, it will be remembered, proposed to pay only half a guinea for each case as, in their opinion, reasonable remuneration for the service rendered. The Act does not fix a definite sum, but it was shown that one guinea was the amount usually awarded and judgment was very properly, we think, given for the plaintiff.

The resident medical officer of the Leeds Public Dispensary and his locum-tenent were summoned at the instance of the Registrar-General for having contravened the provisions of the Births and Deaths Registration Act of 1874. The former gentleman attended a child at the dispensary. He was afterwards absent from the institution for a time, leaving some open death certificates signed by him. 15 days after the child was taken to the dispensary the locum-tenent, who had no personal knowledge of the case, filled in the particulars as to the cause of death on one of the forms referred to. It was not contended by the prosecution that there had been any attempt wilfully to issue a false certificate; nevertheless there had been great irregularity. The magistrate imposed a nominal fine in each case, "the amount of the penalties being paid as the costs of the prosecution." We took occasion to endorse the action of the Registrar-General, maintaining, as we have always done, that certification of death should be in strict accordance with the terms of the Act.

In the Queen's Bench before the Lord Chief Justice Messrs. **ANDERSON** and **FENNER** sued a Mr. **MOELLER** for the payment of fees for professional services. It was pleaded in defence that the charges were exorbitant, and that there had been want of proper care and attention. Evidence was called to refute the latter plea, and successfully, for after a most able and lucid summing-up by the Lord Chief Justice, the jury found for the plaintiffs, though for a smaller sum than was claimed.

A very interesting case was concluded at an adjourned inquest at Hastings on Nov. 17th. An elderly lady received an injury to the hip. After leaving the local hospital she came under the care of Mr. H. R. **MANSELL**. This gentleman wishing to clear up a doubtful diagnosis employed a chemist to take a radiograph. One result of the procedure was that a skin eruption with subsequent extensive ulceration developed at the site of application of the instrument. The distance of the focus-tube from the skin was not mentioned. Evidence was given that the apparatus was somewhat antiquated. The exposure seemed to have been unusually prolonged. The jury found that no blame attached to the medical man or to Mr. **BLOOMFIELD** who took the skiagram. In commenting on the case we expressed the opinion that considering the possible mishaps the Roentgen rays should be applied by the medical man himself or by some other skilled qualified operator.

SHAW *v.* the Railways Passengers Assurance Company, which was adjudicated upon by a court of arbitration, raised two very important pathological and incidentally clinical questions. The deceased man was thrown from a cart and received severe internal injuries. After temporary improvement he got worse, and died 10 weeks after the accident. At the necropsy a soft mass was found filling the pelvis, which the medical men who attended the deceased concluded was a degenerated blood-clot. A microscopical examination was made by the Clinical Research Society and the result reported as showing a soft sarcoma. From their finding we gathered that the arbitrators were of opinion that the examination of a single microscopical section of the mass was not sufficient to distinguish between a round-celled sarcoma and granulation tissue, or that, granted the existence of the former it was not proved beyond reasonable doubt that the injury might not have been the exciting cause of the growth. These assumptions received our endorsement.

As in our last annual record, so now, we express our unfeigned satisfaction at the marked diminution in the practice of criminal abortion by medical men. It would seem that the merited condign punishment meted out to unworthy members of the profession has had a deterrent effect upon would-be contraveners of the law—if such there are. There seems, however, too much ground to fear that the crime in question has by no means fallen into desuetude as regards abortion-mongers. At the Central Criminal Court on Nov. 20th ERNESTINE KATZ, a German, was sentenced to 10 years' penal servitude. From documents found on her it appeared that she had been charged in 1897 at Berlin with the same offence and had absconded from her bail.

The crusade against the publication and sale of obscene literature has met with considerable success. We trust that the authorities will continue their attempts to suppress this fertile source of moral pollution. "Professor WELLS," a sexual quack, got no more than his deserts when he was sentenced to 12 months' imprisonment for using in a public place obscene and filthy language, and for having published an obscene book.

Overlying still contributes largely to the record of infant mortality. Much of the sacrifice of life in this way might be easily prevented, as we have pointed out, by putting young children in separate beds instead of allowing them to sleep with their parents. It seems reasonable to infer that criminality as well as carelessness accounts for many of the deaths from overlying which are attributed to accident, although the difficulties in the way of determining the facts are in most instances insurmountable. A woman was committed for trial at the North London Police-court for having negligently attended her child whilst in bed with it. She had previously lost two of her children from "overlying."

A remarkable instance of ice-cream poisoning occurred in Rochdale. A large number of people were attacked with gastro-intestinal symptoms, and one person died. The constituents of the "cream" would seem to have become infected from having been placed in contiguity with excreta from the human alimentary canal. The case points to the necessity not only of providing cream free from organisms and the products of their fermentative action, but of preserving the same from after-contamination.

Very few cases of homicidal poisoning have to be chronicled. Accidental and suicidal poisonings, on the other hand, have claimed their wonted share of victims.

Our knowledge of the action of poisons has been amplified in some cases and emphasised in others. The recently discovered existence of arsenical beer poisoning on a wide scale has revealed the original source of the evil. At the same time it has raised the whole question of artificially prepared foods and drinks. Moreover, we have been led to compare the effects of certain consequences of arsenical poisoning with those of chronic alcoholism and the disease beri-beri. Both arsenic and alcohol cause peripheral neuritis. The pigmentation from arsenic unfortunately occurs too late to raise a timely warning.

The provisions under the Sale of Food and Drugs Act are not sufficient to safeguard the community. Further legislation to compel specification is needed. In THE LANCET of Jan. 20th, p. 177, we wrote: "The preparation of maize glucose is, however, conducted with great care and there is no reason for doubting the wholesomeness of the product." Arsenic has not yet been found in artificial golden syrup, we believe.

Dr. LOUIS P. HAMBURGER has published in the *Johns Hopkins Hospital Bulletin* an instructive case of chronic arsenical poisoning, in which the prominent features were pigmentation, keratosis, and ascites. It seems to be not improbable that arsenic may have a direct effect upon the serous membranes as well as upon the nervous, mucous, and cutaneous membranes. M. ANDRÉ PETIT and M. HUDELO, in papers read before the Société Médicale des Hôpitaux, have discoursed on the relation of plumbism to parotitis. They found lead in the saliva. It seems likely that parotitis may be caused (1) by the irritant action of the lead during salivary excretion and (2) by spreading of the inflammation from the buccal mucous membrane. Industrial lead poisoning has received attention and the recommendation of the chief inspector of factories that each successive attack of lead poisoning in the same individual should be notified is likely to prove a signal service.

In the *American Journal of the Medical Sciences* Dr. F. B. HARRINGTON has related a series of 132 cases of gangrene from the continued application of dilute solutions of carbolic acid. In some instances a 2 per cent. or 3 per cent. solution applied for 24 hours or less sufficed. In MERCK'S Archives attention was drawn to the antidotal action of alcohol as regards carbolic acid. It can be given in the form of brandy or whisky. It is recommended that a weak solution of sulphate of soda be used to wash out the stomach and that the same salt should be administered subsequently. A new process has been devised for estimating quantitatively mercury in the urine. The urine to which stannous chloride has been added is poured on an asbestos filter containing particles of gold derived from auric chloride. The difference between the weight of the dried filter before and after the expulsion of the mercury by volatilisation gives the amount of mercury. We consider the old plan of electrolysis to be preferable.

Dr. COLEMAN of New York has described a case of poisoning by trional. The patient, a woman aged 35 years, suffering from mild alcoholic delirium, took 540 grains of the drug. The chief symptoms were thickness of speech and ataxy. Dr. TAYLOR and Dr. SAILER, in their contribution from the WILLIAM PEPPER Clinical Laboratory, University of Pennsylvania, gave the history of a case of fatal poisoning by sulphonal. The victim was a woman, aged 52 years. There was difficulty of speech, sighing dyspnœa, hæmatoporphyrinuria, and stiffness and paralysis of both legs. Death resulted from cardiac failure. Post mortem the internal organs showed fatty degeneration. There was pigmentation of the spleen and lymphatic glands.

In the *Edinburgh Medical Journal* Dr. JAMES FOULIS has described two simultaneous cases of poisoning by cannabis indica. The patients, two students, took in successive doses 25, 40, and 90 minims of the tincture with a view of "experiencing the wonderful dreams" produced by the drug. The symptoms were marked mental and muscular stimulation. In JACOB'S Festschrift, 1900, Dr. B. SCHARLAN has illustrated the value of curare in the treatment of tetanus by three successful cases.

Coal-gas accounted for the death of a man at Birmingham. The gas escaped through the failure of the water seal—a most dangerous arrangement—in a chandelier fitted with a water-slide pendant. A man and his son were killed by the inhalation of gas which had escaped from "a shilling in the slot meter." The gas company's employé had omitted to test the meter, a circumstance upon which we animadverted.

DENTAL SURGERY.

The past year has given clear evidence that the medical profession is becoming fully alive to the important rôle which an aseptic mouth plays in the maintenance of good general health. In an excellent series of communications to THE LANCET in the early part of the year Dr. WILLIAM HUNTER showed that pernicious anæmia is probably a chronic infective disease with marked gastro-intestinal symptoms. The infection he considered in the majority of the cases to be directly traceable to the mouth. Mr. RICKMAN GODLEE, in a paper read before the Royal Medical and Chirurgical Society, drew attention to serious conditions which were apparently traceable to infection from a suppurative periodontitis. Not only has the question of septic infection from the teeth received attention from the medical profession but the subject of early decay of the teeth has been brought prominently forward by the first report of the committee appointed by the British Medical Association. The report, although it adds nothing new to our knowledge of caries, is nevertheless an able *résumé* of the question and forms a good basis for further researches.

Papers on Superior Protrusion (prominent upper teeth) have appeared from the pens of Mr. T. E. CONSTANT, Mr. E. LLOYD-WILLIAMS, and Mr. J. F. COLYER. Mr. CONSTANT dealt briefly with the question of etiology, Mr. LLOYD-WILLIAMS and Mr. J. F. COLYER with treatment. In the paper by the latter early interference — namely, before the eruption of the canines—was recommended, and it was shown by models of cases before and after treatment that by this means better results can be obtained than when treatment is delayed until the appearance of the second permanent molars. A paper on the Treatment of Misplaced Teeth by Alveolotomy has been contributed by Mr. W. H. DOLAMORE. This method consists in the immediate regulation of teeth by making incisions through the whole alveolus on either side of the misplaced tooth and bringing the tooth, with its encircling structures, either forwards or backwards as required. The method seems destined to prove useful for the correction of misplaced teeth in adults.

An excellent article has appeared on Antral Abscess by Mr. J. G. TURNER. The writer points out the unsatisfactory results which follow opening of the antrum through sockets of teeth and strongly recommends the operation through the canine fossa, as by this means all parts of the antrum can be reached and the mucous surface curetted. Attention is also drawn to the frequent prolongation of the antrum into the nasal process. This portion of the antrum is inaccessible and is often overlooked by the operator, thus continuing a focus of infection. Investigators have been busy investigating the micro-organisms connected with caries and useful communications have been published by M. CHOQUET and Mr. A. L. GOADBY. The mummification of pulps has again attracted attention and it seems quite possible that some of the methods which are being tried may prove of great utility for the treatment of the pulp in difficult cavities.

A case of multiple necrosis, supposed to be traceable to septic infection from a tooth, was recorded by Mr. BREWARD NEAL. The cause was an obscure one and would have been more interesting if in recording the case it had been stated what care had been taken to exclude other causes. A large number of records of cases in which a relationship is supposed to exist between dental and general conditions are too often rendered valueless by want of care in excluding the possible or probable causes.

Mr. M. HOPSON has reported an instance of hypertrophy of the gums existing in three members of a family—the father and two children—one interesting feature being that in the father a sarcoma springing from the upper part of the maxilla appeared.

In the practice of dental surgery progress has been made in the treatment of cavities by means of porcelain inlays. It is to be hoped that this work, which in its place is excellent, will not become a lever for quackery.

The x rays have been more employed as an aid to diagnosis during the past year, and the paper read by Mr. GOLDIE before the Odontological Society of Great Britain showed their great value. In probably no other branch of surgery are the rays more useful, and it is to be hoped that the dental hospitals, like the general hospitals, will institute proper departments. Dental surgeons and those in authority as teachers do not seem to have yet grasped the value of this means of diagnosis.

The annual meeting of the British Dental Association was held at Leeds under the presidency of Mr. G. BRUNTON. An important discussion took place on the Teaching of Mechanical Dentistry, and another feature of the meeting was the number of papers and demonstrations on the subject of crowns.

The past year has seen another International Dental Congress, Paris being the rendezvous. The gathering was a distinct success and many of the papers which were read were of more than usual merit.

The importance of providing dental surgeons to the services formed the subject of a communication by Mr. N. G. BENNETT, and there is reason to believe that the question is receiving official attention. If such officers are appointed it is most important that they should hold not only dental but also medical qualifications.

Publications.

There have been but few new books published; Mr. J. J. FITZGERALD'S little work on "Pyorrhœa Alveolaris" has reached a second edition. Dr. SIM WALLACE has published a book on "The Etiology of Caries," Dr C. N. JOHNSON one on "The Principle and Practice of Filling Teeth," and Mr. J. F. COLYER one entitled, "Notes on the Treatment of Irregularities in Position of the Teeth."

Obituary.

The obituary of the year includes Mr. JAMES WALLACE of Paisley, Mr. J. H. REDMAN of Brighton, Mr. C. MORLEY of Derby, and Mr. J. B. FLETCHER of London. The dental profession has also to regret the loss of Mr. STORER BENNETT and Mr. T. UNDERWOOD.

ANATOMY AND PHYSIOLOGY.

Although no very remarkable advance can be chronicled in regard to the progress of physiology during the past year, yet, like the ripples of the rising tide, a constant accession of facts may be observed which serve to eliminate former errors, to strengthen and establish the truths which may even yet be in need of support, and to open up new paths of research. It is pursued with singular perseverance and ability in Germany, and so numerous are the articles that have been published in that country that it has become impossible even for those who have devoted themselves to its study to read more than a small proportion of them. Pflüger's *Archiv für Physiologie*, which is only one amongst several journals devoted to physiology, forms four large volumes of 640 pages each and contains upwards of 100 articles, many of them running to a length of 30 or 40 pages, for the present year alone. In taking a general survey of this field of science it may be noted that a considerable number of the papers read before societies and contained in journals are devoted to the chemical side of physiology. Taking at random, for example, one or two of the parts of the journal we have just mentioned (Pflüger's *Archiv*) we find articles on the quantitative determination of glycogen, on the proportion of urea in human milk, the position of the purin or xanthin bodies in general metabolism, on the presence of proteolytic and amylolytic ferments in the colon, and on the absorption of fat without previous saponification. So, too, in Reichert's *Archiv* we find essays on ferments, on the absorption of food, on the preliminary stages of glycogen in the body, and on the colouring matters of the blood; and in the *Journal of Physiology* we have contributions to the physiological effects of peptone when injected into the circulation, the pressure filtration of proteids, the metabolism of phosphorus, and on the separation of a pure albumin from white of egg. If progress be made on these lines it is clear that our knowledge of the processes by which the dead protoplasm of plants and animals becomes converted into the protoplasm of the living being will be presently fully and correctly ascertained.

The students attending the courses of instruction on the different branches of medical science at the University of Cambridge are becoming year by year more numerous and an increase in the accommodation is absolutely necessary. New buildings are about to be constructed, the total cost of which is estimated at £40,000. New laboratories have been completed at King's College, London, at great expense and were formally opened by Lord LISTER An extremely liberal offer was made to the University of St Andrews by the late Lord BUTE who proposed to found a chair of anatomy in that university and to endow it with the sum of £20,000. The offer, it need hardly be said, was accepted and hearty thanks were tendered to the Marquis of BUTE for his liberality.

The Harveian Oration was delivered before the Royal College of Physicians of London by Dr. CLIFFORD ALLBUTT who took for the subject of his discourse Physiological Darkness before the time of HARVEY and gave a masterly sketch of the course of mingled truth and error in long bygone times.

If the estimate of the quantity of blood in the body given by Dr. JOHN HALDANE and Dr. LORRAIN SMITH is to be trusted, the statement that is to be found in most modern text-books that it equals one-twelfth or one-thirteenth of the weight of the body must be regarded as too high. These observers drew their conclusions from the rate at which the hæmoglobin of the blood becomes saturated with carbonic oxide when a given small percentage of this gas is continuously breathed, and their estimate is that the quantity is only about $\frac{1}{20{\cdot}5}$ of the body-weight, or about seven or eight pounds for a man weighing 150 lb., with extremes of one thirtieth and one-sixteenth. This estimate, whilst it is in accordance with the very marked effects produced in these days by the abstraction of a few ounces of blood, is difficult to reconcile with the estimates of HALLER and WEISBERG, both careful observers, who formed their opinion from the quantity of blood collected from the body in the case of decapitated criminals, and placed it, the former at about from 28 to 30 pounds, and the latter at 24 pounds. Can our better and more varied dietary have led to the production of blood smaller in quantity but of better quality and more adapted to the needs of the economy than the more abundant but less diversified diet of our forefathers?

An interesting lecture on Some of the Mechanisms of the Heart and its Valves was delivered at the meeting of the Chelsea Clinical Society by Dr. WILLIAM EWART. He dwelt upon the presence of a supra-papillary and of a retro-mitral space in the ventricle, showed that during contraction the posterior mitral flap is thrown into pleats, admits a powerful ventricular aspiration, and holds with those who accept a muscular and a valvular element in the first sound. By an ingenious arrangement of reflectors and lenses W. ENGELMANN has been able to exhibit magnified 35 times the action of the living heart of a frog upon a screen. J. A. MACWILLIAM has continued his researches on the physiology of the mammalian heart and discusses the influence of chloroform upon the rate of the heart-beat. Mr. W. H. THOMPSON has studied the effects of the intravascular injection of peptone and albumose, and shows that the vessels of the kidneys and limbs are but slightly affected, whilst those of the spleen undergo moderate, and those of the liver considerable, dilatation coincidently with the fall of blood-pressure. Professor SCHÄFER and Mr. S. VINCENT find that in the extract of the hypophysis cerebri there is a substance soluble in saline solution, but insoluble in alcohol and ether, which when injected into the veins increases blood-pressure, and another substance soluble in alcohol and ether as well as in saline solution which depresses the blood-pressure. The hypophysis cerebri has received attention from other quarters, V. KUPFER having studied its development and H. C. BENDA having read before the Pathological Society of Berlin a paper on its normal structure and pathological condition. The researches of E. V. CYON appear to show that it may supply a deficit of iodothyrin and act as a supplementary organ to the thyroid body. An important research has been carried out by Dr. J. L. BUNCH on the innervation of the muscular coat and the vessels of the intestines. His investigations show that these parts are supplied by the splanchnic nerves, which contain both constrictor and dilator fibres derived primarily from the spinal cord, and that in dogs they leave the spinal cord by the anterior roots of the second to the sixteenth post-cervical nerves, the higher roots containing a larger proportion of dilator fibres, the lower roots of constrictor fibres. Professor STARLING has shown that in the cat as well as in the dog excitation at any one spot of the intestine produces excitation above and inhibition below the excited spot. Dr. F. W. PAVY has followed up his investigations on the sugars in the blood and upon the effects of intravenous injection of various forms of sugar. It is well known that many animals can store up glycogen in the liver when they are restricted to a purely proteid diet. Professor J. SEEGEN, experimenting with liver extract, has found reason to believe that the proteids undergo a disintegration in the liver leading to the detachment of a molecule of a sugar-like substance containing nitrogen which by the action of a liver ferment undergoes further change, terminating in the production of glycogen. Similar conclusions have been arrived at by Dr. BERKHARD SCHONDORFF. On the other hand, two French observers, M. C. BOUCHARD and M. A. DESGREZ, have satisfied themselves that muscle glycogen can be formed in the body from incompletely oxidised fats. The experiments of R. COHN render it probable that glycogen can be derived from leucin and Dr. MARTIN JACOBY points out that there are probably many ferments in the liver. He has himself carefully followed out the characters of a ferment which is capable of oxidising salicyl aldehyde and has given it the name of "aldehydase." An article written by Mr. H. F. BELLAMY and lately contributed to our columns deals with the function of the spleen. It was found long ago by Professor SCHIFF that after ligature of the splenic vessels at the hilum or after removal of the spleen as a whole trypsin fails to appear in any considerable quantity in the pancreatic juice or in an infusion of the gland during that stage of digestion in which, in the intact animal, it is normally present—that is, from four to seven hours after feeding. Hence Professor SCHIFF thought during the congestion of the spleen a substance is produced within the spleen which, carried away by the blood, gives to the pancreas what it requires to form its peptonising ferment. The discovery of the precursor of trypsin, trypsinogen, in the cells of the pancreas by HEIDENHAIN led Professor SCHIFF to repeat his former experiments in conjunction with Dr. HERZEN, and the general conclusion arrived at is that in addition to other functions the spleen furnishes a recrementitious product which causes in the pancreas the transformation of its inert zymogen into active trypsin.

The effects of sudden release from increased atmospheric pressure such as is experienced by those working at the foundation of bridges are well known to be serious and have been attributed to disturbance of the circulatory and respiratory systems. Dr. LEONARD HILL has placed animals under these conditions and finds that with dogs and cats exposed to rapid increase of pressure amounting to two atmospheres and rapid diminution to the ordinary pressure no effects beyond slight increase of the respiratory oscillation and slightly diminished frequency of the pulse occur. The mechanical congestion theory of caisson disease is regarded by Dr. LEONARD HILL as untenable. It would be pertinent to ask how Dr. HILL explains the hæmorrhage from nose and ears that have been observed when the pressure is too suddenly released.

The Croonian Lectures were delivered before the Royal College of Physicians of London by Dr. FREDERICK MOTT, who took for his subject the Degeneration of the Neuron and expressed himself in favour of the view that the terminal arborisation of the axis-cylinder process of one neuron does not anatomically fuse with the cell-body and dendrons of another and that trophically and genetically the two are independent, yet that there is a physiological connexion between adjacent neurons. He also pointed out that the integrity of the sensory moiety of a reflex is almost as important as that of the motor segment; in other words, that sensation must be acute and perfect if the corresponding muscular movements are to retain their delicacy and precision. The second Hughlings Jackson Lecture was delivered before the Neurological Society by Professor HITZIG of Halle; and the lecturer, after bestowing a well-merited eulogium on the work of the physician after whom the lecture is named, proceeded to discuss the subject of the localisation of functions in definite areas of the cortex of the brain. He advocated the view that such centres exist and further contended that in regard to the motor centres two sets might be distinguished, a lower subcortical or reflex set called into play by impressions of hearing, vision, or other special sense, and a higher or cortical set concerned with conscious arbitrary motion.

Dr. A. GURWITSCH has shown that the sheath of SCHWANN of a medullated nerve is genetically an exogenous and quite foreign mesodermal formation. It does not, in the first instance, closely embrace the medullary sheath, but the space between the two is gradually filled up by the growth in girth of the axis-cylinder and of the medullary sheath Dr. W. H. GASKELL, from a comparison of the cranial nerves in mammals with the nervous system in arthropods, finds additional support to his theory of mammalian descent through the arthropods.

Dr. BARBIERI finds that all mixed nerves have more sensory than motor nerves. The ganglia on the dorsal roots belong to the sympathetic system, and in the rabbit there are about 500 cells in each ganglion and about 3000 fibres as it traverses the ganglion.

From experiments with the ergograph Professor MOSSO finds that in soldiers after forced marches the power of the muscles of the arm and hand is diminished, so that, as IOTEYKO observes, whilst moderate exercise of the psychomotor centres produces increased action or activity of both sensory and dynamogenic centres, exhaustion of one centre, as that effecting the movements of the lower limbs, causes depression of all centres and has a tendency to become generalised. He suggests that fatigue is due to some toxin entering the blood current The muscle spindles described as long ago as 1863 by Professor KOLLIKER have been subject to minute examination by Dr. F. PICK. They are fusiform, are surrounded by connective tissue, contain slender muscular fibres with motor end plates, and other thicker nerves, which form a plexus around the fibres and can be shown by degeneration experiments to conduct centripetally. He suggests that they are the receivers and transmitters of the nerve sense.

The origin of uric acid was the subject of an interesting discussion at the meeting of the British Medical Association. The discussion was opened by Professor W. D. HALLIBURTON, and was continued by Professor THOMAS H. MILROY, Dr. ALEXANDER HAIG, and others. The general conclusion appeared to be that it has a double origin, one part being the result of the disintegration of the nuclein taken in with the food, and another part proceeding from destructive changes of nuclein contained in the body, or, as Professor HALLIBURTON expressed it, part is of exogenous and part of endogenous origin. The latter portion is derived from the metabolism of the leucocytes that are so abundantly formed after the ingestion of food.

Several essays have lately appeared on the suprarenal capsules. E. O. HULTGREN and O. A. ANDERSSON in giving the results of a long series of observations and experiments state that extirpation of these bodies in cats and dogs and rabbits occasioned death within a week or ten days. Removal of the organ on one side was followed by the animal becoming thin for a short period. The retention of a small fragment was sufficient to preserve life, but when both are removed death supervenes with great fall of temperature. The metabolism of albumin, the quantity of hæmoglobin, and the number of red corpuscles were not affected. Injections of small quantities of adrenal extract caused temporary improvement, but when large quantities were injected death occurred in rabbits from œdema of the lungs. The injection of extract of the adrenals of rabbits, guinea-pigs, cats, rams, and steers caused rise of temperature in rabbits, whilst the extract of the adrenals of sheep, oxen, and pigs usually caused a fall of temperature. E. BORDIER and H. FRENKEL found that the intravenous injection of very small quantities of suprarenal watery extract caused immediate diminution, or even complete brief and temporary arrest of, the urinary secretion—a condition followed by increased secretion. A very curious inquiry into the effects of light upon general nutrition has been pursued by JUSTUS GAULE He accidentally noticed that the fat bodies situated in the abdominal cavity near the sexual organs in frogs, and especially in winter frogs, are not to be found at night, but are reproduced in daylight. The stimulus to the reappearance of these bodies in daylight is not conducted through the eyes since the phenomenon occurs even after extirpation of the globes.

Publications, &c.

Numerous and valuable articles on Embryology have been published in the *Quarterly Journal of Microscopical Science*, as those of Dr. E W. MACBRIDE on the Amphioxus, of Mr. J. P. HILL on the Embryology of the Marsupialia, of Mr. J W. JENKINSON on that of the Mouse, and on the Nemerteans, by Mr. C. B. WILSON and Mr W. R COE, Dr. A. MASTERMAN on Phoronis, and others, all requiring much care and attention as well as knowledge of the details of microscopical research. The well-written and well-illustrated "Text-book of Embryology" by Dr. JOHN HEISLER of Philadelphia will prove useful to the student as well as to the practitioner Particular parts of the subject have been worked at with care by different men; G. LEVI, for example, has studied the development of the human primordial cranium, C. RABL the development of the lens, E V. WILCOX human spermatogenesis, and G. LOISEL spermatogenesis in the sparrow.

The bibliography for the year in physiology is considerable. Two important cyclopædias have been in course of publication. One of them, edited by Professor SCHÄFER of Edinburgh, who modestly names it a text-book, is just completed. It is written on the lines of the Handbook of Professor HERMANN, the several subjects being committed to the hands of experts. The second is edited by Professor RICHET of Paris and will extend to eight or nine volumes, four of which are now complete. A somewhat similar but less ambitious text-book is appearing in America under the able editorship of Professor W. H. HOWELL of the Johns Hopkins University, Baltimore, assisted by several leading physiologists of that country. The second volume of Professor MORAT and Professor DOYON'S "Traité de Physiologie" has appeared and a well-written text-book has been published by Dr. WINFIELD HALL of the Chicago University. New editions of the Manuals of WALLER, STEWART, and STARLING have been issued and Miss EMMA BILSTEIN has made a good translation of STOHR'S well known text-book of histology.

ANÆSTHETICS.

Intra spinal Cocainisation and Interstitial Infiltration.

Among the year's events in this department of medical science may be placed perhaps first in order, but rather on account of their novel development than of their intrinsic merit, the introduction of spinal cocainisation as a definite mode of producing analgesia, and the extension of local anæsthesia by interstitial infiltration. To **LEONARD CORNING**, an American physician, must be accorded the initiation of the suggestion (1885) that an extended anæsthesia would follow the injection of local anæsthetic bodies into the sheaves of nerves or of the spinal cord itself. **BIER**, in his original monograph in 1899[1] put **CORNING'S** suggestion to the test of actual trial and employed the lumbar puncture. The tissues were infiltrated down to the vertebræ (**SCHLEICH'S** method) and a plugged needle (**QUINCKE'S** plan) was introduced into the spinal canal, some cerebro-spinal fluid was removed, and from 0·005 to 0·01 gramme of cocaine in solution was introduced. The analgesia appeared in from five to eight minutes and persisted in one case for 45 minutes. **BIER** reported more or less severe after-effects—headache, vomiting, depression, and rise in temperature. Besides the obvious danger of sepsis which **BIER** and others insist can be avoided there have been during the past year numerous grave complications and some deaths following this method of producing anæsthesia. **BIER** himself, writing in the *Munchener Medicinische Wochenschrift* of Sept. 1st, 1900, warns the profession against the wholesale adoption of the method, since he regards our knowledge of it as being at present too vague for its safe adoption except in certain cases. Serious accidents, he says, follow injections of five milligrammes and less Under no circumstances does he permit more than 15 milligrammes. The method was discussed at some length at the Surgical Congress in Paris, and several speakers who were in favour of it yet admitted that deaths had followed intraspinal injections of cocaine (**PHELPS**). **TUFFIER**[2] has published 125 cases, including 58 laparotomies, of lumbar puncture made between the fourth and fifth vertebræ. Although he has gained a fairly wide experience and has performed a large number of operations he has been unable to eliminate more or less serious complications, such as vomiting which commonly commences soon after the injection and is often very severe, pallor, respiratory distress, headache, nearly always present and lasting from 15 to 24 hours, persistent paresis and rise of temperature. Out of 125 cases five deaths resulted, and although he exonerates the anæsthetic in four cases he states that the fifth patient died with symptoms of asphyxia. Many observers also have recorded cyanosis as a common symptom. **RACOVICEANU-PITESCI** and **SEVEREANU** of Bucharest have used the method largely and they refer to two deaths in Roumania as a direct result of it and to several serious complications and sequelæ. The former surgeon records 80 cases of cocaine toxæmia persisting for four or five days, while in three cases artificial respiration and stimulants were called for to save life. **SEVEREANU** likewise reported that he had met with great exhaustion and prostration which lasted for some days after injection. He used from one to four centigrammes. He regards the method as being unsatisfactory in that the patient witnesses the operation on his own person. Besides these undesirable accidents associated with this method **GUMPRECHT**[3] has published 17 cases in which lumbar puncture independently of the use of cocaine has been followed by dangerous conditions due probably to the operation. **HENNEBERG** and others have met with medullary hæmorrhage from the same cause. Various writers speak of the difficulty of getting the needle into the canal arising in some cases, especially in those in which the vertebræ are displaced or rigid. The method has also been used extensively in the United States and isolated observers have reported successful cases without dangerous symptoms. S. **ORMOND GOLDAN** met with vomiting in half of his 20 cases; the patients were first pale, then flushed. Headache was present in 50 per cent., and some rise of temperature and profuse sweats were also observed. Rigidity of the muscles of the back occurred in three patients, a troublesome symptom, which in one case persisted for a week. In three instances analgesia was never obtained.

Cocainisation in Parturition.

KREIS[4] was one of the first to use cocainisation of the spinal canal in obstetric practice. According to this observer the analgesia in his cases lasted two hours and the cocainisation did not interfere with the functions of the uterus. **MARX**[5] has recorded a series of cases of parturition without mishap. In these he obtained analgesia by injecting cocaine by the lumbar puncture. His experience with eucaine went to show that it was unsatisfactory for intra-spinal injection. He has also employed morphine, but in one case severe toxic symptoms followed it; he now advises that hydrobromate of hyoscine ($\frac{1}{200}$th grain) should be injected hypodermically in order to relieve the nausea, headache, and vomiting which he finds incidental to the puncture and spinal cocainisation. The statement that "there are frequent nausea, vomiting, severe headache, profuse perspiration, chilly sensations, temperature up to 102° and 103°" is not encouraging. **MARX**, whose careful paper deserves attention gives details of a number of cases. An obvious objection to intra-spinal cocainisation is insisted on by **MATAS**. It is that if the first injection fails to produce a sufficiently prolonged analgesia re-injection is, in obstetric cases, practically impossible. He limits the methods to adults, and to "reasonable persons" who have good self-control, when regional infiltration is impossible, to persons suffering from bronchitis, emphysema, or who for other reasons cannot take a general anæsthetic, and lastly, only to cases which can be completed in an hour and a half. A large number of papers dealing with intra-spinal cocainisation, giving more or less full reports of cases, have appeared since **BIER'S** first monograph, and although the writers make light of the adverse symptoms, which they impute to any cause other than the obvious one, **BIER'S** caution seems more than necessary. Communications of especial note dealing with the subject have appeared by **FOWLER**[6] (New York), **ORMOND GOLDAN**,[7] and **MARX**,[8] and a study of these papers confirms the statements made above. It is interesting to remark that among **FOWLER'S** cases several instances are reported in which analgesia could not be obtained. **NICOLETTI'S** (Naples) experiments on rabbits and dogs must also be referred to in this connexion. Intra spinal injections of cocaine according to this observer produce no histo-pathological change in the nervous tissues—a fact which led **NICOLETTI** to believe that the analgesia is the result of vaso-motor effects consequent upon the action of such bodies as cocaine, ergotin, antipyrin, and quinine. Similar evidence of the immunity of the nervous structures was given in the necropsy of a patient published by **SELDOWITSCH**.[9] The patient died from cachexia. **SELDOWITSCH'S** cases all showed some of the symptoms described by most writers on this subject, while **BIER'S** first experience[10] was more favourable.

Neuro-regional Analgesia.

An attempt has also been made to produce "neuro-regional analgesia": (1) intra-neural, by injecting the cocaine into the large nerve-trunks supplying the region to be operated upon; or (2) para-neural, into the tissues about the nerve-trunks.

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[1] Deutsche Zeitschrift fur Chirurgie vol. ii., p. 361.

[2] La Semaine Medicale, May 16th, 1900.

[3] Deutsche Medicinische Wochenschrift, June 14th, 1900.

[4] Centralblatt fur Gynäkologie, July 14th, 1900.

[5] Medical News, August 25th, 1900, and Medical Record, Oct. 6th 1900.

[6] Philadelphia Medical Journal, Nov. 3rd, 1900, p. 843.

[7] Ibid., p. 850. [8] Ibid., p. 857.

[9] Centralblatt für Chirurgie, vol. xxvi, p. 1110

[10] Deutsche Zeitschrift für Chirurgie, Band ii., Heft 3 and 4.

OBERST, KROGIUS, BRAUN, and KUMMER follow this method. MATAS, whose paper is referred to above, gives careful directions about these modes of producing analgesia in these ways, and to his writings we must refer our readers. SCHLEICH'S important work, "Schmerzlose Operationen," issued recently, gives a very fair account of the case for local analgesia, although it must be admitted that his method leaves much to be desired if true immunity from pain is aimed at. BARKER of University College Hospital has in our columns given his pronouncement in favour of eucaine β and has apparently been satisfied with his trials of local analgesia, using BRAUN'S modification of SCHLEICH'S original method.[11] CUSHING[12] reports a number of herniotomies done under local analgesia. In cases in which a general anæsthetic is undesirable infiltration with eucaine or cocaine is, he considers, most valuable. The patient is, he reminds us, however, longer under operation and feels pain to a certain extent.

Miscellaneous.

Some valuable work dealing with the physiology of the action of anæsthetics has been undertaken during the year. Experiments by Professor W. H. THOMPSON of Belfast appear to show that while ether and its mixtures give rise to an increase in the urinary water secreted, and of the total nitrogen per hour, chloroform brings about an opposite result. Chlorides were lessened under all anæsthetics. While chloroform caused glycosuria albuminuria was absent. KEMP and THOMSON, to whose experiments we have referred elsewhere in our columns, came to a conclusion which if confirmed would seriously affect the reputation of ether as a safe anæsthetic. Investigating the subject anew from the clinical as well as the experimental side DUDLEY BUXTON and A. G. LEVY have shown that the results arrived at by preceding workers were not in their entirety reliable since they had mistaken the effects of ether toxæmia for a normal "ether effect." This ether toxæmia never occurs in practice and in experiment only when the inhalation is conducted on very dangerous lines. The results arrived at by the last-named observers are extremely important but can only be mentioned briefly. Suppression of urine as a result of ether inhalation does not occur, albuminuria is extremely rare, and clinical evidence that they advance revealed that renal after-effects ensuing upon etherisation even when the kidneys are antecedently diseased are very rare. "Ether," they say, "should still be regarded as a very safe anæsthetic." Their experiments with chloroform are also of interest. The respiratory after-effects of ether formed the subject of an important discussion by the Society of Anæsthetists. The conclusion which, it appears, may be fairly drawn from it is that much confusion has arisen in the recording of cases; the anæsthetic, although occasionally at fault, but far less often so than is commonly stated, is in most instances one of many factors bringing about the pulmonary complication. A point advanced by MAYO ROBSON, and confirmed by others, being that in private practice respiratory effects are almost unknown, while in hospital practice, under less favourable conditions, pneumonia or bronchitis occasionally supervenes after operations undertaken under ether, J. FREEMAN, speaking before the Bath and Bristol Branch of the British Medical Association,[13] stated that out of 3000 etherisations in which persons of all ages were included he had only met with two cases of bronchitis.

MCCARDIE has recorded[14] a rare complication under ether—viz., spasmodic closure of the larynx—and a somewhat similar occurrence is reported by SHUTER in which respiration failed under ether. FEILCHENFELD'S[15] suggestion to give small doses of tincture of strophanthus (from five to six minims) on two nights before giving chloroform in cases of asthenic or excitable hearts is supported by carefully thought-out reasoning. WALKER (Durazno, Central Uruguay) has used anal injection of artificial serum in a case of chloroform collapse with success, but the rationale is not easy to grasp As chloroform was given by the towel method it seems perhaps better to leave off using the towel, and so to avoid the necessity for employing the artificial serum. H. A. HARE, whose name is associated with much valuable experimental work dealing with the physiology of anæsthesia, has delivered a valuable address on anæsthetics in which he reiterates his view that chloroform accidents arise from vaso-motor paresis.[16] KRAMER'S[17] experimental investigation of the influence of stimulation of a sensory nerve on circulation and respiration under complete, and under incomplete, anæsthesia brings our acquaintance with this subject within the region of exact knowledge. His conclusion is that severe vaso-motor shock is more liable to follow operations done under partial anæsthesia than such as are done under complete insensibility. The method of massage of the heart which is called "Prus's plan," although successful according to Dr. PRUS in 76 per cent. of dogs which he poisoned with chloroform until cardiac action failed, was tried by him on a person who committed suicide, but without success. Dr. PRUS removes the rib cartilages and opens the pericardium. The measure, an heroic one, may have failed in this case because the person was an alcoholic subject whose heart muscle was probably past stimulation.

Mishaps under Anæsthesia.

We have repeatedly drawn attention to casualties under anæsthetics and have indicated the obvious lessons to be drawn. It is matter of regret that during the year many fatalities under chloroform have occurred, and too frequently in cases in which nitrous oxide, ether, or the A.C.E. mixture might have been more safely employed. The practice of giving chloroform in dental cases is one too obviously bad to need argument, and yet we have had again and again to report deaths arising through it. We may hope that in the new century wiser counsels may prevail. We also hope that the necessity for the better teaching and equipment of our hospitals in matters connected with anæsthetics, to which we referred recently in a leading article, may receive the recognition which it undoubtedly deserves.

No special advance in methods or apparatus has to be recorded for the year 1900, but a pronouncement by the General Medical Council that any medical man giving anæsthetics for a dentist who was not on the Dental Register would be liable to have his conduct investigated by that body is a noteworthy one for all anæsthetists.

MIRROR OF HOSPITAL PRACTICE.

The "Mirror of Hospital Practice" has during the year contained descriptions of many interesting and important cases from the hospitals of the metropolis and the provinces, and in some instances from the hospitals of our colonies. These cases serve to illustrate the treatment of the present day as carried out in these institutions and they may be taken to represent the present high level which surgical science has reached.

The best treatment of intussusception cannot yet be considered as finally determined, for some surgeons are still of opinion that laparotomy should always be preceded by an attempt at reduction by injection or inflation. It is certain that either of these procedures may, if performed skilfully, be carried out without any real addition to the risk which the patient incurs, and certainly reduction sometimes occurs under this treatment. But in the majority of cases these attempts end in failure, and it is then necessary to submit to the shock of an abdominal section a child who has already been weakened by these procedures. If the laparotomy be performed only a few hours after the commencement of the intussusception a very small incision is needed, the reduction is quickly performed, and the shock is minimised. These remarks are illustrated by the cases that have appeared in the "Mirror." Dr. H. A. LEDIARD of Carlisle recorded two cases—one a child two years and five months and the other only six months of age. In each case attempts had been made to effect reduction by injection. Laparotomy was performed and both children recovered. Mr. HARRY LUPTON of Stratford-on-Avon operated on an infant, aged 10 months, who had the symptoms of an intussusception, and though great difficulty was experienced in reducing it the child recovered. In this case the operator was convinced from the tightness of the invagination that nothing short of laparotomy would have been of any avail. Mr. J. HOWSON RAY has recorded four cases in which he has operated for this condition. All the children were under the age of nine months and two recovered and two died. The two successful cases had lasted 12 hours and two days respectively, but the two fatal cases had lasted two and a half days and five days respectively, and in one of them it was found necessary to resect a portion of the bowel. Two interesting instances of this condition were recorded by Mr. LAWFORD KNAGGS of Leeds; in one a child, aged three and a half months, had a primary, a secondary, and a retrograde intussusception. In the other case the invagination was caused by a lipoma of the bowel.

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[11] THE LANCET, Jan. 20th, 1900, p 156
[12] Annals of Surgery, January, 1900
[13] Brit. Med Jour, 1900, vol. i., p 873.
[14] Ibid, p. 138.
[15] Centralblatt für Chirurgie, No 4, 1900.
[16] Journal of the American Medical Association, March 24th, 1900.
[17] Annals of Surgery, September, 1900, p. 376.

Another subject which has been well illustrated in the "Mirror" during the past year is the antitoxin treatment of tetanus. The value of the antitoxin is only marked if it is given early before any large amount of toxin has been absorbed, and therefore its use is often very disappointing, but the antitoxin in moderate doses may be administered without danger, and therefore it may always be given; yet its employment should not prevent the other surgical treatment of the wound by which the continued absorption of toxins from the wound may be prevented.

The operation of total removal of the upper extremity, interscapulo-thoracic amputation, or Berger's operation as it is often called, is by no means frequently performed, but we have been able to publish the notes of two cases in which it was found necessary. The first case was under the care of Mr. T. J. VERRALL and the operation was performed for a sarcoma of the upper end of the humerus. No recurrence had taken place 22 months after the accident. The other case, which was under the care of Mr. EDMUND OWEN, was one in which after a very severe burn the whole arm and a part of the mammary region were entirely destitute of skin. The arm was perfectly useless, as apparently the muscles were affected. Local applications and skin graftings were of no avail, and it was therefore determined to remove the limb, and there was not sufficient covering for any amputation lower than the interscapulo-thoracic The patient recovered rapidly from the operation, and was well two months later.

Foreign bodies are by no means rarely found in the bladder, and they are probably much more frequently met with in the female bladder than in the male bladder, and this is due to the fact that the urethra in the female is much shorter and wider than in the male. One of the most curious examples of foreign bodies in the bladder was in a case under the care of Mr. J. H. MORGAN. A woman, 32 years of age, complained of symptoms pointing to a vesical calculus, and when she was sounded a stone was found and Mr. Morgan decided to perform lithotrity. When the stone had been crushed and the fragments were being washed out it was found that there were several bits of glass and globules of mercury amongst them. Some larger portions were removed by means of forceps and they were seen to be parts of a clinical thermometer. No history could be obtained of the introduction of the instrument. An interesting case was recorded by Mr. T. F. CHAVASSE, in which the husk of an oat made its way probably from the larynx to a situation under the skin of the neck whence it escaped after an incision had been made over it. Mr. CHAVASSE has also described another case of a foreign body; a little girl, three years old, swallowed a brass shawl pin, two and a half inches in length. Two months later it was removed from the abdominal wall a little below and to the left of the umbilicus. At Guy's Hospital under the care of the late Mr. J. N. C. DAVIES COLLEY was a woman who seven months previously had swallowed a packing-case needle, four inches long. She had had at intervals attacks of severe pain on the left side of the abdomen, where a tender firm swelling developed. This was incised on two occasions. On the second operation the peritoneal cavity was opened and the needle was found in the descending colon, whence it was removed, and the patient recovered.

Thrombosis of any of the mesenteric vessels is a very rare cause of intestinal obstruction, and two cases have been recorded in the "Mirror." In one case, under the care of Mr. C. WHIPPLE, a man, 38 years of age, had 38 inches of the ileum which were deeply congested and in part gangrenous, the result of thrombosis of its mesenteric vessels. The symptoms produced were suggestive of obstruction but none could be found on operation and therefore an enterostomy was done but the patient died a few hours later. The other case was that of a man, 51 years of age, who died seven hours after he was admitted into St. Pancras Infirmary under the care of Dr. W. M. DUNLOP. He suffered from vomiting and was much collapsed. At the necropsy it was found that about two feet of the ileum were intensely congested and that the mesenteric veins corresponding to the congested bowel were thrombosed. No cause for the thrombosis could be discovered.

The blocking of the pelvic cavity by a tumour is an exceptional reason for the performance of Cæsarean section. In a case under the care of Dr. LLOYD ROBERTS of Manchester a fibroid tumour of the uterus was discovered at the commencement of labour. As only one and a half inches of available conjugate were left it were decided to perform Cæsarean section. The child lived and the mother also, though she had an acute septic attack which was apparently benefited by the use of anti-streptococcic serum. In another case Cæsarean section was performed in a case with some contraction of the pelvis and the foot presented with the head. The child was dead at the time of the operation, but the mother made an almost uninterrupted recovery.

Mr. D'ARCY POWER had an interesting case under his care at St. Bartholomew's Hospital. A man was admitted into the hospital for total suppression of urine, and though an examination was made of the right kidney no stone could be found, and the man died next day. At the post-mortem examination it was found that the left kidney was represented by a small thin piece of fibrous tissue, but a pervious ureter was present. The right kidney contained four small calculi, and the right ureter was patent.

An instance of compound separation of the lower epiphysis of the femur has been recorded by Mr. E. W. ROUGHTON. It occurred in a little boy, nearly six years old, who caught his legs in a wheel of a cab behind which he was riding. A portion of the shaft of the femur necrosed and had to be removed, but the boy recovered with only about half an inch of shortening. The other femur was fractured at the same time and it united well.

Dr. EDMUND CAUTLEY has recorded one more case of the rare condition which has been named "congenital hypertrophic stenosis of the pylorus." Up to the present 32 cases of this curious condition have been described and 26 of these have been put on record within the last five years. The case was a fairly typical one, though, in place of the constipation which is usually present there were watery motions. The child, who had had vomiting constantly from birth, died on the day after admission to the Belgrave Hospital for Children, so that there was no time for treatment. Up to the present time only one case of recovery has been recorded and that was operated on, so that in the future an early operation seems to offer the best chance of recovery though the patients are hardly in a very suitable condition for operation.

In this country hydatids are by no means common, but we have recorded several in the "Mirror." In one case under Mr. RUTHERFORD MORISON there was one hydatid cyst in the liver and one also in the lung. In a man under the care of Surgeon F. H. A CLAYTON, R N., the diagnosis of hydatid of the liver was made by the discovery of daughter cysts in the motions. The patient suffered from symptoms resembling those caused by the passage of gall-stones along the bile-ducts. The symptoms all ceased after a time and the man apparently recovered without any operation.

Duodeno-choledochotomy is a name applied to the rare operation by which a gall-stone impacted at the termination of the common bile-duct is removed by opening the duodenum and then incising over the stone. It has been done in about 15 cases, with three deaths. Mr. FREDERICK PAGE successfully performed this operation on a woman, 59 years of age, who had been jaundiced for three months.

THE NAVAL AND MILITARY MEDICAL SERVICES.

The War in South Africa.

When summarising at the close of last year the events falling during the twelvemonth under this heading we wrote under circumstances of great gloom, for it was during the dark early days of the war in South Africa. Looking back on our articles during the first stages of the campaign there is a melancholy sort of satisfaction in finding that we expressed the opinion that the war would prove a much more formidable undertaking and would require a larger force than was generally imagined, although we had then no idea, of course, that it would prove so costly and formidable as it has done. But the state of matters in South Africa, if still unsatisfactory, is nevertheless different now from what it was then and during the beginning of the present and now closing year. Then it was the story of unpreparedness on our part, of insufficient and divided forces, beleaguered garrisons, and invaded territories. The fortitude and determination of our generals and the courage and determination of our troops enabled them to hold their own—and more, while the enemy, from want of a bold and original strategical scheme, missed their grand opportunity. Then Lord ROBERTS came on the scene with forces adequate to the emergency, and a speedy change occurred in the complexion of the campaign. Our misfortunes were retrieved everywhere Our soldiers have had to fight under altogether exceptional conditions created by the recent improvements in arms and ammunition such as no other troops have ever yet had to encounter and against an alert and stubborn foe with a perfectly new system of tactics. They have acquitted themselves well.

If Paardeberg was, militarily speaking, the turning-point of the campaign, immediately afterwards came, as far as the medical services were concerned, the overwhelming difficulties of the war. Up to that time there can be no doubt that the medical arrangements were the bright spot of the campaign. The weight of skilled, expert, and independent testimony—that, for example, of Sir WILLIAM MAC CORMAC, Mr. FREDERICK TREVES, and numerous others—was all to the same effect. The sudden and wholesale outbreak of enteric fever in a fatigued army, which had altogether outmarched its supplies and had not the necessary transport to bring them up promptly, will most probably, in our opinion, be found to account for the deplorable occurrences which temporarily obtained.

The prevention of the diseases incidental to war and the care of the sick and wounded during a campaign have always been, and, despite all we can do, will probably always continue to be, a very difficult problem for practical solution. As medical science advances and a growing feeling of patriotism and philanthropy on the part of the nation finds its expression in providing more and more admirably equipped hospitals, appliances, and organised aid, so must it become more and more difficult for a Government to compete successfully with outside efforts and to keep pace with the increasing demands of a luxurious age. The British Empire has possessions and interests everywhere and we are always engaged in some war or other, but no two of them are exactly alike or resemble the wars of other European Powers. In South Africa we have had to fight physical geography as well as a stubborn foe, and it was the former which caused the temporary collapse of our arrangements for the care of the sick. We need not enumerate the number and names of the civil hospitals and hospital ships which have been sent out to the seat of war. They have vied with one another in their attempts at completeness of plan and detail. The land service hospitals have been designed and fitted out—from an administrative and scientific point of view—with an elaboration of comfort and convenience which, considering their purpose and work, left little or nothing to be desired. The national movement in aid of the sick and wounded in war is one which deserves every support and encouragement. In any large war civil aid is now necessary, for no Government can, with the means at its command and by purely official methods, successfully cope with modern requirements. And in any case voluntary aid societies and organisations can render very effective help in supplementing the provision made by Government. As far as Government and the military authorities are concerned they can never lose sight of the fact that armies exist for the purpose of fighting and that they fight to win, and that, consequently, everything has to be subordinated to military success. The aims and objects of all field service medical regulations are to secure a due provision and proper distribution of men, material, and transport. The pivot of the whole system is to free the movement and action of a fighting force as far as possible, by dispensing with all needless reduplication of stores and appliances, and by relegating the sick and wounded in the direction which they must eventually take, if they prove inefficient—namely, to the hospitals in the rear, where they can be properly attended to Some sort of medical equipment for war has to be provided and maintained by Government on a uniform and suitable scale and it must be more or less adapted for any occasion that may arise and must be supplemented to meet special requirements. As no limitations are imposed upon philanthropic sources of supply, either in aim or object, it is obviously unfair to compare them with the Government supplies. Taking the modern system of field medical service as a whole it is based upon thoroughly sound principles, but it must be capable of being modified and adapted to circumstances if it is to prove effective. Sometimes it is extremely difficult to do this. The conditions in connexion with the war in South Africa were quite exceptional and may never occur again. Our army was fighting some 7000 miles away from England and over an area of about 160,000 square miles of territory with long and frequently interrupted lines of communication. There was a favourable combination of circumstances from a medical point of view nearly up to the capture and occupation of Bloemfontein. The battles were fought close to railroads and the British army was healthy. The time of stress and strain which was to test the efficiency of the army medical service had not arrived. But it came when the army had outmarched its supplies and when an outbreak of enteric fever followed on the insufficiency or breakdown of the transport. Then it became obvious. Undoubtedly all the circumstances were terribly against the medical service, but the fact remained that the hospitals and medical supplies were wanting.

The Medical Services of the Present and Future.

It is impossible for financial reasons to maintain in time of peace a Royal Army Medical Corps at a strength and on a scale adequate for the requirements of a big war. That the corps as it exists at present must be largely increased and that its officers must have increased facilities for professional study and training is obvious. The way in which this can be best accomplished must be considered hereafter. A radical and comprehensive reorganisation will be necessary for the purpose. But some scheme in the nature of the German system of keeping the civil medical element in touch with the army will also have to be introduced, as well as a method of welding all branches of the medical service—militia and volunteers—with the regulars and of giving all their members some training in military medical duties. The war in South Africa has opened a new chapter in the history of the British Empire by closely cementing the colonies with the motherland; and we have now to frame an organisation by which the whole strength of the medical element at our disposal can be made available in war. The aim in our future wars will rather have to be to take the hospital to the wounded than the wounded to the hospital. The field hospitals will require to be treated as independent units in every respect and to be furnished with adequate transport; and the bearer columns will probably have to be attached to, and utilised by, these hospitals. A more easy-working and active organisation will also have to be given to stationary hospitals to enable them to change their position and to move when and where they are required. The hospital nursing system will have to be largely increased and better provided for; but we do not believe that it is practicable or expedient to have female nurses with the moveable hospitals in the immediate track of the front fighting line. As regards the men of the Royal Army Medical Corps, it has always seemed to us that every attention should be given to their hospital training as orderlies and nurses, and that their military training in the way of parades and inspections should be curtailed as much as possible. The usefulness of such men lies in the former direction—as properly qualified attendants on the sick and wounded—and not in their acquaintance with military drills or their smartness as soldiers. The question of the organisation of a special service with a large sanitary executive for the carrying out of practical army hygiene will have to be considered and settled. There is much besides—such as having an army medical school in London instead of at Netley—affecting the medical service and all that appertains thereto which will have to be taken up in earnest in the coming army reforms, but whatever is done must be done deliberately and in time of peace.

Some Lessons of the War.

The feelings of disappointment and depression caused by the publication of Mr. BURDETT-COUTTS'S letter in the *Times* reflecting upon the medical arrangements for the care of the sick and wounded will not easily be forgotten. Debates ensued in the House of Commons, and these were followed by the appointment of a Royal Commission, which proceeded to South Africa to investigate all the facts on the spot. The publication of the report of this Royal Commission has still to take place, and until this report sees the light it is best not to dogmatise hastily upon the subject.

The same may be said of the whole history of the war. The official report has yet to be prepared, and until the country is in full possession of facts judgment is premature. We have, however, had the gratification of being able to supply the readers of THE LANCET with a large and varied amount of information concerning the war. The use of the newest rifled weapons and modern projectiles has revolutionised many of our views about gunshot wounds and military surgery. The Mauser and other bullets of a similar kind are, happily, merciful missiles as regards the character of the wounds which they inflict, and the results have often been of a very remarkable character, constituting a revelation to surgeons as to what the human body can tolerate with relative impunity. Antiseptic surgery has, it is needless to say, been universally practised and with splendid results. The climate also was very favourable, and, as a rule, the atmosphere was clean, dry, and aseptic. Our thanks are due to Sir WILLIAM MAC CORMAC for his admirable and descriptive series of articles, while our readers are also indebted to a number of other contributors and correspondents for first-hand news from the seat of war. Many of the medical officers of the navy as well as those of the army and the Colonial forces—to say nothing of many distinguished hospital surgeons and others—have taken part in the campaign.

We cannot leave the subject of the war in South Africa without adverting to the spirit of patriotism, devotion, and self-sacrifice which it has evoked on the part of the medical profession, both civil and military. On no previous occasion has such an array of surgical and medical skill and ability been brought to bear upon field service work in coöperation with the regular military medical service. As regards the latter, it would be impossible to name all the medical officers deserving of mention. One and all, military and civil alike, the medical men in the Boer war have distinguished themselves by their arduous and cheerful service. Nor have they been behind the combatants in personal gallantry, and here we may be permitted to mention two names. As a sample of bravery and devotion the way in which Major W. BABTIE of the Royal Army Medical Corps won his Victoria Cross has never been excelled. The second name is that of an officer of the Colonial medical service. Captain ALBERT T. DUKA of the Queensland Army Medical Corps was the only medical officer shut up with the small force during the siege and successful defence of Elands river camp from August 4th to 16th. The exploit of the force is comparatively little known, or at any rate has not commanded the attention that has been given to many less striking episodes in the war. The besieging army was a large one commanded by General DELAREY, who continuously shelled and fired on the camp and succeeded in beating back General CARRINGTON'S relief force. The Elands river camp garrison lost heavily. There were 73 casualties out of a small force, and five men (besides a hospital orderly) were wounded a second time in the hospital extemporised for the occasion. The pluck and endurance shown by Captain DUKA were conspicuous, and the professional services that he rendered on the occasion were of an exceptional kind performed under very trying circumstances.

The Naval Medical Service.

A good deal of work has fallen upon the Naval Medical Service during the past year. The medical officers of that service have taken a distinguished part in connexion with the naval brigades both in South Africa and China. In the former they were present, of course, at the siege of Ladysmith. Members of the service were also with Lord METHUEN'S force and took part in the operations under that general, several of them being mentioned in dispatches for their meritorious services. In the war in China the officers of the Naval Medical Service played a very responsible and important part in connexion with the relief force under Admiral Sir E. H. SEYMOUR.

The Indian Medical Service—the Indian Contingent for China.

As regards the Indian Medical Service we may say that the pressure upon the officers of that service has been great during the past year, owing to the continued prevalence of plague and famine and epidemic cholera and other diseases which are incidental to India. The very serious and critical state of affairs in China has, moreover, thrown upon the medical authorities of India the duty of making all the medical arrangements and the fitting out of a large hospital service for the expeditionary forces (mainly composed of the native army) to take part with the composite international forces of other Powers in the operations in China. From all we can gather we do not think that either the Indian or the Imperial Government has had practically much to learn from the other great military Powers in the fitting out and conduct of such expeditions or of the hospital services or provision of transport in connexion therewith. If the same amount of criticism had been brought to bear upon the conduct of affairs in China that has been applied in South Africa it would be found that this country has held its own. It seems, according to late reports, that the health of the German, and of our Indian, troops in China is bad. It is becoming very cold there, and as the Sikhs and native soldiers from India always feel the cold very much and are liable to acute pulmonary affections and recurrences of malaria fever at this season an increased amount of sickness among them is only what might be anticipated.

Ashanti.

The trouble in Ashanti must not be left without mention. From a medical as well as a military point of view the punitive expedition was a success, for, considering the unhealthy nature of the climate, the unfavourable seasons, and the hard work and exposure, it was attended with a relatively small loss of life. This is partly to be accounted for, no doubt, from the fact that mainly native forces inured to the climate were employed.

It will be seen from the foregoing that the history of the public medical services during the year 1900 has been almost entirely one of war. Let us hope that their history in 1901 may be one of peace and progress.

CHEMISTRY.

Radio-Activity.

Perhaps the phenomenon in chemistry which has attracted most attention and study during the year has been that comparatively newly-discovered property of certain substances which is now called "radio-activity." It would seem that there exists a group of elements which manifest radio-activity to a marked degree. Thus a new and most fascinating field of inquiry has been opened up since M. HENRI BECQUEREL observed that compounds of uranium in particular emit rays which affect a sensitive photographic plate through bodies usually considered opaque to light, and further that these radiations are deflected by a magnet and cause the discharge of an electrometer when brought to bear upon it. These rays have consequently so far been called "Becquerel rays" or uranic rays. But these rays appear to be emitted by other elements. Their discovery is next in importance to Professor ROENTGEN'S discovery of the rays which still have to be called "x," for it is announced that the study of radio active substances has laid bare new elements. Recent investigations would appear to show that radio-activity is due to an element or elements not yet isolated. Up to the present it is said that uranium and thorium compounds alone are practically active—that is to say, that the property of emitting rays which act on photographic plates is assumed to be a specific property of uranium and thorium. Sir WILLIAM CROOKES in a number of very interesting experiments which he has made has shown that amongst the minerals which he employed for the purpose those that were radio-active contained either uranium or thorium. In regard to uranium Sir WILLIAM CROOKES has obtained evidence which tends to show that the supposed radio-activity is due to the presence of a foreign body and is not an inherent property of the element itself. For the present, therefore, the unknown body must be provisionally UrX. The question remains as to whether in thorium compounds the same body exists. Already some investigators in Paris believe that they have obtained distinct evidence that this high degree of radio-activity is due to a hitherto unknown element. A substance has been isolated which has since been called "radium," the properties of which, it is said, resemble those of pure barium. It possesses, however, a higher atomic weight. Later it was announced that by mere contact of this substance with a salt of barium its radio-active property was communicated and thus an artificially radio-active barium was obtained. It is evident that chemists are on the threshold of an entirely new field of research which promises to yield very remarkable results. The position at present appears to be that we know of radio-active bodies which have five different origins—the compounds of uranium, thorium, polonium, radium, and a substance resembling titanium. Uranium and thorium have, of course, been long known as well defined chemical bodies, but the three last-named are so far only hypothetical elements. Of these radium is the best known, because greater study has been devoted to it.

The Transmuting of Elements.

The question of transmuting the elements has once more arisen, but this time attention has been turned not to the conversion of copper into gold, but to the conversion of phosphorus into arsenic and possibly antimony. As is well known, these elements are very "near relatives." The crux was, what was the black substance known as black phosphorus present in ordinary phosphorus after the addition of ammonia. It was suggested that it was arsenic produced by the action of ammonia on phosphorus. It has since been declared by Mr. T. FITTICA that he has, by acting upon phosphorus with ammonia in the presence of air, obtained a true transformation of phosphorus into arsenic, and according to his view the latter would appear to be a compound of phosphorus with nitrogen and oxygen. Later, the same investigator has stated that he has succeeded in transmuting phosphorus into antimony. These statements, one and all, are generally discredited, though, of course, the creed is fast gaining very general adherence that there is but one element, a primordial "stuff" out of which the rest of the elements have been and perhaps are being, elaborated. Whatever may be the truth in regard to these averred transmutations it is remarkable that quite recently it has been shown that arsenic may be administered in the form of a methyl compound—namely, cacodyl—in comparatively large quantity with relatively slight toxic results. Further, cacodyl is said to be almost a specific in debilitated conditions, replacing the phosphorus in nerve tissue. Does it replace phosphorus or is it arsenic transmuted into phosphorus?

Argon and Company.

Professor W. RAMSAY and his colleague Dr. M. TRAVERS have been busy studying the curious companions of argon.

So far argon would appear to be associated with three other elements called respectively "neon," "krypton," and "xenon." The place of these newly-discovered elements in the chemical hierarchy is still surrounded with obscurity, although they show a regularity in some respects which admits of their classification in the periodic code. But apparently there is little that is analogous between them, so that the properties of one do not necessarily suggest the properties of another. With the ordinary elements, as is well known, it was possible to predict by analogy the properties of an element yet undiscovered and missing in the periodic arrangement. There is, of course, a grand truth at the bottom of the periodic law but as yet this system of classification, it must be confessed, is still a conundrum. A gas apparently simulating argon was obtained by Dr. T. L. PHIPSON by passing dry cyanogen through a red-hot tube full of iron nails. The gas appears to be a carbide of nitrogen, but the announcement seems to have received little attention and certainly, up to the time of writing, no confirmation.

The Production of Ozone.

An interesting method for the production of ozone has been discovered by M. HENRI MOISSAN, who has shown that when fluorine comes into contact with water at a low temperature hydrofluoric acid is formed together with ozone. The case is one of polymerisation of oxygen which, of course, in the first instance is liberated by the fluorine. The method is not expensive and the ozone obtained is concentrated, and it is possible that this reaction may be of advantage for the commercial preparation of ozone.

Lotus Arabicus and Prussic Acid.

The production of prussic acid in nature has been well exemplified in the case of the *lotus Arabicus*, a small leguminous plant indigenous to Egypt and North Africa. Mr. WYNDHAM R. DUNSTAN found that when moistened with water and crushed the leaves of the plant evolved prussic acid in considerable quantity. The plant has proved highly poisonous to horses, sheep, and goats, and has been a source of anxiety to the military and civil authorities in Egypt. In the course of the investigation a new glucoside was recognised.

Desiccated Albumin.

Some interesting observations on the effect of desiccating albumin upon its coagulability have been made by Mr. J. BRETLAND FARMER. By carefully drying albumin this substance appears to be brought, so to speak, into a static condition. Chemical change or physico-chemical change is inhibited just as in an interaction between phosphorus and oxygen when conditions of complete dryness obtain. Similar conditions may be regarded to obtain in the case of protoplasm or micro-organisms which, when sufficiently desiccated, withstand conditions which otherwise would certainly promote chemical disintegration. "They—that is, the seeds and spores of certain bacteria—appear to be reduced to a static condition by drying, and the researches of ROMANES indicated no measurable chemical change as proceeding in them under these circumstances; and, again, the investigations of BROWN and ESCOMBE and of Sir W. THISELTON-DYER have also rendered it difficult to believe, when subjected to the other end of the scale of temperature, that any metabolism can really be proceeding. In these cases the molecular machinery of life is all present and intact, but the manifestation of vitality as measured by chemical movement and by the change in the condition of energy is absent. But such a state differs widely from death, seeing that when the conditions favourable to the continuous progress of those reactions which are associated with vitality are restored the organism proceeds to work in the normal manner once more. Similarly the albumin heated in the desiccated form retains, instead of changing, that particular molecular condition which enables it, on restoring the essential conditions of moisture, to coagulate in a normal fashion when heated to a suitable degree of temperature."

During the past year it is evident that chemistry has not been entirely approached from a narrow technical standpoint, for the labours of technical research have related to problems of vitality, and to those interactions going on in the human organism the study of which is calculated to raise medicine to a higher, because less empirical, position.

PUBLIC HEALTH.

The Plague at Glasgow, and its Lessons.

The closing year of the nineteenth century will be remarkable in history from the fact that for the first time since the days of the great mortality of the seventeenth century bubonic plague obtained a footing in one of our greatest centres of industry, and the epidemiologist of the future who records the waxing and waning of pandemics will perhaps occupy himself with a comparative study of the methods of control adopted now and in the past. Perchance, too, he will have to relate that in the year 1900 Great Britain received the first indications of what was to be her share of the pandemic wave, and he may perhaps deplore that the warning was not duly heeded, in that our smaller port sanitary authorities, certain riparian authorities, and numerous inland authorities failed to appreciate the writing on the wall. It has now been sufficiently demonstrated that, however plague may behave itself in the future, we in England possess at this moment no racial immunity from it. It is important, too, that the Glasgow outbreak should be properly interpreted, and that it should not be hastily assumed that when next the disease fixes itself upon this country it will be controlled with equal success. Dr. A. K. CHALMERS—the able medical officer of health of Glasgow—has set an admirable example to the country, and we are glad to see that his successful efforts in dealing with the plague have been officially and graciously acknowledged by the Local Government Board of Scotland. We should be glad to see his services recognised in one sense in even higher quarters, and in another by the municipal authority which he has served so well. But there is some evidence to show that the plague that visited Glasgow was of a somewhat kindly type, and that the disease possessed both a low striking power *quâ* infectivity and a low fatality rate. Moreover, the evidence does not, it would seem, point to rodents, such as rats, as having actively participated in the outbreak, and in this respect the Glasgow outbreak bears a marked contrast to that which occurred in Sydney in the early part of the year. There the connexion between the disease in rats and that in man seems to have been almost demonstrated; at any rate there can be no doubt as to the association. There is one great lesson which the events of the past year have brought home to us—that is, the tendency which plague manifests to develop in the poorer quarters of a city amid surroundings where both dirt and darkness are prevalent.

The advent of plague has done much to stimulate our authorities to action during 1900, and the port sanitary survey which was undertaken by the Medical Department of the Local Government Board could not have been more opportunely timed seeing that the warnings then given were, in fact, fully justified before the survey came to a close. Until, however, the next annual report of the medical officer of the Local Government Board is published—and the interval as yet may be considerable—we are not in a position to state precisely the results of the survey. It must be patent to anyone who is at all familiar with the records of the public health service that in our smaller ports and inland districts there is an enormous amount of work to be done before anything approaching security can be even thought of. By the term "security" we do not mean to convey an idea of absolute immunity from plague. If but the foam of the next plague wave has a tendency to fleck the shores of Great Britain nothing we can do in the matter of medical inspection or of defunct quarantine will serve to keep the disease altogether at bay. The history of Glasgow alone is sufficient to demonstrate this fact, and we have recently had numerous instances—such as the case of plague at Llandaff and the several cases which occurred in the port of London—illustrative of the same conclusion. Our safety against an epidemic depends upon (*a*) the manner in which infected, or possibly infected, vessels are dealt with at our ports; (*b*) the promptitude with which the departure of passengers from such vessel to our inland districts is notified; and (*c*) the manner in which such information is dealt with. The fact that in the Glasgow outbreak plague had apparently existed for from two to three weeks before it was recognised is sufficient to indicate to us what our dangers may be, and the absence of any properly constituted port sanitary authorities in Scotland is by no means reassuring to those who fear that plague may reach us across the Scottish border. The case of Ireland, too, may have to be considered a little more in detail before we can face the future with any degree of equanimity.

In connexion with the important subject of plague mention must be made of the report issued by the Royal Commission on Plague upon the methods of preparing Mr. Haffkine's preventive prophylactic, and upon the results of its use. Although the report is on the whole highly critical, no doubt is left upon the reader's mind as to the value of this prophylactic, notwithstanding the fact that the methods of manufacture come in for somewhat severe condemnation. It is under these circumstances a matter for congratulation that there is now in this country, whether at the Local Government Board or elsewhere, a supply of this valuable material. What may be termed the serum-therapy of plague has not had the advantage of such a critical examination as has the prophylactic culture of Mr. Haffkine, and the trial of Yersin's serum at Glasgow was not such as to lead to any very definite conclusions.

The Prevention of Tuberculosis.

The year 1900 will also be noticeable by the future chronicler in another relation—although the first year of the twentieth century may have greater claims in this respect. The net cast by preventive medicine grows larger year by year, and with its increasing size the individual meshes apparently contract. It is, however, but very rarely that the net is cast around another disease, and that disease thus brought within the scope of sanitary administration. But during the past year tuberculosis has received an altogether unique attention at the hands of sanitary authorities and their officers, and the "psychological moment" has evidently arrived for vigorous efforts to be made to curtail the ravages of this disease. The congress which is to be held in London at the end of next July, and which is to be presided over by the Prince of Wales, will, it is to be hoped, have the effect of stimulating public opinion up to the passing of useful measures through the Legislature. The erection of sanatoria for phthisical patients has already received a strong impetus, and 1900 will probably be regarded as the year in which this movement had its birth in this country.

Sewage Disposal.

The Royal Commission on Sewage Disposal has continued its sittings during another year and has paid visits to certain large towns where experimental works are in progress. We should be glad if we were able to anticipate the issue of at least an interim report which would have the effect of defining the position of the Commission relative to the important and really pressing subject as to whether or not the use of land is still to be insisted upon in all systems of sewage disposal, but we fear the knowledge hitherto acquired is not yet such as is capable of being focussed.

Food Preservatives and Substitutes.

The important question of the use of certain chemical preservatives in our food and drink has continued during the year to receive the attention of the Departmental Committee of the Local Government Board, and visits have been paid by members of that committee to Holland, Germany, Denmark, and Ireland, with a view to ascertain the practices in vogue in these countries in respect of this matter. Whatever may be the decision at which the committee arrives, some valuable evidence and important experimental results will doubtless be placed on record. Probably, too, the medical profession will in future pay more attention to this subject than has hitherto been the case. The uncontrolled use of substances which are at one and the same time both drugs and preservatives can hardly fail at times to lead to posological complications, seeing that the medical practitioner who prescribes one of the drugs in question may be quite unaware that his patient is already being, and has perhaps for years been, over-dosed with the same substance.

That there is pressing need for a more detailed examination of our food and drinks, and of the substances used in their preparation, has been recently brought home to us in a somewhat dramatic and startling fashion by the revelations as to the presence of arsenic in beer, and a question asked lately in Parliament as to the number of samples of sulphuric acid which have been examined by the Government analyst during the past year seems to indicate the direction in which reform is most urgently called for. In the matter of beer, as in certain other directions, the responsibility *quâ* purity is, it appears to us, not sufficiently defined, and the fact that the Treasury, the Home Office, the Local Government Board, the Board of Agriculture, and the Inland Revenue have certain functions and interests in this matter, has led to less control being exercised than obviously should have been the case.

The Prevention of Malaria, Yellow Fever, and Typhoid Fever.

In the domain of tropical medicine great advances have been made in our knowledge of the prevention of malaria by the destruction of certain species of mosquitoes, and the practical experiments conducted in the Roman Campagna and on the west coast of Africa have gone far to show that if the bites of these mosquitoes can be prevented, so also can malaria; in other words, that if the formula, "No mosquitoes, no malaria," does not convey all the truth, it does so to such a degree as to render action in this direction the most practical measure for controlling the disease. Dr. Celli and Dr. Koch have also laid much stress upon the presence of rice-fields as conducing to malaria, and the latter has remarked, "The more rice fields there are in the neighbourhood of a place, and the nearer they are, the greater the abundance of mosquitoes."

The terrible prevalence of enteric fever among our troops in South Africa has afforded an altogether exceptional opportunity for the study of this disease under the conditions of modern warfare, but it is deeply to be regretted by all true epidemiologists that more advantage was not taken of the situation by the despatch of a really capable committee of trained epidemiologists to investigate the situation at the actual moment of prevalence. Doubtless the Commission which was despatched a few months since will bring back much highly valuable information, but it is quite clear that they have not been afforded a fair opportunity for adequate research. Some 15,655 cases, 3642 deaths, and 9128 invalids, will require no little investigation. Anti-typhoid inoculation has been submitted to some experimental tests in South Africa during the year under review, but we must await the official returns before judging the results.

The etiology of yellow fever has been further cleared up during the past year by Dr. **WASDIN** and Dr. **GEDDINGS** of the Marine Hospitals Service, Washington, U.S.A., who, in their report issued at the beginning of 1900, confirmed in most of the essential details the discoveries of Professor **SANARELLI** with reference to the bacillus icteroides being the specific organism of that disease and have also demonstrated that the infection of the disease is taken in by the breath.

The Housing of the Poor.

In the more exclusively administrative side of public health the year 1900 will for some five millions of our population situated in the County of London mark a new departure, and upon the corporations which have now replaced the old vestries will devolve the duty of guarding the health of the new metropolitan boroughs. All students of local government will watch the new corporations somewhat critically and anxiously to see if they set an example of purity of life to the local authorities throughout the country, or whether they degenerate into aggregations of interested place seekers unduly influenced by the jerry-builder and insanitary property-owner. In connexion, however, with the subject of slum property the year 1900 has seen some good work, and although the modified machinery for applying the Housing of the Working Classes Acts cannot be accepted as in any sense final Mr. **CHAPLIN'S** Act may prove helpful to local authorities. The London County Council, too, are taking steps which may afford some useful lessons to those who are endeavouring to face these problems seriously, and the improved means of transit afforded by electric tramcars and underground railways must be regarded as not unconnected with the problems of the housing question.

Vaccination.

The new Vaccination Act, on the whole, is working smoothly, although in more than one large town the anti-vaccinationist is in a more fighting mood than are the officers whose duty it is to enforce the Act. But there seems little room for grievance left, and the scenes which took place under the old Act have ceased to occur. Still, Mr. **WALTER LONG**, the new President of the Local Government Board, must exert considerable tact and firmness if he wishes to report to Parliament at the expiration of the period for which the Act is operative that unqualified success has attended its administration. But the fact that the percentage of vaccinations to births was in 1899 72·1, as contrasted with 54·2 in 1898—an increase of 33·8 per cent.—is decidedly hopeful. Moreover, Mr. **LONG** has already shown himself to be a Minister of remarkable determination, and, if we mistake not, he will prove a vigorous administrator.

The Disposal of the Dead.

The sanitary condition and resources of London burial-grounds have been inquired into by the medical department of the London County Council during the past year and some interesting information has been accumulated. The indications are that the old idea of preserving the dead must give place to one which will expedite the resolution of our remains rapidly and withal inoffensively—that leaden coffins and deep brick graves must find a substitute in a method which will be more in keeping with the "earth to earth" of our burial service, with the findings of the bacteriologist, and with the dictates of economy; while for those who view with distaste even this relatively rapid decomposition of the body by earth-to-earth burial there is an increasing number of crematoria being erected where the same final result can be reached in the course of some two hours. The number of persons who appreciate this somewhat sudden rupture of material associations increases year by year, and it is estimated that at Woking alone at least 300 bodies have been thus dealt with during 1900. How will these figures compare with those for the year 2000?

Sanitation in Dublin.

The persistence of an exceptionally high death-rate in Dublin was in part explained by the description which our Special Sanitary Commissioner gave of the insanitary conditions prevailing there at the commencement of the year. As children had been the principal sufferers the reports which we published dealt extensively with the elementary schools. Many of these are situated in extremely unhealthy and overcrowded districts. They have not sufficient playgrounds or breathing space around them, but are wedged in between filthy dwellings or abut upon lanes where offal and offensive matter are allowed to accumulate. Inside the light is often deficient and sometimes no provision, or only very scant and insufficient provision, is made for washing. The children, especially at the industrial schools, are often extremely dirty, and it is not to be expected that under such circumstances they will grow up to appreciate the advantage of cleanly habits and healthy homes. These homes are generally in old houses that were built for one family but which have now been turned into tenements where many families reside. Of course they are not suited for such a purpose and the property is soon degraded. Filth of the most revolting description abounds on all sides, yet many of these slum dwellings are in the very centre of the town and near to the most fashionable quarters. There have been some noble efforts made to deal with the question of the housing of the poor, but in face of widespread poverty, of the dirty habits of the people, and of their complete ignorance of the principles of cleanliness these endeavours have only touched the fringe of the problem. Consequently epidemics follow one upon the other with regrettable and monotonous regularity. Much might be done to mitigate these evils if object lessons and practical lessons were given in the schools in cleanliness and domestic economy. Unfortunately, political and religious animosities hold the first rank where only practical questions of local administration should be dealt with, and in the wrangle of party strife the cause of sanitary reform is thrust into the background. Even in the management of hospitals the same strife occurs and sisterhoods interfere on religious grounds with purely technical medical matters. This introduction of religion and politics as dominating factors over matters of technical administration is one of the greatest obstacles in the way of efficient sanitary reform, and yet it is only necessary to refer to the appalling description given in our columns of the condition of Dublin to appreciate how much such reform is needed.

THE GENERAL MEDICAL COUNCIL.

The sessions of the General Medical Council have been of considerable interest from the number of important questions which have been raised as well as from the nature of the cases brought under the disciplinary notice of the Council. Important changes in the *personnel* of the Council have to be recorded as affecting the character of its debates. Mr. **R. BRUDENELL CARTER**, who long and ably represented the Apothecaries' Society of London, has been replaced by Sir **HUGH REEVE BEEVOR**. Sir **RICHARD THORNE'S** death was much felt in the Council. He was not restrained by his official position or by temperament from sharing boldly in the fray of discussion on all subjects. The great interests of the Crown in State Medicine are happily well guarded by his successor, Mr. **W. H. POWER**. If he has not yet acquired that freedom of debate which characterised his predecessor all who know him recognise that the Council has gained in him a clear and logical head. Sir **PHILIP C. SMYLY** resigned before the November meeting, and was succeeded in the representation of the Royal College of Surgeons in Ireland by Dr. **CHARLES BENT BALL**.

Professor ALFRED HARRY YOUNG takes the place of the lamented Dr. D. J. LEECH as representative of the Victoria University. A new member, adding to the size of the Council by representing a new constituency—Birmingham University—is Professor BERTRAM COGHILL ALAN WINDLE. Mr. WINTERBOTHAM has been appointed solicitor to the Council, on the resignation, after long and valued services, of Mr. F. W. FARRER. A well-deserved vote of thanks to Mr. FARRER was passed.

At the May meeting of the Council the deliberations were prolonged through nine days. Three days were almost wholly given up to the penal cases. One of the practitioners, a dentist, whose name was ordered to be erased was charged with "systematically seeking to attract professional practice by the issue of public advertisements of his name, address, appliances, and professional qualifications." This should serve as a warning to dentists, many of whom have a tendency to advertise in a way quite inconsistent with the status now conferred upon them by Act of Parliament. Such conduct will in future be the less excusable, because at this session the Council ordered its resolution disapproving of advertisement to be issued to every dentist on the Register.

At the November session there were, amongst others, two penal cases, involving somewhat new forms of complaint, which call for a short notice here. One was that of HENRY WARD IRVINE of Birmingham, registered as M.B., Bac. Surg., M.D., Univ. Dub., who had accepted office in an institution called the Consultative Medical and Surgical Institution, Birmingham. By the promoters of this institution he was extensively advertised as its consulting physician, and the question was whether he had condoned such advertisement and must therefore be considered to have advertised. The Council found the charge against Dr. IRVINE of infamous conduct in a professional respect proved and adjourned the further consideration of the case to the next May session. The other case was that of JOHN MARTIN THOMSON, of Airdrie, N.B., registered as M.B., Mast. Surg., Univ. Edin. He was charged with keeping a chemist's shop and employing assistants for the sale of drugs and poisons who were not qualified to act as chemists or pharmaceutical assistants. The chief defence was that the custom was universal in that part of Scotland. The Council found the charge proved and adjourned the further consideration of the case to the next May session. The prevalence of such a custom throughout Scotland is a matter of some importance to the Council, who should ask for proof of this statement with a view to formulating procedure. The construction of rules to prevent fraudulent personation seems to be attended with some difficulty, as the report of the committee in May was recommitted, and even in November no final report was presented.

The financial position of the Council is interesting. At the May meeting the Council gave, as a part of its expenses, £500 to the Branch Council of Ireland, which finds increasing difficulty in carrying on its branch work with the funds accruing from its own registrations. The other Branch Councils are in a better financial position, but, as may be seen from the report of the Special Finance Committee made at the November session, there is a tendency in late years for the expenditure to exceed the income. This is not so much from a falling off in income as from ever-increasing expenditure on law proceedings, on long sittings of the Council, on stationery, and generally by that lavish and generous humour which is generated in a body which has for some years accumulated money without using it. It will be seen that there is considerable difference of opinion in the Council as to the exact financial situation, some members being disposed to regard it more favourably than others. It is satisfactory that the Council has resolved that the whole financial position is to be referred to an expert for his consideration and advice and that his report is to be in the hands of members of the Council a month before the next meeting. There should be no serious difficulty in adjusting the income and expenditure of the Council, for the property of the Council is rising in value and the annual deficit is not a serious one.

A more difficult question than the financial one is the adjustment of the relations between the General Medical Council and the medical authorities, and the definition of their respective functions. Anything more unseemly or unprofitable than the friction between the Royal Colleges of Physicians of London and Surgeons of England on the one hand and the General Medical Council on the other, in respect of the recognition of institutions for the teaching of chemistry, physics, and biology cannot be imagined, and unfortunately it is only emphasised by the resolution of the Council at its late meeting to "adhere" to a position which it has no legal power to sustain and which may easily involve it in costly and undignified litigation. The calm judgment of the President will, it is to be hoped, avail to moderate feeling on both sides.

At the May meeting valuable reports from the experts who had been consulted by the Council as to the best means of raising the standard of preliminary education were presented by the Education Committee. The Council adopted the view of the committee that while it was not possible in the existing condition of education to require from all intending medical and dental students the standard of general attainments represented by the so-called senior and higher grade examinations, a substantial advance can be made by insisting on improvements in the character and stringency of junior examinations. Especially can these examinations be influenced by the Council who can require that candidates shall have obtained a higher standard than that of a simple pass. It was also determined to refuse registration to all students who have not attained the age of 16 years. At the November meeting it was reported that all the educational bodies were endeavouring to comply with the views of the Council.

An ill advised suggestion of the Public Health Committee to divide candidates for Public Health Diplomas into two classes, junior and senior, and to facilitate unduly the acquisition of such diplomas by colonial practitioners was not accepted by the Council, which is sensible of its responsibility in this matter and of its power to enforce its views. At the November meeting the subject was disposed of by making the demands equal from all classes of candidates as respects the time to be devoted to laboratory work and work under a medical officer of health.

An important reminder of the subjection of the General Medical Council to the Privy Council in some subjects was supplied in May by an intimation from the latter body that at the proper time it will be prepared to apply Part 2 of the Medical Act, 1886, to Italy. This means, of course, that in due time some recognition of the rights of Italian medical practitioners to practise in England and *vice versâ* may be arranged. After the Order in Council the part of the General Medical Council under the Act comes into play in deciding before conceding registration whether any given foreign diploma guarantees sufficient knowledge and skill, and whether the applicant is of good character. It rests with the Queen in Council to decide if Italy has accorded just conditions of practice to Her Majesty's medical subjects in that country. The information conveyed in our Rome correspondent's letter last week, however, would indicate that it is very doubtful whether Her Majesty in Council will be in a position to declare that her medical subjects in Italy have been accorded "just conditions of practice."

THE BRITISH MEDICAL ASSOCIATION.

The sixty-eighth meeting of the British Medical Association was opened at Ipswich on Tuesday, July 31st, under the presidency of Dr. WILLIAM ALFRED ELLISTON, senior surgeon to the East Suffolk and Ipswich Hospital. This is the first occasion upon which the Association has met at Ipswich. The meeting of the Association was this year rather handicapped by other meetings which occurred about the same time, notably the Centenary of the Royal College of Surgeons of England and the International Medical Congress held at Paris. But, on the whole, the meeting was successful and saw the beginning of a reform movement that may later be found full of significance. The Presidential and other addresses were, as might have been expected in the last year of a century, retrospective. Dr. W. A. **Elliston** took for the subject of his address Some Incidents in the Evolution of the Modern Physician Mr. F. **Treves**, who gave the Address in Surgery, spoke upon the Surgeon in the Nineteenth Century. Dr. W. J. **Smyly**, who gave the Address in Obstetrics upon the Maternal Mortality in Childbed, took a retrospect of the subject as it appeared from the beginning of the century until now; and only Dr. P. H. **Pye-Smith**, who gave the Address in Medicine entitled "Medicine as a Science and Medicine as an Art," resisted the temptation to sum up the progress and the mistakes of the century. The discussions and papers were all round maintained at a high level, although there was nothing very startling to the fore. But the Ipswich meeting of 1900 may become memorable in the annals of the Association by reason of the carrying of a motion proposed by Mr. **Victor Horsley** in the following terms:—

> "That a committee be appointed to consider and report upon the best means of reorganising the constitution of the British Medical Association, such committee to furnish a provisional report to the branches by March 1st, 1901."

After the date had been altered from March 1st to Feb. 1st this motion, which was unanimously carried on August 1st, resulted in the appointment of the following gentlemen as a committee. Those nominated by the Council were as follows:—For South Africa, Surgeon-General J. B. **Hamilton**; for the East Indies, Mr. **James Cantlie**; for Ireland, Sir **John Moore**; for Scotland, Dr. J. C. **McVail**; and for England, Dr. **Roberts Thomson**, Dr. **Radcliffe Crocker**, Mr. T. **Jenner Verrall**, Dr. R. **Saundby**, Dr. S. **Woodcock**, Dr. **Ward Cousins**, Mr. H. T. **Butlin**, and Mr. **Andrew Clark**. Mr. **Horsley's** nominations were: for the West Indies, Dr. C. G. **Gooding**, late of the Barbadoes; for Australasia, Mr. C. G. D. **Morier** of Adelaide; for Scotland, Dr. R. C. **Buist** of Dundee; for Ireland, Professor J. W. **Byers**; for Canada, Mr. **Edmund Owen**; for England, Dr. A. **Cox**, Dr. **William Gordon**, Dr. C. H. **Milburn**, Dr. A. G. **Bateman**, Dr. A. B. **Ritchie**, Mr. J. S. **Whitaker**, and Mr. **Victor Horsley**. The report of the committee should be of great interest to the Association, that is, to a large section of the British medical profession.

VARIOUS HOSPITAL FUNDS.

When the many calls upon the purses of the charitable during the past year are taken into consideration the promoters of the Metropolitan Hospital Sunday Fund are to be congratulated upon the success of their labours on behalf of the sick and needy poor of the Metropolis. Under the presidency of the Right Hon. Sir **Alfred J. Newton**, Bart., Lord Mayor, treasurer of the Fund, a total of £51,993 14*s.* 6*d.* was collected. This shows a falling off from last year when the total was £53,504 11*s.* 1*d.*, but not including last year the present total is the largest one since 1895. The amount collected by the various congregations was £35,856 8*s.* 11*d.* and the legacies, special donations, &c., made up a sum of £16,137 5*s.* 7*d.*, this latter sum including £10,000 from Mr. **George Herring**, £1090 from the late Mr. **Thomas King** of Tisbury, Wilts, and an anonymous donation from "F. H." of £1000. It should be mentioned that Mr. **Herring** offered to give an additional £10,000 if the collection could be raised to £90,000. Sir **Savile Crossley** for the tenth time gave £500; "A. G. P.," £300; and "Delta," for the twenty-second time, £200. At the meeting of the committee of distribution in July it was decided to divide the sum of £46,492 among 140 hospitals and 54 dispensaries. Among the largest of the contributions from the congregations the Rev. Prebendary C. J. **Ridgeway**, of Christ Church, Lancaster-gate, headed the list of contributions with £1519, and the Rev. Canon **Fleming** of St. Michael's, Chester-square, collected £1158 from his congregation. The Rev. Prebendary **Eardley Wilmot**, M.A., of St. Jude's, South Kensington, collected £855.

The energy displayed by the workers for the Hospital Saturday Fund is worthy of all praise. Notwithstanding the exceptional strain upon public charity this year this Fund shows no falling off; indeed, up to the end of last week it was £184 ahead of the amount collected up to the corresponding period last year. The accounts of this Fund are not made up until the new year, so that no proper comparison can be drawn between this and the other metropolitan funds. The amount distributed last year was £17,013 13*s.* 8*d.*, a sum practically made up of the pennies of working-people. An interesting fact worthy of note in connexion with this Fund is that the deficit which was at first entailed by the abandonment of the annual street collection has in three years been fully made up.

The Prince of Wales's Hospital Fund has this year received £26,888 in annual subscriptions, £8523 from donations, undefined contributions, and newspaper collections, £6038 from investments, £1000 from a legacy by Madame **Rosa Ann Deleglise**, £1000 as an annual grant from the trustees of the London Parochial Charities for the maintenance of convalescent hospitals, and other smaller sums, making a total of £43 468 13*s.* 1*d.* In addition to this £6000 were received from the League of Mercy. The annual subscriptions show an increase of £1200 over the amount of last year. The donations, on the other hand, are £5000 less. A legacy of £3000 from Sir H. P. **Turner Barron** will probably be paid in 1901. £50,000 have been distributed, of which £49 000 went to hospitals and £1000 to convalescent homes. This is an increase of £8000 on the amount distributed last year, and last year there was an increase of £9000 over the previous year.

In application to all the funds we heartily re echo the words of His Royal Highness the **Prince of Wales** when recently in referring to his own Fund he said: "I can only hope that as time goes on the Fund may increase in prosperity, so that the great object we had in view, that of placing the hospitals of this great metropolis on a thoroughly sound financial basis, may be accomplished."

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The manner in which Dr. **William Selby Church** fulfilled the duties of President during his first year of office left but little doubt as to his re-election, and at a comitia held on April 9th Dr. **Church** was again installed in the chair by an almost unanimous vote of the Fellows. On July 11th the President informed the College that he had accepted the invitation made to him, as President of the College, by the Secretary of State for the War Department, to become a member of the Commission appointed by the Government to inquire into the condition of the sick and wounded in South Africa, and in accordance with the by-laws he nominated Dr. F. W. **Pavy** to act as President during his absence.

During the year an important alteration was made in the by-law dealing with the permanent or temporary expulsion of a Fellow, Member, or Licentiate from the College.

A report, dated Nov. 20th, from the Committee on the Nomenclature of Diarrhœa was received, in which it was recommended that the term "epidemic enteritis" should be used as a synonym for epidemic diarrhœa and that the College should urge the entire disuse as synonyms of epidemic diarrhœa in medical certificates of death of such terms as "gastro-enteritis," "muco-enteritis," or "gastric catarrh."

By laws were enacted and approved relating to the representatives of the Royal College of Physicians of London who should be appointed members of the University of London. It was determined that the representatives should always be Fellows of the College and the mode of their election was precisely laid down.

The subject of the Weber-Parkes Prize Essay for 1903 was announced to be "The Channels of Infection in Tuberculosis, together with the conditions, original or acquired, which render the different tissues vulnerable"

A communication was received from the Secretary of State for the War Department asking the advice of the College on a proposal for encouraging the investigation of the nature and cause of dysentery affecting armies in the field and its relationship (if any) to enteric fever. The President was requested to express to the Secretary of State the hearty appreciation of the College of the proposal submitted and to suggest that in its opinion the end in view would best be attained by appointing a small commission of suitably qualified persons to conduct the inquiry. A subsequent communication from the Secretary of State announced the appointment of the following commissioners:—Dr. W. J. R. SIMPSON, Colonel J. L. NOTTER, R A.M.C. (Professor of Military Hygiene, Army Medical School, Netley), and Major D. BRUCE, R.A.M.C.

The following awards were made during the year:—The Blane Medals to Staff-Surgeon JAMES M. ROGERS, R N., F.R.C S. Eng., and Surgeon OSWALD REES, R.N., M.D Glasg., and the Jenks Scholarship to Mr. ALFRED GEORGE SWAN.

The following lectures were delivered during the year: the Milroy Lectures by Dr. F. J. WALDO on Summer Diarrhœa, with Special Relation to Causation and Prevention; the Goulstonian Lectures by Dr. PERCIVAL HORTON-SMITH on the Typhoid Bacillus and Typhoid Fever; the Lumleian Lectures by Dr. W. B. CHEADLE on Some Cirrhoses of the Liver; the Croonian Lectures by Dr. F. W. MOTT on the Degeneration of the Neurone; and the Bradshaw Lecture by Dr. ARCHIBALD E. GARROD on the Urinary Pigments in their Pathological Aspects. Professor CLIFFORD ALLBUTT was the Harveian orator for the year.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The chief event of the year 1900 has certainly been the celebration of the centenary of the granting of the Charter in 1800, whereby the old Surgeons' Company, which had become dissolved, was reconstituted and incorporated under the name of the Royal College of Surgeons of England. About a year ago the Council obtained a Supplementary Charter whereby they became empowered to grant diplomas of Honorary Fellowship not exceeding 50 in number. The centenary celebrations commenced with the conferring of the Honorary Fellowship on the PRINCE of WALES. A conversazione took place at the College and the centenary meeting was held in the late theatre of the University of London, when the President, Sir WILLIAM MACCORMAC, welcomed the guests, and then conferred the honorary diplomas on 34 foreign and British representative surgeons. It should be mentioned, however, that in addition to the PRINCE of WALES the Marquis of SALISBURY and the Earl of ROSEBERY were also made Honorary Fellows. On the same evening was held the centenary dinner in Lincoln's Inn Hall The centenary festival was in every way a success and was worthy of the College and of the occasion.

At the annual election of members of the Council there were four vacancies, as Sir THOMAS SMITH, Mr. JOHN TWEEDY, and Mr. ALFRED COOPER retired, and Mr. J. N C. DAVIES COLLEY had resigned and subsequently died. Sir THOMAS SMITH did not seek re-election, but there were in all 12 candidates, and Mr. TWEEDY and Mr. COOPER were re elected and Mr. A. PEARCE GOULD and Dr. J. WARD COUSINS were elected.

The annual meeting of Fellows was fixed for July 5th, but the number required for a quorum not being present no meeting was held. This is the fourth time that a meeting has been summoned and a quorum has not been present, and it is not at all unlikely that in future the regular meetings will be discontinued and that a meeting will only be summoned when the Council considers it necessary.

The annual meeting of Fellows and Members was held on Nov. 15th, when the Council was requested to have the names of deceased Members printed in the annual report, and a resolution was carried to the effect that the Council was asked to obtain representation for the Members. Another resolution requested the Council to take steps towards obtaining a Parliamentary inquiry into the working of the Medical Acts with a view to their amendment. A further resolution expressed the opinion that every Member of the College was entitled to receive a copy of the annual report from the Council without application. Another resolution asked the Council to agree to the recent recommendations of the General Medical Council with regard to the combination with the Apothecaries' Society and the question of the commencement of scientific studies. The Council at its next meeting acceded to the request that the names of the deceased Members should be published in the annual report, but they thought that it was not desirable to re-open the question of the representation of the Members on the Council It was also decided that the annual report should be sent to those Fellows and Members only who apply for it.

Two Members were elected to the Fellowship under the 20-years' rule—Brigade-Surgeon-Lieutenant Colonel W. R. HOOPER, C.S I, I.M.S., and Mr. FREDERICK PAGE of Newcastle. Mr JOHN LANGTON delivered the Bradshaw Lecture on the Association of Inguinal Hernia with the Descent of the Testis. The Jacksonian Prize was awarded to Dr. LAMBERT LACK for an essay on the Pathology, Diagnosis, and Treatment of Inflammatory Affections of the Nasal Fossæ and the Associated Sinuses and Air Cells. The subject of the Jacksonian Prize for 1901 is the Diagnosis and Treatment of Bullet-wounds of the Chest and Abdomen. The John Tomes Prize was awarded to Mr. J. H. MUMMERY. Mr. EDWARD TRIMMER, M.A, the Secretary of the College, who has been connected with the institution for 42 years, has resigned, and his resignation will date from March next. Mr. SIDNEY COWELL, B.A., who has been assistant secretary, has been appointed to succeed him.

BENEVOLENT AGENCIES OF THE PROFESSION.

The Royal Medical Benevolent College, which provides pensions for aged medical men and the widows of medical men in reduced circumstances and a school open to all classes but offering special advantages to the sons of medical men, 50 of whom are foundation scholars, sorely needs greater support than it receives. There are 50 pensioners, all of whom receive annuities of £30, with the exception of a few still occupying rooms in the asylum who receive £21. There are also nine "Pugh" pensioners who receive £30 a year each, two "Da Silva" pensioners, each of whom receives a pension of £20 per annum in addition to the out-pension given by the College, and three "Morgan" annuitants who receive annuities of £20 each. 50 foundation scholars receive an education of the highest class and are boarded, clothed, and maintained at the expense of the College. Nine perpetual presentations for female orphans of medical men and one with certain restrictions open to those who are not orphans exist in connexion with the College at the School of St. Anne's Society. As the College has not much in the way of permanent income the cost of maintaining the 50 foundation scholars and the 50 pensioners has to be defrayed mainly out of the annual subscriptions and donations and these have for some years past been insufficient for the purpose.

The income of the British Medical Benevolent Fund has barely covered the outlay and subscriptions are urgently needed to maintain the efficiency of the grant department. The annuity department shows an income from investments of £2350, while the amount paid in annuities is £2213. The annuitants number 111. In the grant department the income from subscriptions and donations is £1691, while the amount voted by the committee in payment of grants totals £1685. Had it not been for two large and unexpected donations there would have been a serious deficiency. 165 cases have been relieved.

The Society for the Relief of Widows and Orphans of Medical Men was founded in 1788 and incorporated by Royal Charter in 1864. The benefits of the society are confined to the widows and orphans of deceased members of the society, and any registered member of the profession residing within a radius of 20 miles from Charing Cross is eligible for proposal as a member of the society. The receipts for 1899 amounted to £3353 and the grants and expenses to £3250 13*s.* 1*d.*

THE LANCET Relief Fund still continues to relieve cases of temporary distress, and the report for 1900, which will be published in an early issue of THE LANCET, will probably show that the number of cases dealt with this year is greater than that of last year. The amount expended in gifts may also show an increase.

ANALYTICAL COMMISSIONS OF THE LANCET.

The investigations undertaken in THE LANCET Laboratory during the past year have been of general interest. In view of the inquiry into the question of the use of preservatives and colouring matters in food by a committee appointed by the Local Government Board—before which committee one of our Commissioners gave evidence—it occurred to us that a history of the subject would be looked for at this stage and only in the past pages of THE LANCET could such a history be found. In 1851 public attention was first drawn to the preservation and artificial colouring of food by the labours of the Analytical Sanitary Commission of THE LANCET instituted by the late Mr. THOMAS WAKLEY, M.P., the Founder of the journal. In the first number of the present year will be found an article entitled "An Historical Record of the Use of Preservatives and Colouring Matters in Food, according to the Inquiries of the Analytical Sanitary Commission of THE LANCET from 1851 to the present time." This article is a *résumé* of the various articles and communications which appeared in THE LANCET when the subject was first mooted half a century ago, and we believe that this historical synopsis has proved instructive in showing the origin and early uses of artificial colouring matters and preservatives in food, as well as by drawing a contrast between past and present methods. The committee of inquiry referred to has not yet reported or drawn up any recommendations as to the direction in which legislation may be directed for the better security of a pure food-supply from the points of view indicated. We predicted that the inquiry would involve a considerable amount of time and labour, though we believe the Local Government Board at the outset thought that short work could be made of the subject in hand. As it is the inquiry has lasted well over a year and the report is not yet to hand, but a question recently put in the House of Commons elicited the statement that it might be ready by March next.

In THE LANCET of May 5th (p. 1298) our Commissioners drew attention to the composition of custard powders which are so often recommended in place of eggs for the preparation of a custard. As a matter of fact our analyses of several powders showed that the albumen found in them ranged from 3 per cent. to *nil.*, while in none of them was there any fat. They consisted chiefly of starch coloured with turmeric or an aniline dye. As was pointed out, such a mixture cannot compare dietetically with the true custard made with milk and eggs. The matter is of some importance, especially as custard is employed as an acceptable food for invalids. The custard powders examined were in no sense equal to eggs and milk.

In the same number of THE LANCET (p. 1299) appeared a chemical account of the colouring of the new halfpenny postage stamp which early in the year was altered to green from red in order that it might conform with the colour of the stamps of the same value in other countries. The colouring we found to consist of a mixture of Prussian blue and a chrome colour. No lead or arsenic, or other mineral irritant could be found. The gum was the dextrinous substance derived by heating starch, called British gum. The chemistry of the new halfpenny stamp, therefore, is satisfactory, but, of course, as our readers were reminded, postage stamps are constantly exposed to the risk of contamination with septic organisms, which fact renders the common habit of licking them very undesirable.

Statements appeared frequently in the press in the early part of the year to the effect that amongst other unfair devices adopted by the Boers in the present war was that of coating the Mauser bullet with a poisonous salt of copper. By the courtesy of Sir WILLIAM MAC CORMAC, who placed at our disposal some of the so-called copper-dipped bullets, our Commissioners were able to submit the coating, as well as the case which enclosed the bullet, to analysis. The metal case was found to contain both nickel and copper. The wax outside was shown to be identical with that used in candle-making. Since candle-wax contains stearic acid it would most likely act upon the metal of the case, producing in a similar way the green "tears" commonly found hanging from brass candlesticks. A good deal of the wax could be scraped off and was quite white, the green portion being next to the metal case. In this layer of wax both nickel and copper were found. These results were quite inconsistent with the theory that the Boers had maliciously coated their bullets with poisonous copper salts.

The next subject which engaged the attention of our Laboratory Commissioners was the Sparklet system of extemporaneously aerating liquids. The inquiry related to (1) the safety of the method arising from (*a*) the sparklet or bomb containing liquid carbonic acid gas and (*b*) from pressure in the charging bottle; (2) the purity of the gas; and (3) the purity of the finished product and its chances of contamination. We were satisfied as to the safety of the method and to a great extent also as to the purity of the aerated liquid obtained. On this last point, however, we made a few suggestions which if acted upon should give greater security in this regard.

A very interesting enterprise in the direction of hydrotherapeutics at Shanklin in the Isle of Wight was the next subject of inquiry. We refer to the ferruginous baths which have recently been constructed there on the exact plan adopted at Homburg Spa, Schwalbach, and elsewhere. A number of analyses of the water of the ferruginous spring at Shanklin Spa were made on the spot, and afterwards a complete account of the composition of the water was published from THE LANCET Laboratory. At the same time the ingenious system of heating the baths, by means of which the natural condition of the water is undisturbed, was described with some detail.

The number of specimens of food, drugs, and other articles examined in THE LANCET Laboratory and reported on in our Analytical Records column was exactly 100, and the number of individual determinations thus involved was 373. In connexion with special analytical work some 34 analytical determinations were made, bringing up the total analyses to 407.

THE INTERNATIONAL CONGRESSES IN PARIS.

Early in 1899 we began the publication of articles designed to arouse interest in the great international medical congresses to be held in the following year in connexion with the Universal Exhibition at Paris. It must be confessed that our endeavours did not meet with that measure of success which, under normal circumstances, would have been secured. As we have always maintained that the progress of science should not be checked by frontier demarcations, we have been anxious that Great Britain should be adequately represented at all international scientific gatherings. This year the war in South Africa very materially interfered with our aspirations in this respect. So many physicians and surgeons went to the front that those who remained in England had more than their usual amount of work to do and were therefore less able to find time to attend congresses. Also, the natural anxiety caused by the war and the mourning for lost friends or relatives made others less inclined to take part in congresses and their accompanying festivities. Thus the medical world at the Paris Exhibition had to endure the absence of many who, under more propitious circumstances, would have largely contributed to uphold the fame of British science in these parliaments of the world. So also with regard to the Exhibition itself, we fear that its innumerable useful and practical lessons have been lost to many members of the profession who in normal times would certainly have visited this unparalleled collection of the works of civilisation. At any rate we have endeavoured to supply our readers with descriptions of the Exhibition and of the many congresses.

First International Congress on Deontology.

Particularly anxious were we to give the fullest prominence to all that was done to improve the moral and material position of members of the medical profession. The economic evolution which is revolutionising the social conditions of all the great industrial peoples has also affected the medical profession, and not only in Great Britain, but throughout all civilised countries. Consequently, we have had, for the first time in European history, a great international congress attended by medical men from all parts of the world, gathered together to discuss solely the economic position of medical practitioners, and the ethical principles necessary to meet and to mitigate newly developed evils. Unfortunately the attendance of British representatives was very small, and this was due, not only to the causes enumerated above, but also to the fact that the International Congress on Medical Deontology or Ethics met at about the same time as the annual meeting of the British Medical Association. Nevertheless, the economic difficulties that beset the medical profession in England were explained to the congress, amongst others by our Special Commissioner, who has now for several years been contributing special reports on the subject to these columns. From Germany and Austria came encouraging accounts of the formation in those countries of medical chambers somewhat after the model of chambers of commerce. Medical associations in Hungary, Roumania, and Norway also give good promise, while the medical syndical chambers or unions of France and Belgium are militant institutions that are really fighting very actively for necessary reforms. All this work of organisation has also influenced the legislature of some countries and the laws regulating medical practice have been improved. The results altogether of this first congress were so encouraging that it was determined to continue the work, and a second International Congress of Deontology will be held in Belgium three years hence. It is to be hoped that on that occasion Great Britain will be better represented than she was at the first congress.

First International Congress of the Medical Press.

But this was not the only congress dealing with the organisation of the medical profession. It was followed immediately by the International Congress of the Medical Press, at which THE LANCET, the *British Medical Journal*, and a great number of continental and American medical journals were represented. In some countries the necessity for an improvement in the medical press is, unfortunately, but too evident, and this congress was the first step taken in that direction. The object was to convert medical journalism into a profession actuated by a proper sense of its dignity and governed by self-imposed and generally recognised ethical laws. In this wholesome work the British medical journalists were able to take a leading part. But a great difficulty arose in defining what really constituted a medical journalist. Should a medical man engaged in medical practice own and edit a medical journal? If so, what was to prevent such a paper becoming a means of self-advertisement? Again, if the journal, as is the case with regard to some journals on the continent, is owned by a firm of wholesale druggists, what was to prevent such a journal from becoming a means of unfairly advertising the special drugs produced by that particular firm? How to create in all countries a medical press that should be above suspicion and to secure the services of medical journalists who should be sufficiently paid to be fearless and independent in their criticisms is a problem hard to decide in countries where many of the so called medical journals are little better than trade circulars. That this ideal had actually been achieved in England was a source of much encouragement to the congress; and in this congress, at least, the British representatives were able to occupy the foremost rank and to render efficient help to the work taken in hand. So complex were the difficulties, so urgent was the need of reform, that the congress not only resolved to meet again, but instead of deferring such meeting for some years it was decided that the Second International Congress of the Medical Press should be held at Brussels next year.

Thirteenth International Congress of Medicine.

Hardly had this congress terminated than the largest of all the congresses began, for more than 5000 delegates and members attended the Thirteenth International Congress of Medicine. Divided into 28 sections, each section constituted a congress in itself and each will issue a weighty volume describing its proceedings. The papers read in these sections bore evidence of a great deal of hard work, but the new theories broached or new discoveries described were not numerous. Apart from the ordinary debates many visits were made to various hospitals and cliniques, and of course to the technical sections of the exhibition. On the other hand, some of the State receptions and entertainments that had been announced were postponed in consequence of the assassination of the King of ITALY, which occurred just before the congress met. A large staff of able collaborators enabled us to give our readers a very full account of the International Medical Congress.

Tenth International Congress of Hygiene.

The Tenth International Congress of Hygiene and Demography followed upon the International Medical Congress, and of all the four great medical congresses it was certainly the best organised. The Congress of Deontology was also well managed, while that of the Medical Press, being necessarily small, did not give rise to any great difficulty in regard to management, but there was certainly a good deal of blundering over the International Medical Congress. The Congress of Hygiene was interesting, as these congresses always are, for they deal with so many practical everyday questions. The most remarkable, and at the same time a very discouraging, feature about the congress was the utter collapse of the Bacteriological Section. A joint meeting with the Third or Sanitary Engineering Section had been organised. The engineers appealed to the bacteriologists to indicate how towns should be supplied with water: should it be spring water, river water, water from the chalk, filtered water, or water sterilised by some chemical or electrical process? The result of the debate that ensued must have greatly increased the perplexities of the engineers, for there was no agreement among the bacteriologists on any one of the points raised. All these debates were described at length in our columns at the time and we also published briefer accounts of minor congresses, such as the international congresses on psychology, on sanitation in the colonies, on pharmaceutical specialities, &c.

The Universal Exhibition.

Then, as far as time, space, and the intervals between these congresses would allow, we gave descriptions and criticisms of the medical, surgical, and sanitary sections of the Universal Exhibition. This was a difficult task to undertake, for the exhibits were scattered in all directions and their number was legion. Perhaps one of the most remarkable features was the show made by new countries and by the smaller nationalities, such as Hungary and Belgium. Great Britain, on the other hand, was only represented by manufacturers of sanitary appliances, &c. There were no Government, State, or municipal exhibits to show what general progress in sanitation had been accomplished in the United Kingdom. The Governments of almost all the other nations had, on the contrary, sent reports, diagrams, and various models of institutions, bacteriological laboratories, &c., which indicated what had been accomplished in recent years for the preservation of public health and for the spread of the knowledge of hygiene. If the political action of the British Government has of late years been the subject of much hostile criticism on the continent, the really wonderful demonstration in which representatives of all nations participated and which was organised by the French medical men in honour of Lord LISTER was a proof that the civilised nations of the world are ever ready to acknowledge, and to pay homage to, what has been achieved in Great Britain for the advancement of science. It is a pity, therefore, that the authorities in this country did not profit by the Universal Exhibition to show more fully how in matters of sanitation we are still in the vanguard. Such an effort would have been fully appreciated. For throughout the proceedings, whether at the Exhibition or in the congresses, whenever an Englishman presented himself he was received with the greatest courtesy and was generously awarded whatever praise or applause was suited to his endeavours and work. Indeed, all such exhibitions and international congresses must tend to smooth rough corners and to build up international friendships and alliances, as well as to spread knowledge and to give birth to new ideas. Thus is the course of peace and progress advantageously served.

THE ORGANISATION OF THE PROFESSION.

Continuing this year the campaign started by the series of articles entitled "The Battle of the Clubs" and "Hospital Abuse" we have published further articles on the Organisation of the Profession, which were the result of investigations made by our Special Commissioner at Cork, Yarmouth, Norwich, and Cowes. It was at Cork that the movement against the clubs definitely began, and there the members of the profession have united with wonderful unanimity. At first they attempted to utilise what professional organisations already existed, but experience soon proved that to meet new conditions and to enforce a new policy it was necessary to create a special organisation. Thus the Medical Profession Association of Cork came into existence. So far back as 1892 the majority of the Cork practitioners had agreed on a wage-limit to be enforced for all contract work, and the following year they undertook to boycott those practitioners who failed to stand by the profession. It was not, however, till February, 1895, that the celebrated movement against the medical aid clubs began. Then nine medical officers resigned the positions which they held in connexion with 20 clubs. The clubs succeeded in importing four outside medical men and a long struggle commenced. But the Cork Medical Profession Association were able to raise a fund, which, however, was not needed for more than a year, as the position of the medical men greatly improved through the abolition of former abuses. Gradually the resistance has decreased, only 12 out of the 20 societies continued the struggle and only two out of the four imported medical men remained to help them. With impoverished exchequers and reduced membership these clubs still continue the struggle. The practitioners of Cork, however, have long since become quite independent of them and their members, for the position of the practitioners has in every respect been greatly improved through the successful action of their organisation.

At Great Yarmouth also the resident medical practitioners have given a good example of what can be done by united action. There they have fought the Medical Institute established by a federation of friendly societies. Constituting themselves into a branch of the Incorporated Medical Practitioners' Association, they first attempted to prevent the formation of female lodges of Foresters and the importation of practitioners by medical insurance companies. To secure union in the ranks of the profession the older practitioners were careful to befriend and to assist their juniors in every way and thus prevented the latter from falling into the hands of the organisations that were seeking to exploit and to sweat medical men. The profession was successful in rendering it impossible for speculative insurance companies to establish branches of their business in Yarmouth. Several clubs that have not joined the institute have accepted the terms offered to them by the Yarmouth practitioners. Altogether the latter are now in a much more favourable position and many of the abuses have been done away with. Contrary to the usual experience, it was not the practitioners who struck against the clubs but the latter organised a lock-out. The clubs called upon the practitioners to accept the conditions which the clubs had thought fit to impose or to resign their posts of medical officers to these institutions. The resignations followed in due course and thus the lock-out began and it has worked to the great moral and material advantage of the members of the profession in practice at Yarmouth.

In the neighbouring town of Norwich, however, no such favourable results have been attained. Meetings were held, excellent resolutions were adopted, but there has been no spirit of discipline and what was voted was never carried out. 25 years ago similar efforts were made and with as little success. What the medical practitioners collectively condemn they individually practise. They denounce the club and contract system and yet they nearly all work for clubs or contract with patients—that is to say, have penny clubs of their own. A good leader and a powerful organisation are required. At present neither is forthcoming. Much of what our Commissioner has seen and described is encouraging; but his experiences at Norwich were the reverse of this. In one respect Norwich has set a good example; the members of the profession in that town have displayed a true spirit of solidarity towards their colleagues of the neighbouring town of Yarmouth. None of the Norwich *consultants consented to meet the practitioners of Yarmouth* who were working for the Friendly Societies Medical Institute in that town. They have been equally staunch in refusing to have anything to do with the medical officers who are the salaried servants of the Norwich Friendly Societies Medical Institute. When any member of this institute desires a second opinion he must visit a consultant alone and pay a guinea fee, and the fact that many members have done this shows that they can afford more than a penny per week for medical attendance.

At Cowes also there have been much weakness, hesitation, and backsliding displayed by the local practitioners. One local practitioner, however, has made a good fight against the gross abuse prevailing among the friendly societies. It was especially against the female lodges of Foresters that the contest arose and in the course of time a wage-limit was imposed. This wage-limit is too high and there is no really effective machinery to ensure that it shall be observed; but still, it is something to have established the principle and to have made the majority of the local practitioners acknowledge the necessity of some form of united action to secure such reforms. This wage-limit, however, does not apply to the *Foresters Friendly Society, but only to the medical aid* society which the Foresters have formed for the benefit of their wives and other members of their families. Both the Oddfellows and the Foresters retain in their ranks many prosperous members who can well afford to pay the usual medical fees. There is evidently urgent need for the formation of a medical union for the whole of the Isle of Wight.

This principle of forming medical unions was endorsed at Manchester, where in the month of May a conference on the Organisation of the Profession was held under the auspices of the Manchester Medical Guild, which is a medical union formed by some 200 medical men. 50 delegates attended and claimed to speak on behalf of about 4000 practitioners. This would be a very good beginning indeed if the practitioners in question were not merely sympathetic but were solidly organised Unfortunately the conference *spent the greater part of its time in describing* well-known grievances instead of devising means of action. Then there was weakness displayed in the tendency to call upon others to do the work which the medical practitioners should themselves be the first to undertake. Parliament was to legislate in this direction and in that direction, and the General Medical Council was to enforce new ethical rules for the government of the profession. But reforms do not come this way, and authorities rarely do more than give official sanction to what has already, at least in part, been achieved by voluntary effort. The first step of all is organisation, legislation will follow in due course upon united action.

HONOURS TO MEDICAL MEN.

The closing year of the nineteenth century has been an average one in respect of the number of honours which have been bestowed upon members of the medical profession. At a time when Imperialism and all that is connoted in that word was, and is, so much in the air it was perhaps fitting that the list *of honours for the new year,* like the subsequent birthday honours, should embrace the names of men widely distributed over Her Majesty's dominions, and so we find it. Among the new Knights were Sir T. LAUDER BRUNTON, M.D. Edin., F.R.S., and Sir F. H. LOVELL, C.M.G., Surgeon-General of Trinidad, the former a physician of high standing, and a man who has unobtrusively worked hard in the profession to which he belongs; the latter a member of the Executive and Legislative Council of Trinidad, who at one time held the appointments of chief medical officer, President of the General Board of Health, and member of the Legislative Council of Mauritius; and the Honourable Sir JOHN ALEXANDER COCKBURN, M.D. Lond. and Adel., Agent General in London for South Australia, formerly Premier of that colony, received knighthood in the Order of St. Michael and St. George. Mr. JOHN PRINGLE, M.B., C.M. Aberd., a member of the Privy Council and Legislative Council of the Island of Jamaica; Mr. PATRICK MANSON, M.D., LL.D. Aberd., medical adviser to the Colonial Office; Mr. WORDSWORTH POOLE, M.B., B.C. Camb., late principal medical officer of the West African Frontier Force, now Legation surgeon at Peking; and Mr. ARCHIBALD DONALD MACKINNON, M.D. Aberd., principal transport officer for Uganda, were appointed Companions of the Order of St. Michael and St. George.

The disappointingly short list of birthday honours added four new knighthoods to the profession, namely, those of Sir HECTOR CAMERON, the President of the Faculty of Physicians and Surgeons of Glasgow and the representative of that body upon the General Medical Council; Sir J. W. MOORE, the President of the Royal College of Physicians of Ireland; Sir WILLIAM BISSET BERRY, Q.C., Speaker of the House of Assembly of the Cape of Good Hope; and Sir DAVID PALMER ROSS, C.M.G., Surgeon-General of British Guiana. Lieutenant-Colonel AYLMER MARTIN CROFTS, I.M.S., residency surgeon at Gwalior and medical officer to the Maharajah, received *a Companionship of the Most* Eminent Order of the Indian Empire. Companionships of the Bath were bestowed upon Surgeon-General H. SKEY MUIR, Deputy Director-General of the Army Medical Service, and Lieutenant-Colonel B. B. CONNOLLY, late of the same service. Lieutenant-Colonel R. N. CAMPBELL, I.M.S., and Captain C. H. JAMES, I.M.S., received the Kaisar-i-Hind gold medal for Public Service in India. Major STEVENSON, I.M.S., Captain JOHN GRANT, I.M.S., and Miss CHARLOTTE ADAMS, L.R.C.P. Edin., Mrs. HENRY SMITH, and Miss SUSAN CAMPBELL, L.R.C.P. Edin., also received the silver medal of the same order.

Sir GEORGE HARE PHILIPSON, M.D. Cantab., M.D., D.C.L. Durham, President of the University of Durham College of Medicine and representative of that College on the General Medical Council, was created a Knight this year.

In 1899 the German EMPEROR conferred upon Surgeon-General J. JAMESON, C.B., the medal instituted in memory of the late Emperor WILLIAM for services in connexion with the Franco-German war. We are pleased to have to record that this year the KAISER has conferred upon Sir WILLIAM MAC CORMAC the "Kaiser Wilhelm" memorial medal in recognition of his services during the same war of 1870–71. Sir WILLIAM MAC CORMAC has also received from the President of the French Government the Cross of Commander of the Legion of Honour in recognition of similar services.

During the year Lord LISTER has been appointed Serjeant-Surgeon in Ordinary to Her Majesty, in the room of Sir JAMES PAGET, Bart., deceased, and Mr. FREDERICK TREVES has been appointed one of the *Surgeons Extraordinary* to Her Majesty.

We close our list of honours to British subjects with a name of which we and the whole of the profession feel proud in the highest degree—namely, that of Major WILLIAM BABTIE, C.M.G., V.C., of the Royal Army Medical Corps, who has received the decoration of the Victoria Cross for the following act of courage. At Colenso, on Dec. 15th, 1899, the wounded of the 14th and 66th Batteries Royal Field Artillery were lying in an advanced donga close in the rear of the guns *without any* medical officer to attend to them, and when a message was sent back asking for assistance Major W. BABTIE rode up under a heavy rifle fire, his pony being hit three times. When he arrived at the donga, where the wounded were lying in sheltered corners, he attended to them all, going from place to place exposed to the heavy rifle fire which greeted anyone who showed himself. Later in the day Major BABTIE went out with Captain CONGREVE to bring in Lieutenant ROBERTS who was lying wounded on the veldt. This also was under a heavy fire.

It is somewhat invidious to select from the names of foreign medical men those who have received honours of distinction during the year, but we may perhaps mention the name of Dr. R. BLONDEL, who so ably acted as General Secretary to the International Congress of the Medical Press which was held in Paris during the time of the Exhibition and who was named a Chevalier of the Legion of Honour.

OBITUARY.

Again we have to present to our readers a summarised account of those members of the medical profession who have finished their labours in this life. As the members of the navy and the army serve in all parts of the empire to guard the interests of the body politic, so, too, the members of the medical profession serve in very varied fields to guard the interests of the human body. As sickness and wounds are universal, so, too, are those trained to do their utmost to prevent and treat the one or to heal the other found throughout the world. The first name on our list, first in reputation, in honours, and in date of occurrence, is the honoured one of Sir JAMES PAGET, who passed away full of years and honours on the night of Dec. 30th, 1899. His labours and example for good are known to all the world.

Naval Medical Service.

The senior service has suffered less by death among its medical members than the junior, but we have to chronicle the death of HENRY PEACOCK, F.R.C.S. Eng., M.R.C.P. Lond., of Bath, who served in the Royal Navy on board H.M.S. *Crocodile* from 1839 to 1840, and for 20 years afterwards as medical officer of the dockyard at Chatham. In 1862 he retired from the service and started in practice at Sudbrook, Gloucestershire. He was subsequently assistant physician to the Gloucester General Infirmary. Lieutenant-Colonel ARCHIBALD ADAMS entered the medical department of the Navy in 1872 and served with the Royal Marines through the Ashanti war of 1873–1874. In 1875 he entered the Indian Medical Service, and after being attached to the Erinpoora force received the appointment of residency surgeon to the Court of Marwar, where he resided for 18 years. After this he was made administrative officer in Rajputana and died while combating an epidemic of cholera. He became Lieutenant-Colonel in 1895. GEORGE HUTCHINSON MILNES, M.D. Cantab., M.R.C.S., entered the Royal Navy as surgeon in 1886, served at Suakim, and afterwards at the Royal Naval Hospital at Haslar.

Army and Indian Medical Services.

In the Army Medical Service we have to note the deaths of ALEXANDER GRANT, F.R.C.S. Edin. Mr. GRANT entered the Bengal Medical Service in 1840 and retired as surgeon-major in 1861. He served through the Chinese war of 1841–42 and also through the first Sikh war. In 1849 he was appointed surgeon to the Governor-General. He held the post of President of the Medical Faculty in the University of Calcutta and was also an honorary surgeon to the QUEEN. DAVID CULLEN, M.D. Edin., a deputy-surgeon-general of the Army Medical Department, served through the Crimea and the Mutiny. From 1875 to 1880 he was registrar to Netley Hospital. He held the Crimean and Mutiny medals, with clasps for Sebastopol and Lucknow. ROBERT COLLUM, M.D. Glasg., M.R.C.P. Lond., entered the Bombay Medical Service in 1837 and was attached to the staff of Sir CHARLES NAPIER during the conquest of Scinde. Between Bombay and Scinde he had to deal with an outbreak of cholera on board the ship from which 64 soldiers died in eight days. Whilst in Scinde he had medical charge of the troops returning from the first Afghan war and afterwards served as surgeon to their Highnesses the ex-Ameers of Scinde. After further service in Bengal and Bombay he retired from the service in 1857. During his residence in England he was physician accoucheur to the Paddington Maternity Charity and physician to the Western General Dispensary. CHARLES POPE WALKER, M.B. Durh., major in the Royal Army Medical Corps, fell a victim to dysentery at Ladysmith on Jan. 5th. He went out with the troops in November, 1899, and was present at the battles at Dundee and Elandslaagte. He entered the army in 1886 and first served in the North-West Provinces. ALEXANDER CHARLES ARCHIBALD ALEXANDER, M.R.C.S. Eng., was a major in the Royal Army Medical Corps and died on Jan. 23rd. He first saw service in Egypt with the Guards at Suakim in 1885, receiving the medal with clasp for Hasheen and Tamai together with the Khedive's star. He was permanent medical officer to the Royal Military Tournament, and was only prevented from accompanying the forces to South Africa owing to the effects of a sunstroke received at Gibraltar last year. THOMAS GUY, M.D. Heidelb., F.R.C.P. Lond., was born in 1819 and entered the army in 1842 as assistant surgeon. He became surgeon in 1853 and surgeon-major in 1862. He served through the Abyssinian war of 1867–1868, was mentioned in despatches, and was promoted to be Deputy-Inspector-General of Hospitals. In 1872 he retired with the honorary rank of Inspector-General. During the Franco-German war he acted as director of the English ambulance. WILLIAM MCNEILL WHISTLER, M.R.C.P. Lond., was educated at the University of Pennsylvania, and though not serving with the British army acted as assistant surgeon with the Confederate army in the American Civil War. At the conclusion of hostilities he came to London and after studying at St. George's Hospital was appointed physician to the London Throat Hospital. HENRY THOMPSON, M.R.C.S. Eng., L.R.C.P. Lond., practised for many years in the north of England and was for long connected with the Hull Infirmary, being successively house surgeon, assistant surgeon, and full surgeon to that institution. He was also for 20 years surgeon to the 1st Volunteer Battalion East Yorks regiment and was promoted on his retirement to the rank of surgeon-lieutenant-colonel. THOMAS ALFRED PERRY MARSH, L.R.C.P. Lond., M.R.C.S. Eng., died from enteric fever at Deelfontein on May 22nd. He was educated at Bristol and University College Hospital, and entered the Army Medical Service in about 1882. He served through the Burmese war of 1885–1887, and previously to his illness was principal medical officer at De Aar. At the time of his decease he was a major in the Royal Army Medical Corps. AYLMER ELLIS HAYES was at his death lieutenant-colonel in the Royal Army Medical Corps. He was educated at St. Mary's Hospital and became M.R.C.S. Eng. in 1871. He joined the Army Medical Staff, becoming surgeon in 1877, surgeon-major in 1889, and lieutenant-colonel in 1897. He served through the Afghan war of 1878–1880, for which he received the medal. Later he served in the Soudan, being twice mentioned in despatches and winning the D.S.O. After spending some time at Netley as registrar and at Aldershot in command of No. 2 Station Hospital he served at Hong-Kong, but in 1897 retired from the active list. On the outbreak of the present war he re-joined and was put in charge of the Connaught Hospital. JOHN STEWART STEVENSON, M.R.C.S. Eng., L.R.C.P. Lond., who died at Lucknow from heat apoplexy, entered the Indian Medical Service in 1896, and shortly after his arrival in India was sent to Bangalore on plague duty. He also served as "special plague officer" in the Mauritius. He served with the Tirah field force during the operations on the North-west frontier in 1897-98 and received the medal and clasp. He was the only son of Surgeon-General W. F. STEVENSON, who recently returned from South Africa, where he had been acting as principal medical officer on the line of communications. CHARLES JAMES HISLOP WARDEN, Lieutenant-Colonel I.M.S., was for many years a prominent chemist and pharmacologist in India. He qualified as M.R.C.S. Eng. in 1872 and L.R.C.P. Lond. in 1873 and took the M.D. degree of Brussels in 1884. At the time of his death he was examiner of medical stores to the India Office. He joined the Bengal Medical Service in 1874. JOHN TRESSILIAN TOLL, M.R.C.S. Eng., L.R.C.P. Edin., practised for some time in Australia. When the first South Australian contingent started for the front he volunteered as medical officer and was appointed with the rank of surgeon-major. He accompanied the troops to Bloemfontein, where he was attached to a hospital and was stricken with enteric fever. Becoming convalescent he started for home but died on the voyage.

Ambassadorial and State Officials.

EDWARD DALZEL DICKSON, M.D. Malta, was physician to the British Embassy at Constantinople, in which city he lived for 60 years. He was the eldest son of a naval surgeon who served under NELSON in the Baltic campaign. EDWARD DICKSON was born in 1816 and was educated at the University of Malta. In 1837 he was appointed physician to the British Consulate at Erzeroum. He was appointed Embassy physician at Constantinople in 1856 and ten years later served as third commissioner at the International Conference held in that city to inquire into the best means of preventing the spread of cholera from Asia into Europe. HADLEY JACKSON, M.R.C.S. Eng., L.R.C.P. Lond., who died from fever in the Uganda Protectorate on Feb. 16th, was educated at University College Hospital and served in Northern Rhodesia. Later he took service under the Uganda Protectorate and was in medical charge of a punitive column when he met his death. EDWIN VAN MILLINGEN, M.D. Würtzburg, practised in Constantinople as an ophthalmic and aural surgeon. He was an Englishman, but received his medical education at Würtzburg and Vienna. He was professor of ophthalmology in the Imperial School of Medicine at Constantinople. His Excellency ROBERT HALLIDAY GUNNING, M.D., LL.D. Edin., was educated at Edinburgh, but spent most of his life in Brazil where he was a great favourite of the late Emperor. The country has also to regret in the person of Mr. ARTHUR JENNER, murdered in Somaliland, a public servant connected by birth with the medical profession. Mr. ARTHUR JENNER was one of the sons of Sir WILLIAM JENNER.

University and College Professors.

The universities have this year suffered greatly by the loss of prominent professors. The University of London led the way in having to mourn the death of Sir JAMES PAGET, who, though not a professor, was Vice-Chancellor from 1884 to 1895. Next in order the University of Edinburgh lost by death the valuable services of her Professor of Physic and of Clinical Medicine, Sir THOMAS GRAINGER STEWART, in his sixty-third year. He succeeded Sir R. CHRISTISON as physician-in-ordinary to HER MAJESTY the QUEEN in Scotland, was knighted in 1894, and was President of the British Medical Association in 1898. An admirable clinical teacher, he worthily sustained the best traditions of Scottish medicine. But a few weeks after the death of the Professor of Medicine the University of Edinburgh had to sustain another blow by the death of Sir ANDREW DOUGLAS MACLAGAN, the Professor of Jurisprudence and Public Health. He came of a medical stock, his father, DAVID MACLAGAN, having been surgeon-in-ordinary to the QUEEN in Scotland, physician to the forces, and President of both the Royal Colleges of Edinburgh—a double honour which his son DOUGLAS likewise filled. Sir DOUGLAS MACLAGAN, who was knighted in 1886, was not only an eminent physician, surgeon, and medical jurist, but also a good writer and musician. He appeared for the defence of MADELEINE SMITH in her trial in which a verdict of "Not proven" was returned. Sir WILLIAM PRIESTLEY, Professor of Midwifery and of Diseases of Women and Children at King's College, London, died, after a long illness, on April 12th. He attended sundry members of the Royal family at the time of their confinements and was knighted in 1893. In 1896 he was elected without a contest as Member of Parliament for the united Universities of Edinburgh and St. Andrews, and although he had but a brief career in the House, yet he was able to exercise an important influence in relation to measures bearing on public health. PIERCE ADOLPHUS SIMPSON, M.D. St And., was Emeritus Regius Professor of Medicine in the University of Glasgow. He had also been lecturer on medical jurisprudence at Anderson's College and physician to the Glasgow Royal Infirmary. JOHN ANDERSON, M.D., LL.D. Edin., F.R.S., went to India in 1864, when he was appointed professor of Comparative Anatomy in the Medical College, Calcutta. Between 1868 and 1887, when he retired, he accompanied various Government expeditions as scientific adviser. By the death of Sir HENRY ACLAND, the University of Oxford lost a very familiar and well-beloved personality. Full of years and honours the former Regius Professor will live long in the recollection of the University which he loved so well. ALFRED WILLIAM HUGHES, M.B., C.M. Edin., F.R.C.S. Eng. and Edin., Professor of Anatomy at Cardiff, and afterwards at King's College, London, went out to the war in charge of the Welsh Hospital. He contracted typhoid fever and only reached home to die. DENNIS EMBLETON, M.D. Durh. and Pisa, F.R.C.S. Eng., F.R.C.P. Lond., who died in his ninety-first year, was the first professor of medicine in the University of Durham, and from 1858 to 1872 represented that university on the General Medical Council.

Hospital Physicians and Surgeons.

ROBERT GLASGOW PATTESON was educated at Dundalk Grammar School and at Trinity College, Dublin, where he graduated as M.B. in 1885. In 1886 he was elected surgical travelling prizeman of Trinity College and pursued his studies at London, Berlin, and Vienna. He was afterwards assistant surgeon at St. Vincent's Hospital and in 1895 was elected surgeon to the Meath Hospital. He was but 38 years of age at the time of his death. GEORGE VINER ELLIS, F.R.C.S. Eng., was born in 1812. He received his early education at the Cathedral Grammar School of Gloucester and afterwards at University College, London, where he was appointed demonstrator of anatomy to RICHARD QUAIN. He studied in Paris and Berlin, and in 1850 was appointed Professor of Anatomy at University College in succession to RICHARD QUAIN, which post he held until 1877, when he was made Emeritus Professor. He was the author of the well known "Demonstrations of Anatomy." JOHN NEVILLE COLLEY DAVIES-COLLEY, M.A., M.B., M.C. Cantab., F.R.C.S. Eng., was born at Chester in 1843 and was educated privately and at Trinity College, Cambridge. In 1864 he entered Guy's Hospital as a medical student, graduated as M.B. in 1868, and became a Fellow of the Royal College of Surgeons of England in 1870, being also appointed demonstrator of anatomy in the Guy's Hospital Medical School. In 1872 he was elected assistant surgeon and during the course of his career at the hospital was demonstrator of surgery, lecturer on surgery, lecturer on anatomy and full surgeon. He was also for a long time surgeon to the Seamen's Hospital, Greenwich. On becoming aware, about Christmas, 1899, that he had malignant disease of the liver he resigned his post at the hospital and was presented by the students with an illuminated address. He was a noted consultant, a good surgeon, and an admirable teacher. GEORGE EDWARD WILLIAMSON, M.A. Durh., M.B. Lond., F.R.C.S. Eng., was one of the many medical men whose deaths Newcastle-on-Tyne has recently had to deplore. He was born in 1842 and was educated at the London Hospital and in Paris. In 1878 he was admitted F.R.C.S. Eng., and practised as an ophthalmic surgeon, being for some years ophthalmic surgeon to the Royal Infirmary, Newcastle. For a few months before his death, however, he was engaged in teaching operative surgery as a colleague of Professor F. PAGE. JULIUS ALTHAUS, M.D. Berlin, M.R.C.P. Lond., was the son of a German Lutheran Minister and was born at Detmold. He studied at Bonn, Heidelberg, Berlin, Vienna, Paris, Prague, and London, in which last town he finally settled. In 1866 he founded the Hospital for Epilepsy and Paralysis in Regent's Park to which institution he acted as physician for 28 years. JAMES GROSVENOR MACKINLAY, F.R.C.S. Edin., was born in 1844 and was educated at Epsom College and Charing-cross Hospital. He devoted himself to ophthalmic surgery and at the time of his death was surgeon to the Royal Eye Hospital and to the Royal Free Hospital. He was an original Fellow of the Ophthalmological Society. JAMES FENTON STAMPER was for many years in practice at Pembroke Dock. He qualified as M.R.C.S. Eng. in 1861 and took the degree of M.D. at the University of St. Andrews in 1862. He was Admiralty surgeon and agent, a J.P. for the borough of Pembroke, consulting physician to the Haverfordwest and Pembrokeshire Infirmary, and surgeon to the Pembroke Dispensary. BERNARD E. BRODHURST, F.R.C.S. Eng., was well known as an orthopædic surgeon and was for many years on the staff of the Royal Orthopædic Hospital. THOMAS JONES, M.B., B.S. Lond., F.R.C.S. Eng., who died at Springfontein, was one of the many victims, direct or indirect, of the South African war. He had left England on April 14th in charge of the Welsh Hospital and died on June 18th. Born in Carmarthenshire, he was educated at Derlwyn College and afterwards at the Swansea Normal School. He then studied at the Northern Hospital, Liverpool, and at Guy's Hospital. He graduated as M.B. and B.S. at the University of London and became F.R.C.S. Eng. in 1875. Previously to this, however, he had served the Manchester Royal Infirmary as house surgeon, and after holding various posts became full surgeon in 1880. He was also professor of surgery at the Owens College. He was an admirable and most popular teacher and his death is a great loss to the profession. HENRY BURFORD NORMAN, F.R.C.S. Eng., was educated at University College, London, where among his contemporaries were SPENCER WELLS and JOHN ERICHSEN. He started in practice as an ophthalmic surgeon and filled the office of surgeon to the North London Eye Hospital. Failing health compelled him to leave London and he retired to Portsmouth, where he was soon elected a member of the surgical staff of the Royal Portsmouth Hospital. He was one of the founders of the Portsmouth and South Hants Eye and Ear Infirmary and was consulting surgeon to it. DANIEL JOHN LEECH, M.D., F.R.C.P. Lond., was Professor of Materia Medica and Therapeutics in the Owens College, consulting physician to the Manchester Royal Infirmary, and representative of the Victoria University upon the General Medical Council. He was in addition secretary of the Manchester and Salford Sanitary Association, a body which through his instrumentality has been of the greatest service to Manchester as regards the prevention of the adulteration of food and the prevention of black smoke. HENRY EWBANK, M.R.C.S. Eng., L.R.C.P. Edin., was for many years a prominent practitioner in Cheltenham. From 1881 to 1883 he was senior surgeon to the General Hospital, Cheltenham. For some time, too, he acted as honorary surgeon to the Home for Sick Children. WILLIAM MARCET, M.D. Edin., F.R.C.P. Lond., F.R.S., who died at Luxor, was well known as a physician interested in physiological chemistry. His life's work was an inquiry into respiratory phenomena and his results were given to the world in the Croonian lectures delivered by him in 1895. WILLIAM ADAMS, F.R.C.S. Eng., the well-known orthopædic surgeon, was surgeon to the Great Northern Central Hospital. He was the first to practise subcutaneous osteotomy of the neck of the femur for ankylosis of the hip-joint. THOMAS SCATTERGOOD, M.R.C.S. Eng., L.S.A., was for many years connected with the Leeds Medical School. Sir WILLIAM STOKES, M.D., M.Ch. Dub., F.R.C.S. Irel., came of a family eminent in many branches of learning. He was Professor of Surgery to the Royal College of Surgeons in Ireland, surgeon-in-ordinary to HER MAJESTY the QUEEN in Ireland, and had been Honorary President of the International Medical Congresses of Berlin, Rome, and Moscow. In 1886 he received the honour of knighthood and this year he sailed for South Africa as one of the consulting surgeons to the forces. His death occurred at Pietermaritzburg from pneumonia. He had been lecturer on surgery at the Carmichael School and was surgeon to the Meath Hospital. THOMAS MOORE, F.R.C.S. Eng., of Blackheath, was at the time of his death senior surgeon to the Miller Hospital at Greenwich and consulting surgeon to the Brighton Children's Hospital. ROBERT STRAFFORD SMITH, M.D. R.U.I., who died at an early age from septicæmia, was one of the most promising of the younger generation of medical men in Belfast. He was physician to the Royal Victoria Hospital in Belfast and Lord Chancellor's Visitor in Lunacy. LEWIS ALBERT SAYRE, M.D., LL.D., of New York, was the well-known orthopædic surgeon and Emeritus Professor of Orthopædic Surgery of the New York University. WILLIAM CHAPMAN GRIGG, M.D. Edin., M.R.C.P. Lond., who died in South Africa, was for some years a prominent gynæcologist in London. He was obstetric physician to out-patients at Westminster Hospital and physician to Queen Charlotte's Lying-in Hospital. ROBERT CORY, M.D. Cantab., F.R.C.P. Lond., had held the posts of assistant obstetric physician to St. Thomas's Hospital, but he was chiefly known for his admirable work in vaccination and his self-sacrificing heroism in vaccinating himself from an undoubtedly syphilitic child. On three occasions he escaped infection but on the fourth he contracted a severe attack of syphilis. WILLIAM ANDERSON, F.R.C.S. Eng., who died very suddenly on Oct. 27th, was surgeon to St. Thomas's Hospital. He was well known as an authority upon Japanese art and was for some time director of the Japanese Naval Medical College at Tokio. He was also Professor of Anatomy to the Royal Academy of Arts. Genial, kindly, and a thorough artist, his place will be hard to fill.

Civilian Practitioners.

WILLIAM NEALOR THURSFIELD, M.D. Edin., D.P.H. Cantab., was born in Shropshire and educated at Marlborough and at King's College. He subsequently studied at the University of Edinburgh and for one year after his graduation he held a commission at Netley, which he resigned owing to the illness of his father. He then practised in New Zealand, but returning to England took up the subject of public health and was appointed medical officer of health of Wellington, Salop, in 1870. In 1873 he was appointed medical officer to a combination of urban and rural districts, and in 1897 he gave up these district appointments on becoming medical officer of health for the county. JAMES HOWISON, L.R.C.P., L.R.C.S., L.M. Edin., who practised for many years in Darlington, received his medical education at Edinburgh. He died in London at the age of 77 years, and his death was caused by his blindness, owing to which he accidentally stepped off the platform at West Hampstead station and received fatal injuries from a train. John Gorham, M.R.C S. Eng., L.S.A., was for many years a well-known practitioner in Tonbridge and wrote much upon light and crystallography. Frederick Williams Lewis was educated at the Middlesex Hospital and practised in Llandovery, being surgeon to the Great Western and the North-Western Railway Companies. George Cheesman, L.R.C.P. Edin., M.R.C S. Eng., was for a long time medical officer to the Southampton Incorporation, and died at his residence, Bitterne Park, at an advanced age. Joseph Edward Kenny, L.R.C.P., L R C.S. Edin., who received his medical education at Dublin and Edinburgh, took an active part some two years after qualifying in endeavouring to stamp out an epidemic of small-pox which was raging in Dublin. He was a prominent Irish Nationalist, and in 1881 was arrested as a "suspect." He was a firm supporter of Mr. Parnell and stuck to him even after the split which arose in Committee Room 15. Although so active a politician he took the greatest interest in charitable work in the city of Dublin, and was in addition coroner for the city, discharging the duties of the office with great ability and success The cause of his death was septicæmia. Sir William Miller, M B T.C D., was one of the best known practitioners in Ulster. In 1875 he was chosen Mayor of Derry, was re-elected in 1876 when he was knighted, and was again re-elected in the following year. He was also Mayor in 1888 and in 1889 and at the time of his death had only just been appointed high sheriff of the county. Besides his public appointments, which were very numerous, he had a large private practice. Henry Hannotte Vernon, M.D., F.R S. Edin., had been medical officer of health of Southport since 1873 and since 1888 had devoted the whole of his time to that office. He received his medical education in Edinburgh and for a time practised in London, but had resided in Southport since 1868. Daniel Ainley, L R C.P. Edin, M.R C.S. Eng., was for many years medical officer of health of Halifax. He was educated at St. Bartholomew's Hospital and commenced practice in Halifax in 1868 and was appointed medical officer of health of the borough in 1872 In 1892 and 1893 his department was sorely taxed by an epidemic of small-pox, over 500 persons being removed to hospital. John Wiblin, F.R.C.S. Eng., who died at the advanced age of 87 years, practised in Southampton, where he was sanitary surveyor to the Board of Trade and medical superintendent of quarantine to the Union and Royal Mail lines of steamers. George Bird, M.D. St. And., who practised in Welbeck-street for many years, was born in 1817 and was educated at University College. He was well read and had travelled much and had had many patients from the literary and artistic worlds, such as Leigh Hunt, Dickens, Lytton, Thomas Woolner, and Sir Richard and Lady Burton. Benjamin Howard of New York was a Member of the Royal College of Surgeons of England and a Fellow of the Royal College of Surgeons of Edinburgh. He was well known as the inventor of Howard's system of artificial respiration which he first demonstrated at King's College Hospital on July 7th, 1877. Another subject in which he took a deep interest was the provision of horse ambulances for large towns. David Young, M.D. Aberd., was for many years a well-known practitioner in Florence and in Rome He commenced professional life by holding the professorship of botany at Grant Medical College, Bombay. John Tilsley, M.R.C.S. Eng., L R C.P. Lond., was a medical missionary in China. On the outbreak of the trouble there he started for home but died from dysentery on the day of his arrival in England. George Samuel Gregory, M.R.C.S. Eng., L S A., died in his eighty-fifth year, having qualified in 1835. For 35 years he practised in Stroud, being certifying surgeon under the Factories Acts. He was an intimate friend of Wilkie Collins. Ernest Arthur Taylor Steele, M.R.C.S. Eng., L.R C P. Lond., of Southend, who died at the early age of 34 years, was for some time in practice at Plaistow, Essex, where chiefly owing to his exertions St Mary's Children's Hospital has now reached its present degree of success. John Orton, M.D. T.C.D., was a well-known practitioner at Beeston and the son of a surgeon who was the first English medical man to practise successfully primary amputation at the hip-joint. William Marshall, M.D. St. And., practised for many years in Dumfries. He took a great interest in the Dumfries and Galloway Royal Infirmary and served on its staff for a lengthened period. Alexander Stevenson, M.B, C.M. Glasg., began life as a lawyer, but afterwards took up medicine and practised in South Shields. Samuel Henry Swayne, M.R C.S. Eng., L.S.A., was a member of a well-known medical family in the west of England and practised in Clifton. Richard Hamilton Cowan, M R.C.S. Eng., L.S A, was a prominent practitioner in Wigan and a member of the staff of the Royal Albert Edward Infirmary. Raymond Ferrers Palmer, M.R C S Eng., practised for a few years in Tamworth, but afterwards entered the Dominican Order, devoting the rest of his life to theological and historical research. John Hawthorne, M.D. R.U I., of Banbridge, co. Down; John Quiller Couch, M.R C.S. Eng, L S A., a member of an old Cornish family; and George Cordwent, M.D. St. And., F.R C.S. Eng., who have all passed away during the year, were three well-known personalities in their respective districts. Richard Benjamin Anderson, F.R C.S. Eng., whose troubled life came suddenly to an end from morbus cordis, formerly practised in Tobago, where he was the victim of that gross miscarriage of justice the details of which have been fully set forth in our pages.

Amongst other members of the profession who passed away during the year were Thomas Greaves Walker of Bristol, M.R.C.S. Eng., L.S.A., in his thirty-ninth year; Thomas Jones Dyke, F.R C.S. Eng., for 36 years medical officer of health to the town of Merthyr Tydvil, who died at the age of 84 years; Frederick Edward Pearse, M.D. St. And., medical officer and public vaccinator for the first district of the Frome Union; Robert Goldsworthy Tucker, L R C.P. Edin., M.R.C S. Eng, a well-known practitioner of Swanley in Kent; Samuel Hyde, M.D. St. And., one of the best-known practitioners in Buxton, an original member of the British Balneological Society and for some time editor of its Journal; John William Young Howison Lavies, L F.P.S. Glasg., who died from pneumonia at the early age of 46 years; John Cadwaladr Williams, M.B., C.M. Edin., who also died from pneumonia; Allan McLean, M.D., C.M. Edin., a leading practitioner in Dorsetshire and a keen volunteer who had been commanding officer since 1885 of the 1st Dorset Volunteer Artillery; Joseph Cave Spicer Jennings, F.R C S. Eng., of Malmesbury, a well-known antiquarian; John Underwood, M.D. Edin., of Hastings, who died at the age of 84 years; Walter Clegg, M.R.C S. Eng., L.S.A., who had served in the Crimea and was coroner of the Boston District of Lincolnshire for 40 years; Robert Wills Soper, M R C.S Eng., of Dartmouth, who had held, amongst other appointments, that of Admiralty surgeon and agent and who was a justice of the peace for Dartmouth; Francis Joseph Mathews, L R.C.P. Irel., who died from tetanus after a bicycle accident and who had been for many years medical officer to the Stradone Dispensary District of Cavan and medical attendant to the Royal Irish Constabulary; Thomas Fitz-Patrick, M.D. Dub, M R C.P. Lond., who was a distinguished graduate of Dublin University as well as of Cambridge and a talented physician and remarkable linguist as well as a good scholar; W. Radford, M.D. T.C.D., who died at the advanced age of 89 years and who was a well-known practitioner in the West of England and justly respected for his charitable work in connexion with lace workers, whom, when they complained of failing sight, he used to see personally, to test their refraction, and to supply them with spectacles free of charge; and Claude Clarke Claremont, who qualified as M.R C.S. Eng. in 1855 and served for many years as public vaccinator to the parish of St. Pancras. To Richard Neale, M D. Lond., the medical profession owes an incalculable debt for his arduous labours in the issue of the "Medical Digest." Joseph Mortimer Granville, M.D. St. And., was formerly editor of the *Globe*, and for many years a member of the staff of The Lancet. Roger Edwards, M.D. Durh., was a prominent practitioner in North Wales and several times Mayor of Llanfyllin. We must also mention the names of Thomas Frederick Hale, M.R.C.S. Eng., L.S.A., of Chesterfield; Alexander Deas Davidson, M.D. Cantab., M.R.C.S Eng., ophthalmic surgeon to the Swansea Eye Hospital; and Courtenay Charles Parsons, M.R.C.S. Eng., who went out to the war as a civil surgeon and died from enteric fever.

Deaths of Medical Men serving in the South African War.

The following is a list, complete as far as possible, of those medical men who have been killed or who have died from disease during the present year while serving in South Africa. Some of the names will be seen to be included under other headings in previous paragraphs. Lieutenant Hugh Bernard Onraet, R.A.M.C., was killed on Feb. 27th in the attack on Pieter's Hill; Captain R. H. E. G. Holt, R.A.M.C., died from wounds received during Sir R. Buller's operations at Modder river on Feb. 21st; Lieutenant G. W. G. Jones, R.A.M.C., died from enteric fever on Feb. 20th at Ladysmith; Major Charles Pope Walker, R.A.M.C., died at Ladysmith from dysentery on Jan. 5th; Captain G. S. Walker, R.A.M.C., died from enteric fever at Ladysmith on Feb. 23rd; Major James Minniece, R.A.M.C., died from enteric fever at Pietermaritzburg on March 17th; Lieutenant Hall, Volunteer Medical Corps, died at Mooi river on March 20th; Lieutenant G. H. Irvine, R.A.M.C., attached to the Royal Horse Artillery, was killed at Sanna's Post; Assistant-Surgeon Jackson, 21st Battery F.A., died from typhus fever and dysentery at Pretoria (*circ.* end of March); Civil Surgeon Whicher died from enteric fever at Mooi river on April 27th; Captain H. Esmonde Dowse, R.A.M.C., died at Bloemfontein on May 5th from enteric fever; Dr. T. W. Illingworth, I.Y., died at Boshof from accidentally taking an overdose of morphia while suffering from fever; Captain R. Fawssett, R.A.M.C., attached to the 2nd Life Guards, died from dysentery at Bloemfontein on May 7th; Lieutenant E. L. Munn, R.A.M.C., died from enteric fever at Boshof on May 23rd; Major T. A. P. Marsh, R.A.M.C., died from enteric fever at Deelfontein on May 22nd; Mr. F. R. Eames, a dresser attached to the Welsh Hospital, died from dysentery at Bloemfontein on May 27th; Civil Surgeon Robert Irvine, at Ladysmith, died from enteric fever on May 26th; Civil Surgeon H. Bryant died from enteric fever at Bloemfontein on June 7th; Civil Surgeon R. T. Fitzhugh died from enteric fever at Deelfontein on June 15th; Civil Surgeon E. Smith died from enteric fever at the base hospital on June 16th; Civil Surgeon H. D. Davis died at Springfontein on June 15th; Mr. Thomas Jones, F.R.C.S. Eng., chief of the Welsh Military Hospital died *circ.* middle of June; Surgeon-Lieutenant-Colonel James Stevenson died at Cape Town on June 19th; Surgeon-Lieutenant-Colonel James Creagh, 9th Battalion King's Royal Rifle Corps (North Cork Militia), died from enteric fever on July 6th, between Viljoen's Drift and Kroonstad; Surgeon-Lieutenant-Colonel William Wellington Lake, M.M.C.S., Volunteer Company Royal Army Medical Corps, died at Bloemfontein of Bright's disease on July 13th; Major George Hilliard, C.M.G., R.A.M.C., died at the General Hospital, Newcastle, South Africa, on Sept. 7th, from a gunshot wound in the abdomen; Civil Surgeon A. E. Elliott died at Middelburg on Dec. 1st, and Civil Surgeon C. C. Parsons at Harrismith on Dec. 2nd, both from enteric fever; and Civil Surgeon Englebach was killed in action at Nooitgedacht on Dec. 13th.

This is the tale of losses in our profession for the closing year of the century. The list is a long one and serves once more to emphasise the universality of the services of medical men. In all climes and at all ages they end their life's work. Ours is the only profession which sets out to fight with an enemy which every member of us well knows must win in the end, and yet although the words of Seneca, "Quotidie morimur: quotidie demitur enim aliqua pars vitae," are still true, yet no less true is the saying of St. Augustine that death is "Instrumentum per quod transiretur ad vitam."

Annotations.

"Ne quid nimis."

RETREATS FOR INEBRIATES.

One of the last official acts of the late Home Secretary was the promulgation of rules for retreats licensed under the Inebriates Acts, 1879 to 1899, the text of these rules appearing in the *Gazette* of Dec. 11th. They are drawn up in accordance with the provisions of the Act of 1898, which, although dealing in the main with criminal inebriates and inebriate reformatories, contains several clauses having reference to the less public institutions, amending the Habitual Drunkards Act, 1879, in certain particulars. The general outcome of this amending legislation is to place inebriate retreats on a more stable footing and to put them in some respects under the jurisdiction of the Home Office whose inspector will visit and report upon the manner of their working. This is all to the good and it is a step in advance in the legislative control of the habitual drunkard, who requires as much protection from himself as the community requires from those who are mentally deranged. We say that it is one step, for although the Act of 1898 does not go all the way in the desired direction by enforcing compulsory isolation upon every victim of the drink habit, but only on those who are convicted of crimes (including the "crime of drunkenness"), it does provide for the detention for a certain space of any inebriate who voluntarily submits to treatment; and to all intents and purposes the provisions for such safe and kindly helping of those persons are similar to those which have long been in operation in regard to the insane. As we read the regulations we find but little variation from the rules laid down by the Lunacy Commission for the control of licensed houses, and we are of opinion that in framing these rules the Home Secretary was to some extent guided by the regulations of that body. It may be of interest to review briefly the chief of these rules. The Act of 1898 transfers the licensing authority to the borough or county council, but before application is made to such local authority "by any person or persons desirous of obtaining a licence to conduct a retreat under the Inebriates Acts" plans of the proposed building must be submitted to the Secretary of State for the Home Department for his approval. We observe that it is especially provided that dormitories should show 600 cubic feet of air space per head and separate bedrooms at least 720 cubic feet, and that separate rooms should be set aside for cases of illness. Another provision is that the resident licensee of a retreat shall, wherever possible, be a registered medical man. We heartily approve of this regulation. The inebriate requires often the most careful medical supervision, and, although it does not seem to be explicitly so stated, the general tenour of the rules is such as to imply that where the licensee is not a member of the medical profession there must be a qualified medical attendant who, we think, should reside on the premises. The licensee is required to keep registers and case-books in which entries as to the history and progress of the case and its treatment are to be made, it being, further, his duty to ascertain and to record particulars of the patients after they have been "licensed or discharged." We imagine that this information, which is to be appended to the notes in the case-book, will in many cases be very scanty, and that the record "not heard of" will largely predominate. There is also to be kept a "licensee's journal" in which are to be recorded all matters of importance occurring in the retreat—matters of discipline affecting the servants and patients, and especially facts as to the obtaining of liquor by patients and the measures adopted to prevent recurrence of such infraction of rules. This journal, too, is to contain full details of every circumstance under which any physical restraint or coercion is employed; but we fail to observe any mention of the kind of restraint which may legitimately be adopted. Perhaps the requirement of a full record may suffice to keep such treatment within the narrowest limits, but we would fain have seen, in the interests of the licensee as well as of the patient, some guidance laid down as to the means whereby this exceptional treatment is to be enforced. A "visitors' book" is also to be kept in which the inspector has to enter his observations, of which a copy is to be transmitted to the Secretary of State by the licensee. There are regulations respecting notices of the death and discharge or temporary absence of the patient, to be sent in the one case to the local authority and to the Home Secretary, and in the other to the inspector whose duties are of a highly responsible kind. He can visit the retreat at any time and all parts of it must be open to him, whilst every patient must be produced to him. Whenever required by the inspector "the licensee and the medical attendant respectively shall ... furnish him with a special report upon the mental and bodily condition and conduct with reference to abstinence from intoxicating liquor, or otherwise, of any patient on the register of a retreat." The clause (No. 8) goes on to say that the inspector's annual report "shall be a detailed and independent criticism of the working of each retreat during the year, and if the licensee neglects to provide facilities for employment or allows the establishment to fall below a proper standard of discipline and efficiency, the inspector shall report to this effect to the Secretary of State, who at his discretion will consider the advisability of communicating with the licensing authority." We have quoted these passages in full because they seem to us to be the keystone for the whole of this amended regulation for inebriate retreats. This thorough and independent inspection—a task demanding considerable knowledge and judgment—will, if it is, as it doubtless will be, thoroughly carried out, go far to establish confidence in these desirable institutions. All other regulations are subsidiary although necessary, and we need not dwell upon them here. The essential factor in this, the latest, legislative enactment for the care and control of the habitual drunkard is plainly based on the close affinity between those who give way to intemperance and so are unable to control themselves and those who from mental derangement cannot look after themselves The border line between the inebriate and the insane is a very narrow one and many there be who pass over it. But the reclamation of the drunkard has for its aim the cure of a vicious tendency which if persisted in renders him more fitted for the asylum than for the retreat The "retreat," however, to be effective must be managed as regards personal liberty on much the same lines as an asylum, whilst it recognises the curability of the dipsomaniac and offers him a means of escape from the fate of the hopeless dement.

CHARITABLE BEQUESTS AND DONATIONS IN 1900.

THE *Charity Record and Hospital Times* has carefully added up all the charitable bequests recorded, issue by issue, in its columns and finds that the total reached during 1900 was £2,016,600, as compared with £1,390,136 in 1899, and £1,303,720 in 1898. "At first sight," says our contemporary, "it would appear that with so large an increase in legacies charitable institutions must be in a prosperous state, but in a number of cases the money is left subject to life interests, and in some cases, we are sorry to say, experience has shown that the testators' ideas of their wealth were exaggerated. For instance, in the case of Professor D E. Hughes, who last year left £400,000 to London hospitals, the money will not come to the institutions until 20 years after the death of Mrs. Hughes; and, again, Mr. H. Chester has left about £60,000 in trust to the Haberdashers' Company to be applied to a new hospital at Putney, if it ever be erected; failing such object, after 20 years the income will go to Guy's Perhaps the most curious bequest is that of the late Mr. Alfred Fennings, who carried on a large business as a patent medicine manufacturer and who directed that after the death of his sister the profits of the business should be paid to the National Refuges for Homeless and Destitute Children." The following is an interesting *résumé* of the largest bequests of the year: "Mr. W. Ford (Liverpool), £10,500; Mr. W. W. Pollock (Glasgow), £40,000; Mr. H Vaughan (London), £100,000; Mr. M. Gledhill (Manchester), over £70,000; Rev. W. M. Sutton (Brighton), £14,000; Professor Hughes, £400,000; Mr. S. Redhead (Cheltenham), about £13,000; Mr. S. R. Runz (London), between £80,000 and £90,000; Mr. R Brooke (Scarborough), £13,000; Mr. T. H. Ismay (Liverpool), £10,000; Mr. J. Howgate (Ealing), £8250; Mrs. Leigh (Halifax), £36,000; Mr. G W. Charters (Belfast), £10,000; Miss Cooper (Colchester), £8000 and land for almshouses; Mr. D. Tinslie (Edinburgh), over £200,000; Mrs. Dowling (Bromley), £10,000; Miss E. F. Dalton (Leicester), £40,000; Mr J. Hutton (Leeds), £9000; Mr. Jacob Feis (London), £14,000; Miss E G Price (Canterbury), £10,000; Mr. R. B. West (Exeter), £50,000; Mr. A. Goerz (London), £20,000; Lord Bute, £20,000; Mr. R. Smith (London), £30,000; Mr. J. Downing (London), £15 000; Mr. R Arthington (Leeds), £20,000; Mr R K. Whitehead (Manchester), about £16,000; Mr. W. Matthews, £19,000; Sir H P. T. Barron (Waterford), £30,000; and Mr. J. F. France, £25,000." Dealing with large donations in 1900 the *Charity Record and Hospital Times* points out that though the year just running out witnessed no such gift as that of Sir J. B Maple to the University College Hospital, there are several instances of big donations. "At the beginning of the year Mr. Thomas Aiken gave £40,000 in aid of the funds of the Edinburgh Royal Infirmary, and Mr. George Herring gave £10,000 to the Hospital Sunday Fund of London. Mrs. Ismay, carrying out the wish of her late husband, gave £10,000 to the Liverpool Seamen's Pension Fund, and a further sum of £10,000 was distributed by the trustees of the late Mr B Piercy amongst various charities. Mr. Hartley of Liverpool gave £5000 to the Colne Cottage Hospital and Mr. Astor gave £10,000 to the Maidenhead Cottage Hospital in honour of the coming of age of his son. It was announced at a quarterly court of the London Hospital that Mr. E. L. Raphael had given £10,000 for the endowment of Jewish wards at that institution, and that an anonymous donor had placed

£22,000 in the hands of the governors for the erection of an isolation block. Mr. J. Corbett gave £10,000 to endow the Corbett Hospital at Stourbridge, and within the past few days Lord Mount Stephen has intimated his intention of clearing off the debt on the Aberdeen Infirmary amounting to £25,000." Our contemporary remarks that the London Hospital is the only metropolitan hospital which has had the fortune to secure a big donation, while it will be seen that provincial charities benefit to a much more marked extent in large legacies than do London institutions.

THE BRIGHT SIDE OF MUD.

The unhappy Londoner who at this season of the year walks streets that run with diluted dirt, or even if he drives gets splashed with the spatterings of wheels coming from the opposite direction, is not wont to perceive any benefit in the prevalent mud of his beloved metropolis. Those of us even who love London best admit that we are better out of it when the streets are muddy. For our most important thoroughfares are not very wide and there is no escaping the flying splotches which seem to have a remarkable affinity for those portions of the person or clothing where their presence is least to be desired. Yet, as the title of this annotation suggests, we believe there is a consolation even for the mud-besprinkled. This happy solace is to be found in a comparison between the hygienic effects of mud and its opposite condition of dustiness. Of course mud is, roughly speaking, wet dust, and dust is dry mud; but the evil effects of dust far transcend those of mud. In the dissemination of disease, mud remains comparatively innocent, but for the behaviour of dust in this respect no words can be too strong. Widely disseminated and inevitably inhaled, dust particles carry and deposit enormous quantities of disease. Its local and comparatively trifling damages, conjunctivitis, pharyngitis, and rhinitis, pale before its evil powers in carrying more formidable disorders. It has recently been shown how summer diarrhœa is wont to prevail most where there is most dust, and that dust may contain the dried sputum of phthisical patients is only too familiar to us all. We have mentioned only two of the graver diseases in the distribution and implantation of which ordinary dust plays a leading part. There are still other complaints in which the inhalation of ordinary dust is baneful, not to mention the special diseases caused entirely by special forms of dust, and we would have it borne in mind that mud has no similar evil influence. Mud is largely water. Paradoxical as it may sound mud is clean, at least as compared with dust. Moreover, the ultimate fate of mud is in the drain-pipe of the street, but dust too often ends in the windpipe of a man, if not in the alveoli even of his lungs. In future, then, let us not revile the passing hansom, nor as we wipe from our collar the mud of London's winter streets too fully condemn it; but rather gratefully reflect that a passing inconvenience, a mere temporary disfigurement, is a small price paid for freedom from the evil possibilities of the dust of an apparently brighter day. The ideal street knows neither mud nor dust. But in a world of imperfections let us not too hastily condemn mud. Let us rather congratulate ourselves on the absence of dust.

THE RESIGNATION OF THE MEDICAL OFFICER OF HEALTH OF MERTHYR TYDVIL.

The position of medical officer of health is one of great responsibility, and if the best results are to be obtained by the holder of the office he must have the confidence and the support of the sanitary authority by whom he is appointed. In a large industrial community where members of the authority are so often owners of property which from its very nature frequently comes under the notice of the health department this support is especially necessary, and we believe that in most of the large towns it is ungrudgingly given. We regret to find that otherwise has been the case at Merthyr Tydvil where Dr. C. E. G. Simons, who was only quite recently elected medical officer of health, has felt his position to be so intolerable that he has resigned his office. Dr. Simons was for some years a member of the Merthyr District Council, so it might be supposed that he would be as well acquainted with the temperaments of his former colleagues as they would be with his. With the merits of the dispute which led to the resignation we are not particularly concerned for they were based upon a question of fact as to whether a member of the health committee did or did not make a certain statement which the medical officer considered was a reflection upon his competency. It is, however, within our province to comment upon a condition of affairs the existence of which can only be detrimental to the public generally. In another large district in Glamorganshire the medical officer of health has recently resigned his position, and although there has been no open breach with the local authority it is generally known that they have refused to carry out his recommendations and are now defying the Local Government Board who have urged the acceptance of those recommendations. Surely the time has arrived for the Board to exercise its powers in respect of such sanitary authorities as these.

MULTIPLE ANEURYSMS.

In the *New York Medical Journal* of Dec. 1st Dr. W. J. Pettus has recorded a remarkable case of multiple aneurysms in syphilis. A fireman, aged 41 years, was admitted to hospital on August 27th with secondary syphilis. He had had a chancre several years before which was followed by the usual secondary symptoms. He had been a hard drinker for many years. About two years before admission he noticed that his right arm was getting weaker and that there was numbness of the inner side of the hand and of the forearm. Shortly after this the left pupil became much larger than the right and the left side of the face would perspire freely while the right was dry. On admission he complained of a dull aching pain in the right arm and shoulder. There was an aneurysm of the first and second parts of the right subclavian artery projecting into the right supra-clavicular space. The apex beat of the heart was in the sixth space to the left of the nipple and was strong and expansile. A systolic murmur and an accentuated second sound were heard. The right radial pulse could scarcely be felt, the left was stronger and about 90. There was right ptosis, but the pupil was normal. The left pupil was dilated. Both pupils reacted to light. The left side of the face was almost constantly wet with perspiration. There was dulness in the hepatic region, extending down to the crest of the ilium. Severe pain was complained of in this region. It began about seven days before admission, when he became quite weak. No pulsation or murmur could be detected. He was kept in bed and 20 grains of iodide of potassium and one-twentieth of a grain of perchloride of mercury were given four times a day. The pulsation in the subclavian aneurysm gradually diminished and a steady hardening could be felt. On Sept. 25th he died from syncope. At the time of death the expansile pulsation had almost disappeared. A necropsy was made, but permission to examine the brain was not obtained. The heart weighed 11 ounces. The left side was hypertrophied and one cusp of the mitral valve was slightly thickened. The aortic valves were competent but the sinuses of Valsalva were greatly enlarged. The ascending and transverse portions of the aortic arch contained nine small sacculated aneurysms, while the entire lining showed evidence of chronic endarteritis. The innominate artery was converted into a fusiform aneurysm which involved the first and second parts of the subclavian and the right carotid arteries A great attempt had been made at coagulation, especially in the innominate portion of the aneurysm A firmly organised clot filled the sac except where there was a small channel for the blood There was a fusiform aneurysm of almost the entire abdominal aorta, beginning at and including the cœliac axis and extending down to the third lumbar vertebra just below the origin of the inferior mesenteric artery. The bodies of the last dorsal and first, second, and third lumbar vertebræ were eroded to the depth of half an inch At the origin of the cœliac axis the sac had ruptured on the right side and the blood had burrowed behind the peritoneum, forming an immense clot extending from the diaphragm to the right iliac crest, which pushed the liver forward and upward The right kidney was about twice the normal size, much flattened and pushed against the abdominal wall The medullary and cortical portions were acutely congested The left kidney was slightly enlarged and congested From the history the abdominal aneurysm appears to have ruptured about a week before admission Severe pain in the liver then developed with great weakness and nausea He constantly complained of pain over the liver and this organ could be plainly felt The temperature was very irregular, varying from 98 6° F in the morning to 102 4° at night Thus abscess of the liver was simulated Over the blood clot the peritoneum was acutely inflamed The right ptosis and left mydriasis were thought to be due to syphilitic meningitis in the region of the third nerves Possibly the brain symptoms were caused by an aneurysm of the posterior part of the circle of Willis

REG v CHILDS

AT Maidstone Assizes before Mr Justice Bruce the trial of this case was concluded on Dec. 15th, when the jury returned the following verdict "Death was accelerated by mechanical means, but the evidence was not sufficient to prove that it was caused by the prisoner" The history of the case is briefly as follows On May 12th, 1900 Katherine Flynn, age 38 years, a married woman, arrived at New Brompton from Malta Two days later she visited Mrs Childs a midwife who had attended her in three confinements On May 15th the deceased was taken ill in the afternoon and Mrs Childs visited the house and remained there from 4 30 P M until 10 P M On May 16th Mrs Childs was sent for and arrived at about 11 30 A M, and Mr E R Thomas was called in at 2 30 P M Mrs Flynn died ten and a half hours later Mr Thomas having no reason to suspect malpractice gave a certificate that death was due to syncope from peritonitis following a miscarriage From information given to the police the Director of Public Prosecutions instituted proceedings and an order was obtained from the Home Secretary for the exhumation of the body A post mortem examination was made at Strood Cemetery on June 19th, when it was found (1) that the deceased had been from four to four and a half months pregnant, (2) that abortion had occurred within a few days of death, (3) that severe hæmorrhage had taken place into the peritoneal cavity through a perforation in the upper part of the uterus of the size of a finger, and (4) that peritonitis of about 24 hours' standing had supervened The coroner's jury found 'that deceased had died from peritonitis resulting from rupture *of the uterus* [the italics are ours] but how or by what means there is not sufficient evidence to show The jury are also of opinion that such rupture was the result of illegal operation' The prisoner was committed for trial by the Chatham stipendiary magistrate on the charge of manslaughter It may be mentioned that when Mr Thomas was called in the deceased was too ill to allow a complete examination The prosecution alleged that Mrs Childs had caused the perforation of the uterus after the abortion had commenced by culpable and criminal negligence during some manipulation or instrumental interference Although it was impossible to say with absolute certainty that the perforation was not due to natural causes it was contended that it was more likely to have been caused mechanically (1) on account of the situation of the perforation; (2) the period to which pregnancy had advanced, and (3) because there was no evidence of any disease in the wall of the uterus contiguous to the rupture Testimony of a non medical nature was adduced in corroboration The sister of the deceased admitted in cross examination that the latter had had two operations performed on the uterus for "polypi" but that a child was born after each operation Counsel for the defence urged that the rupture resulted either from disease or from local weakening of the uterine wall as a consequence of the above-mentioned operations, and further, that if the rupture was of mechanical origin there was no proof that the prisoner was answerable for it The latter proposition was endorsed by the jury By way of comment we would point out that it is, to say the least, indiscreet for a midwife to take upon herself the responsibility of attending a case of abortion until it is too late for skilled medical aid to be of service The prognosis subsequently to the perforation was necessarily extremely grave and nothing short of an early operation to close the aperture and render the parts aseptic would have given the least chance of recovery We have frequently expressed the opinion that medical men are not called upon to act as police Mr Thomas was placed in a very difficult and unenviable position There was no evidence, in his opinion, to warrant him in refusing a death certificate and to this we subscribe

A TELEGRAM from the officer administering the Government of Mauritius was received at the Colonial Office on Dec 21st, stating that during the week ending Dec 20th 56 fresh cases of bubonic plague had occurred, 27 of which were fatal The total number of deaths from plague during the week amounted to 32

THE MANCHESTER AND SALFORD SANITARY ASSOCIATION AND THE BEER-POISONING EPIDEMIC

A MEETING of the committee of this association was held at the offices, Brazenose street, Manchester, on Wednesday, Dec 19th, Professor J DIXON MANN being in the chair The principal item of business on the agenda was a report on the beer poisoning epidemic by Mr WILLIAM THOMSON, F R S Edin, F I C, of which the following is a copy —

"At the last meeting of the committee held on Nov 21st I pointed out to you that I had visited the Manchester Infirmary on the Saturday previous and had been informed of an epidemic which was peculiar to beer drinkers, and that this epidemic had been going on for three or four months Dr Sturrock, the house surgeon, stated that ptomaine poisoning was suspected I remarked that judging from the symptoms it was due to metallic poisoning and that I believed ptomaines could not be produced during the fermentation process I told him that I would undertake to investigate the matter at once I sent a messenger on the Monday following to obtain samples of beer from a house the address of which he gave me and from which he informed me that one patient who was much affected by the malady had obtained the suspected beer and requested one of my assistants to examine it for metallic poison My messenger could not find the place and this caused a delay in my examination due to my absence from town In the meantime I pointed out to your committee before anything had been published respecting arsenic poisoning, that I believed this epidemic was due to metallic poisoning and indicated the probability of lead and you requested me to investigate the matter and to report to the committee. In the meantime Dr. Reynolds discovered and published the fact that arsenic was the cause of the epidemic.

I have examined about 240 samples of beer within the last few weeks and found them to contain: two half a grain, one about one-third of a grain, five about one-fifth of a grain, three about one-seventh of a grain, two about one-tenth of a grain, and five from about one-tenth to about one-twentieth of a grain of arsenic trioxide per gallon. 174 contained amounts varying from one-twentieth part to one-two-hundredth part of a grain of arsenic trioxde per gallon and 48 samples were free from arsenic. In samples of beer brewed from the same quantities of sugar and malt, one containing, however, a greater quantity of hops than the other, the former contained considerably less arsenic than the latter. The hops, therefore, appear to precipitate some of the arsenic from the beer. I then found arsenic in beer to the extent of one-thirtieth of a grain per gallon, which was said to be brewed from malt and hops alone and I then obtained and analysed samples of malt.

I have found that a number of samples of malt contained quantities of arsenic which if dissolved in the beer in the proportion of two and a half pounds of malt to the gallon (assuming all the arsenic in the malt to go into the beer) that the contamination so produced would be as great, if not greater, than that of the average arsenic contaminated glucose beer. It is difficult to see how under the present usual methods of malt manufacture arsenic contamination can be avoided, as it is suggested by some that the fumes arising from the burning of anthracite or coke on being allowed to impinge upon barley after it has sprouted during the drying operation gives rise to a peculiarity of taste in the beer which is demanded by beer-drinkers.

In 17 samples of malt which I have examined five were free from any trace of arsenic, one contained a one-seventeenth, one a thirty-third part of a grain per pound, three contained one-fortieth, two one-fiftieth, one one-sixtieth, three one-seventieth, and one one-hundred-and-fortieth of a grain per pound. I have examined five samples of barley which were all free from any trace of arsenic except one, which was a dried barley, and this contained not more than one-five-hundredth of a grain per pound. This arsenic is contained in the vapours from pyrites in the burning anthracite or coke, as is shown by the fact that malt culms, which are the separated sprouted portion of the barley and which I understand are only used for cattle food, contain arsenic (in one sample which I examined) to the extent of one-seventh of a grain per pound. This material exists in very small grains and the fumes from the anthracite or coke would therefore affect a much larger proportionate surface than would be given with ordinary malt, which is a much larger grain.

If we take it, then, that all the arsenic contained in the malt would go into the beer manufactured and assume that two and a half pounds of malt be used for every gallon of beer, and if we take the average of a fiftieth of a grain of arsenic per pound of malt, it is evident that the beer might contain one-twentieth of a grain of arsenic per gallon—i.e., about a gallon and a quart of beer would contain a maximum medicinal dose of arsenic.

I have also found small quantities of arsenic in the hops to the extent of one one-hundredth of a grain per pound, but from the quantity of hops used in making beer the amount in the finished beverage must be extremely minute.

I have also detected arsenic in other mineral substances sometimes added to beer, but these are used in such small quantities that they could not materially affect the beer. Phosphate of soda, for instance, contained about three grains per pound; metabisulphite of potash contained a one-sixty-sixth of a grain per pound. The yeast appears to secrete arsenic from the wort, as I found it to be present in certain samples to a greater extent than in the beer brewed with it.

From this estimation of arsenic in the samples of malt I presumed that that metal must exist in considerable quantity in ordinary soot. I therefore obtained a few days ago some soot from an ordinary kitchen chimney which I have analysed and find it to contain one and a half grains of arsenic trioxide per pound. I have also examined two samples of coke and one of Welsh anthracite used in drying the malt and have found the former to contain in one sample one-twentieth, the other one-seventeenth, of a grain of arsenic trioxide per pound, whilst the sample of Welsh anthracite contained not more than one four-hundredth of a grain of arsenic rioxide per pound. Presumably, therefore, if the present process of malt drying is to be continued, anthracite an not coke should be employed by the maltster.

It is questionable how much arsenic, if any, should be allowed in any article of food. The Scandinavian Government will not allow a carpet or piece of cloth to be brought into their country which contains one-hundredth of a grain per pound, whilst some medical men are inclined to pass a beer containing a one-hundredth of a grain per gallon. This involves a problem which demands serious consideration."

THE METROPOLITAN HOSPITAL SUNDAY FUND.

At the annual general meeting of the constituents of this Fund held at the Mansion House on Dec. 20th Archdeacon Sinclair presided in the absence of the Lord Mayor, and the following report, proposed by the Rev. Prebendary Ridgeway, seconded by the Earl of Stamford, and supported by Canon McCormick, was unanimously adopted.

The twenty-eighth year of collecting this Fund has resulted, under the Presidency of the Right Honourable Sir Alfred J. Newton, Bart., Lord Mayor, treasurer, in a total of £51,993 14*s.* 6*d.*

The constituents in annual general meeting, assembled in the Mansion House on Dec. 13th, 1899, elected the council for 1900. At the same meeting Hospital Sunday for 1900 was fixed for June 24th, and the usual invitations to coöperate were ordered to be sent to the heads of all congregations within the metropolitan area. Collections were made accordingly and have resulted in a total of £35,856 8*s.* 11*d.*

The Rev. Prebendary C. J. Ridgeway, M.A., of Christ Church, Lancaster Gate, heads the list of contributors with £1519; the Rev. Canon Fleming, B.D., of St. Michael's, Chester-square, collected £1158; and the Rev. Prebendary Eardley Wilmot, M.A., of St. Jude's, South Kensington, £655.

There is a decrease this year of £2313 from congregational collections, owing no doubt to the very large contributions collected to meet the wants of our soldiers and sailors engaged in the war in South Africa. Seven more congregations have collected this year.

In addition to the collections from the contributing congregations Mr. George Herring sent a further munificent donation of £10,000 and expressed his high approval of the manner in which the Fund was administered. Mr. Herring also offered to give an additional £10,000 if the collections could be raised to £90,000. £1090 was received from the estate of the late Mr. Thomas King, of Tisbury, Wilts. £1000 was received from "F. H." Sir Savile Crossley, Bart., again generously contributed £500 (tenth donation); "A. G. P.," £300; and "Delta" sent his twenty-second donation of £200.

The first meeting of the newly-elected council was held on Jan. 19th, 1900, when the General Purposes Committee, the Committee of Distribution, and the Special Committee for the issue of Surgical-Appliance Orders and Hospital Letters were appointed. Sir Edmund Hay Currie and Mr. Richard B. Martin, M.P., as honorary secretaries, and Mr. Henry N. Custance, as secretary, were re-elected. Dr. W. S. Church, President of the Royal College of Physicians of London, was elected to a vacancy on the council caused by the death of Sir James Paget, Bart., F.R.C.S. Eng.

The council gave its general assent to a memorial intended to be presented to the President of the Local Government Board with a view of gaining the exemption of hospitals from local rates.

On the motion of Sir Edmund Hay Currie, seconded by Mr. Sandeman, and supported by the Chief Rabbi the laws of the constitution, which have been in force during the past year, were re-affirmed.

The Rev. A. A. Drew proposed:—

> That the council for the year 1900 be re-elected (with the thanks of this meeting for their labours in the past year), for the year 1901, with the Rev. Ravenscroft Stewart, M.A., the Rev. R. Fotheringham, M.A., the Rev. E. H. Pearce, M.A., and Roger de Q. Quincey, Esq., to fill vacancies.

The Rev. Sir B. Savory seconded the proposal, which was carried.

June 16th was fixed for Hospital Sunday for 1901, and a vote of thanks to the Chairman and to the Lord Mayor terminated the proceedings.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: J. H Fergusson to the *Ramillies* and R. B. Ainsworth to the *Hannibal*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant A. D. Jameson has been instructed to proceed to Woolwich on Jan. 1st, 1901, for duty.

VOLUNTEER CORPS.

Artillery: 4th Lancashire: Surgeon-Captain J. C. M. Given resigns his commission. *Rifle:* The Queen's Rifle Volunteer Brigade the Royal Scots (Lothian Regiment): Andrew Hutton Watt to be Surgeon-Lieutenant. 8th (Scottish) Volunteer Battalion the King's (Liverpool Regiment): William Saville Henderson to be Surgeon-Lieutenant. 1st Volunteer Battalion the East Lancashire Regiment: Arthur Foster to be Surgeon-Lieutenant. 1st (Renfrewshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Claud William Marshall to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

Aberdeen Company: Arthur Hugh Lister to be Surgeon-Lieutenant (supernumerary).

TRANSVAAL WAR NOTES.

Lieutenant-Colonel R. T. Beamish, R.A.M C., is returning home invalided on board the s s. *Wakool*. Colonel A. H. Anthonisz, R A.M.C., and Civil Surgeons E. A. Chartres, T. Kay, G B Buchanan, A. C. Bird, and F. O. Stocher are returning home in the same vessel. At the request of the military authorities the Imperial Yeomanry Hospitals Committee have consented to prolong the duration in South Africa of all the Imperial Yeomanry hospitals until April.

ARMY MEDICAL SERVICE REGULATIONS.

The *Army and Navy Gazette* of last week states that the latest (1900) regulations for the Army Medical Services have been published, and many useful additions appear in them. One alteration particularly demands attention—viz., that now it is ruled that the principal medical officer of a force in the field (Part II. War, para. 626) will be attached to the staff of the general officer commanding-in-chief. This effectually deals with the stupid arrangement which relegated the P.M.O. to the base, at whose suggestion it is difficult to know. Experience in South Africa has doubtless made it clear that a restoration of the principal medical officer to his proper position was urgently needed. The new regulations, together with the "Manual for the Royal Army Medical Corps," and the "Standing Orders" for the same (1899 edition) show work well done at the medical division of the War Office during a time of great pressure.

THE LATE OUTBREAK OF FEVER IN THE PUNJAB.

There has, according to the *Pioneer Mail*, been a severe outbreak of fever of a malarial character in the Punjab during the autumn of this year. It is, however, subsiding. At Lahore and Mian-Mir European officers, civil and military, have been sufferers, while at Ferozepore the whole garrison (with the exception of British troops from the hills) have practically been placed *hors de combat*. Orders have been issued for the 47th Battery R.F.A. to be transferred temporarily to another station for change of air, but at present the men are too feeble to be moved. The disease is of the Peshawar fever type and it has prevailed in the native city as well as in the cantonments. Delhi also has been among the towns that have suffered and the mortality in some of the districts is stated to have been heavy.

RECRUITING.

In 1899 the Inspector-General of Recruiting was able to point to a return of 42,700 men who had accepted service in the regular army, as compared with 38,418 in 1898, 33,722 in 1897, and 27,809 in 1896. The increase during the present year will probably be still greater. Major-General Borrett in his report on last year's recruiting states: "The war in South Africa largely contributed to the material improvement which set in during the early months of the year; thus the year has closed as the best since the introduction of the short service system. Not only did more recruits present themselves for enlistment, but they were of decidedly better physique. While recruiting was in an unsatisfactory condition the percentage of recruits taken under standard had been very high, but in the last quarter of the year it fell materially."

THE EXPERIMENTAL TRIAL OF A NEW SYSTEM OF COOKING IN INDIA.

It will be remembered that it had been determined, as an experimental measure, to replace the native cooks employed in connexion with British regiments serving in India by cooks drawn from the regiments themselves. The new system has not proved altogether satisfactory so far as the experiment has been tried at present, but it is too early yet to pronounce any definite opinion in regard to it. The native servants of India are excellent cooks, as a rule, and it is surprising how well they contrive to succeed in their art, often under very adverse conditions, but it is open to doubt whether they are as careful in the matter of cleanliness and sanitary precautions as are Europeans; hence it was, we believe, that it was determined to give a trial to the latter.

Correspondence.

"Audi alteram partem."

"ISOLATION HOSPITALS."

To the Editors of THE LANCET.

SIRS,—As I before pointed out[1] isolation hospitals are preventive institutions or nothing. Keeping this fact in view the chart which Dr. A. J. Tonkin furnishes in your issue of Dec. 22nd (p. 1835) only adds force to my argument that these preventive institutions do not prevent. The story would have been told with added emphasis had Dr. Tonkin continued the upward curve for 1899 (Nottingham) to 2580 instead of leaving it at 1500. Your correspondent does not attempt to deny the importance of the figures, but he seeks to explain them on the hypothesis of "well-known and recognised periodic waves." I do not wish to imitate the tone of Dr. Tonkin's letter, but I may be allowed to say that such "periodic waves" are neither well known nor recognised. It is a small matter that I have failed to discover such a law, but I find on page 124 (vol. ii.) of Allbutt's "System of Medicine" these words, "On carefully surveying the records of scarlet fever epidemics in the past, it is manifest that nothing approaching periodicity has characterised its epidemic prevalence." But if it be granted that such epidemic prevalence is merely an operation of a fixed law then our efforts at prevention are absurd and unscientific. Your correspondent's line of argument only proves what was known before—that the real *raison d'être* of isolation hospitals is being lost sight of, the futility of efforts directed to prevention having been silently recognised long ago. Let your readers, Sirs, again examine Dr. Tonkin's chart by the light of the fact that he is not authoritatively supported in his views about periodic prevalence and they must conclude, with me, that that gentleman has rendered me considerable assistance. In his conduct of the defence he has made the not altogether unknown mistake of calling one of the most powerful witnesses for the prosecution.

I am accused of having dealt only with a period "when scarlet fever was epidemic in all the large towns." In view of the impossibility of reproducing all the statistics which bear on this question in one letter I did what seemed to me quite fair: I gave the returns of several of the largest towns, taking them in the order of their importance. The editorial comments which called forth my reply had reference to a booklet dealing with the 32 large towns of England and Wales, from the dates when each of these came under some form of notification to the present time. When that letter was written it never dawned upon me that any man who had in view the objects aimed at by the establishment of isolation hospitals would build up an argument founded on the admission that no effort can stay the oncoming of the periodic wave. It is a kind of logic which I find extremely puzzling. That it is giving the whole case away in the plainest manner goes without saying.

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[1] THE LANCET, Dec. 15th, 1900, p. 1759

But to the question: What is the explanation of the tremendous fact that, in spite of the giant strides which municipalities have been making in the direction of improved sanitary conditions; in spite of the lavish spending—not to say squandering—of public money on everything which holds out the least hope of sanitary betterment; in spite of the great army of sanitary officials which is exerting itself to the utmost to improve the public health, an authority is able to tell us to-day that scarlet fever is endemic in every large town in the United Kingdom. It will be granted that the contagious element of scarlet fever—the materies morbi—is always derived from a previous case. If, then, isolation be the remedy the aggregation of 93 per cent. (practically all) of notified cases must succeed in stamping out the disease at no distant date. If this end is not attained why is it not attained? Is it not a reasonable presumption that the explanation will be found in the continued infectivity of hospital discharged patients? But we are told that the number of persons who receive their infection through the medium of the hospital is so small that it may be regarded as a *quantité négligeable*. This notion is so preposterous that one cannot help a feeling of astonishment that medical scientists have allowed themselves to be blinded by a definition so stupid and mischievous as the accepted definition of a "return" case. Dr. Tonkin, who errs in good company, informs us that "the dangerous cases are from 2 to 5 per cent." A case, therefore, which slays at large is not a dangerous case because it does not conform with the postulate laid down that a "return" case must arise in the home. As a matter of fact, the definition, trammelled as it is by limits of place and time, does not give a scintillation of the extent of injury inflicted by these institutions. A discharged patient may sow the disease broadcast and for various and obvious reasons leave the home untouched. It frequently happens that the other inmates of the home have had a mild, though temporarily protective, attack immediately precedent to the removal of the only well-marked case to the hospital. There may be no other children in the home, or, if there are, these may have been protected (in so far as one attack does prevent the occurrence of another) by previous attacks, or may be naturally immune.

Dr. Tonkin thinks that the continued infectivity of the home (after removal) may account for some of the cases which pass for return cases. If this be the case he has advanced a second argument against removal; but new centres of infection are being constantly established by discharged patients who go elsewhere than to their own homes. Cases in point: 1. The relative of a distinguished professional man resident here went straight from the hospital to her home in a distant county, where she promptly spread the disease. 2. A little girl called on her way home from the hospital at the house of a relative, where she played for 20 minutes with her cousin. In a few days the cousin sickened and was presently dead from scarlet fever. 3. A well-known tradesman was asked by a Derby friend to receive the son of the latter into his home for a few weeks' change, the son being a recently discharged patient from the Derby Isolation Hospital. The only child of the host sickened a few days after the advent of the guest and died at the end of a fortnight. Not one of these cases, be it understood, fulfilled the conditions of a "return" case. They burden no annual reports and find no place in tabulated returns anywhere. They go, however, to swell the lists of notified cases and we find them again in the Registrar General's returns. Your correspondent says that these questions will have to be discussed and determined in the near future, and in that event graciously credits me with having accomplished some little good. I am obliged to him. When the investigation takes place it will be found that other questions which have not been raised by this discussion will assume great importance. Amongst these the high mortality rate of hospital-created cases and the occurrence and mortality rate of cases of secondary infection will have to come under discussion. We shall also want to know a little more about that formidable disease, post-scarlatinal diphtheria, the incidence of which is dependent on life in hospitals and the mortality of which is 58·3 per cent. as against the 30·4 per cent. of cases of ordinary diphtheria. The discussion of questions of such serious import to us as a nation will have to be approached in a spirit somewhat different from that which some sanitarians contrive to infuse into discussions of the kind and it will have to be carried on unhampered by senseless formulæ and unlimited by meaningless definitions.

I am, Sirs, yours faithfully,

Nottingham, Dec. 22nd, 1900. EDWARD DEAN MARRIOTT.

IS THERE A PSEUDO-DIPHTHERIA BACILLUS?

To the Editors of THE LANCET.

SIRS,—The report of Dr. J. Priestley, summarised in THE LANCET of Dec. 22nd (p. 1821), deals with a question of very great importance—namely, the possibility of distinguishing between the organisms of diphtheria and pseudo-diphtheria for the purposes of clinical diagnosis. The question briefly amounts to this: Is it possible, in the time allowable for useful clinical diagnosis, to distinguish between these two with any degree of certainty justifying a negative report as to the existence of diphtheria? The question has been constantly before me during the last 12 months in which I have examined cultures from some 1800 throats made in connexion with the securing of the Greenwich Royal Hospital School against an outbreak of diphtheria. In only two or three of this number have I been able to identify anything as morphologically identical with Hoffmann's bacillus, and I certainly do not believe it to be wise or right to act upon such a presumption to the extent of treating such cases as non-infectious. Indeed, no one appears to take such a line, which is as much as to say that those who identify the organism in question, myself among the number, have not the courage of their convictions and dare not take the responsibility of acting upon their opinions. Moreover, it appears to be generally admitted that the one organism may be converted into the other. Surely this is to give up the whole position and to introduce a heresy which may attain very dangerous proportions. In order to preserve a distinction between two organisms, it must be shown that they are at all times and under all circumstances incapable of transmutation. If ever one can turn into the other, then the only logical deduction is that they are essentially identical.

Dr. R. T. Hewlett, who has studied this subject exhaustively, after giving a careful tabular statement of the differences between the two organisms, makes the damaging admission just referred to, the apparent possibility of conversion, and no conclusive one of the tests which he furnishes is capable of application within the time at the disposal of a clinical investigator. This being so, it seems plain that it is the duty of every person who bears responsibility in this respect to refrain, when an organism morphologically resembling the diphtheria bacillus is found in a culture, from stating that the organism so found is not a dangerous one.

The whole matter is, as I have said, summed up in the one statement which I desire to emphasise in every possible way—namely, that *if there be a possibility of converting the pseudo-diphtheria bacillus into the diphtheria bacillus, then there is no such thing as a pseudo-diphtheria bacillus at all*, and this is, I confess, my own present position.

I am, Sirs, yours faithfully,

EDWD. C. BOUSFIELD,

Dec. 22nd, 1900. Bacteriologist of the Borough of Camberwell.

THE OPERATION OF CIRCUMCISION.

To the Editors of THE LANCET.

SIRS—Mr. D'Arcy Power, in his interesting paper on Some Disappointments of Surgery,[1] makes the following very apposite remarks:—"There are few operations more often performed than those of circumcision and for hare-lip, yet there are few which may give more disappointing results. The aim of a perfect circumcision is to remove just so much of the foreskin as is necessary to liberate the glans penis and to avoid removing so much as to leave the patient a '*curtus Judæus*.' Such a perfect operation is rare, but I do not recollect that the difficulties were ever pointed out to me." It is undoubtedly true that such a perfect operation is rare, but why is this the case? The fact is that circumcision is generally regarded as a very simple operation and one which any surgeon feels competent to undertake, but if one may judge from a good many cases which come under notice from time to time the object of the operator would appear to have been not to remove just so much of the foreskin as is necessary to liberate the glans penis, but to cut away as much as possible of the prepuce without injuring the glans penis, which is thus left absolutely denuded from apex to base.

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[1] THE LANCET, Dec. 22nd, 1900, p. 1789.

It may be presumptuous in me to suggest that possibly the text-books on surgery are partly to blame for the extensive mutilations which are frequently practised under the name of circumcision, but the usual method described in most books of placing the circumcision forceps over the line of the corona and then allowing the glans to slip out of the way when the whole of the skin beyond the forceps is cut off has always seemed to me to err in the direction of doing too much. The plan I have generally adopted and found successful is to first seize and gently draw out the end of the prepuce with a pair of artery forceps and then to apply the circumcision forceps not over the corona, but over the end of the glans penis which it just clears. With the subsequent retraction which immediately ensues and after the mucous membrane is slit up along the dorsum it will be found that quite sufficient skin has been removed, no unnecessary mutilation has been produced, and the object of the operation has been satisfactorily attained.

All this may seem a small matter, but no detail, however small, is unworthy of attention in even the most trifling operations of surgery.—I am, Sirs, yours faithfully,

E. DYKES BOWER, F.R.C.S. Edin.

Gloucester, Dec. 24th, 1900.

CACODYLATE OF SODIUM: A WARNING.

To the Editors of THE LANCET.

SIRS,—It is unfortunate that the lay press should have selected for recommendation as a popular remedy so lethal an agent as cacodylate of sodium. We are told that although it contains 55 per cent. of arsenious acid it has none of the toxic action of that drug and that it may be given by mouth in doses of from 20 to 40 centigrammes with perfect safety. This is not my experience. On Dec. 9th I ordered for a patient, aged 21 years, suffering from phthisis, one grain of cacodylate of sodium in a pill. On the following day there was a distinct odour of garlic in the breath and on the second day this was much more marked, was noticeable at some distance from the bed, and suggested the smell of phosphorus. On the third day the patient vomited twice and the odour of the breath was almost gangrenous in character. On the next day, after 11 doses had been taken, the patient was found to be suffering from many of the symptoms of arsenical poisoning. Her face was pallid, the eyelids were œdematous, the conjunctivæ were injected, the tongue presented the appearance of a piece of raw beef, and there was complete loss of appetite. In addition there was arsenical neuritis. The patient complained of pains in the limbs, especially in the lower extremities. There was tenderness on deep pressure over the course of the nerves, more marked in the left leg than in the right. She was unable to move the left leg and there was marked loss of power in the extensors of the left wrist. The patellar reflexes were not abolished, but the attempt to elicit them caused great pain. There was no diarrhœa and there was no albumin in the urine. The odour of the breath disappeared within 24 hours of the suspension of the remedy, and her general condition improved, but the loss of power in the leg and in the arm still persists. The drug was obtained from one of the most reliable chemists in London and was made by Messrs. Pointet and Co. of Paris. It was given in about one-third the minimum dose recommended by Gaillard and other French physicians and its effects were carefully watched, but in spite of all precautions these untoward effects ensued. Gautier states that it may be given hypodermically, in doses of three-quarters of a grain. My experience may be exceptional, but I cannot but think that it is a dangerous remedy which should be employed with considerable caution. I am, Sirs, yours faithfully,

WILLIAM MURRELL.

Welbeck-street, W., Dec. 16th, 1900.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The Carmichael prize of £120 has been awarded by the President, Vice-President, and council to Mr. Horatio Nelson Hardy.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Sanitary Improvements under the Epidemic Diseases Act.—Municipal Subscriptions to the Pasteur Institute of India.—The Health of the Cities of Bombay and Calcutta.—The Plague.

THE Epidemic Diseases Act has been made use of for other purposes than plague administration, and not the least of them has been the improvement and demolition of insanitary buildings. This Act gives powers not possessed by municipal authorities and has been taken advantage of in Bombay city, where during the past year 271 houses and sheds have been demolished and 629 declared unfit for human habitation. In addition compulsory improvements have been effected in a very large number. It is to be hoped that the powers thus given during a plague epidemic will be transferred to municipal authorities as a permanent measure. Few if any improvements have been carried out under these powers in Calcutta.

The authorities of the Pasteur Institute of India have been inviting certain municipal and district boards to contribute annual subscriptions in aid of the Institute. At Lucknow, notwithstanding some opposition, it was carried that "as the Pasteur Institute is a scientific institution for the alleviation of the sufferings of humanity it should be aided by the board and that inquiries be made as to the financial condition of the institution with a view to the board's making a suitable grant." On the other hand, at Calcutta, where the application was rejected, it received opposition from the chairman of the municipal board and another European member.

The draft report of the municipal commissioner for the city of Bombay for 1899–1900 has lately been presented. In it he refers to the exceptional rainfall of only 35·9 inches, which was less than half the normal and half of which even occurred in the month of June, and he mentions how the water-supply became not only scanty but impure. At the same time the worst famine of the century commenced, causing local destitution in Bombay city and a large immigration of destitutes from the famine-stricken areas. The mortality of the city has been very high, there having been 4473 more deaths than in 1898 and the death-rate has been 68·67 per 1000 per annum. The total deaths for the year were 56,434, being 17,785 above the average. In the month of March when plague was at its worst 10,183 deaths were recorded. Plague is credited with 15,796 victims, and diseases of the respiratory system caused 8650 deaths, phthisis 6029 deaths, fevers 5063 deaths, and diarrhœa and dysentery 4286 deaths.

In consequence of the high infantile and maternal mortality in Bombay city the municipality has appointed a committee "to consider and report on the desirability of entertaining one or more diplomaed native midwives for each ward of the city for giving relief to poor women in need of assistance at childbirth." At present the women doing this work are ignorant and dirty and they spread disease far and wide.

The general mortality in Bombay city shows no signs of diminution. For the week ending Dec. 4th it was 804, as against 790 during the previous seven days. During the past quarter it has been at the rate of 84·09 per 1000 per annum. Amongst high-caste Hindus the rate is 79·72 per 1000, amongst Mahomedans 83·55, amongst Parsees 38·51, and amongst Europeans 39·32.

The general mortality in Calcutta is also high and shows no sign of diminution. For the week ending Dec. 1st there were 691 deaths, against an average of 552, a rate of 52·1 per 1000, against an average of 42·2. In both cities plague seems again on the increase. 70 deaths are recorded this week in Bombay and 76 in Calcutta.

Plague has again broken out in the Punjab and at Bangalore it has much increased. The members of the dhobie (washerman) class are the chief sufferers there.

Dec. 8th, 1900.

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